OREGON
ENVIRONMENTAL QUALITY
COMMISSION MEETING
MATERIALS 02/22/2007

State of Oregon
Department of Environmental Quality

Environmental Quality Commission Meeting

February 22, 2007, 9 am – 4 pm

ODFW, 3406 Cherry Ave NE

Salem Oregon 97303

Attendance Sheet

Name/Agency	Email address or phone # (Optional)
City of Salem – Public Works — Mark D Johnston – Biosolids	503-588-6380
Kathryn VanNatta — NWPPA	Kathryn@nwpulpandpaper.org
Stephanie Eisner — City of Salem	seisner@cityofsalem.net
Aaron Courtney — Perkins Coie LLP	acourtney@perkinscoie.com
Michael O'Leary — Sierra Club	michael.oleary@sierraclub.org
HEIDI DAHLIN — CITIZEN	hmdahlin@mac.com 503-631-2855
Nancy Hatch citizen	
Carroll Johnston — Oregon Physicians for Social Responsibility	johnston123@att.net 503-364-1394
Ellen Twist — citizen	wastsino@yahoo.com
Rick George — Conf Tribes Umatilla	rickgeorge@ctuir.com

Environmental Quality Commission Meeting

February 23, 2007, 8:30 am – 12 pm

ODFW, 3406 Cherry Ave NE

Salem Oregon 97303

Attendance Sheet

Name/Agency	Email address or phone # (Optional)
Caroline Silveira, GMA/FPA	csilveira@gmabrands.com
Julie Brandis, AOI	
John Ledger AOI	
Kristan Mitchell ORRA	
Alex Cuyler city of eugene	alex.d.cuyler@ci.eugene.or.us
Rob Guttridge Recycling Advocates	~~Recycle~~ RobRecycles@gmail

Approved __
Approved with Corrections___

Minutes are not final until approved by the Commission.

Oregon Environmental Quality Commission
Minutes of the Three Hundred and Thirty-fifth Meeting

December 14 – 15, 2006

Thursday, December 14 – Regular meeting began at 10:00
DEQ Headquarters, 811 SW 6th Avenue, Room 3A

Regular Meeting[1]

The Environmental Quality Commission (EQC, Commission) held a public meeting beginning at 10:00 a.m. on December 14, 2006, at the DEQ Headquarters building, 811 SW 6th, Room 3A, Portland, Oregon.

The following members of the Environmental Quality Commission were present:

Lynn Hampton, Chair
Bill Blosser, Vice Chair
Kenneth Williamson, Member
Judy Uherbelau, Member

A. Preliminary Commission Business: Adoption of Minutes of the October 5 – 6, 2006 Meeting
The Commission reviewed, amended, and approved draft minutes of the October 5-6, 2006, Commission meeting.

B. Action Item: Contested Case No. LQ/HW-NWR-02-194 in the Matter of Ryan H. Kell and High Tech Now, Inc.
DEQ took action against Ryan H. Kell and High Tech Now, Inc. (Respondents), for failure to make a hazardous waste determination, storing hazardous waste without a permit and failure to file a hazardous waste generators report. When a person or business does not agree with DEQ's enforcement action, they have the right to a "contested case" hearing before an administrative law judge (ALJ). If they are dissatisfied with the decision of an ALJ they may appeal the decision to the Environmental Quality Commission. The Respondents in this case

[1] The staff reports for this meeting can be viewed and printed from DEQ's Web site at http://www.deq.state.or.us/about/eqc/eqc.htm. To request a copy to be sent by mail, contact DEQ, Office of the Director, Helen Lottridge, 811 SW Sixth Avenue, Portland, Oregon 97204; phone: (503) 229-5990.

filed such an appeal. Commissioner Judy Uherbelau moved to accept DEQ's petition to withdraw remaining exceptions, and Vice Chair Blosser seconded the motion. The petition passed unopposed. Commissioner Kenneth Williamson moved to enter a final order as recommended by staff. Commissioner Bill Blosser seconded the motion, which then passed unopposed. Respondent was present at the meeting and commented in agreement with the petition and the order.
Jane Hickman, Administrator, DEQ Office of Compliance and Enforcement

C. Informational Item: Update on the Status of the Umatilla Chemical Agent Disposal Facility (UMCDF)
DEQ gave an update on the status of recent activities at the Umatilla Chemical Agent Disposal Facility (UMCDF). In August 2004, the Commission gave approval to start chemical weapon destruction at UMCDF and DEQ's Chemical Demilitarization Program continues close oversight of work at the facility.
Joni Hammond, Administrator, DEQ Eastern Region and Rich Duval, Administrator, DEQ Chemical Demilitarization Program.

D. Informational Item: Portland-Vancouver and Salem Ozone Maintenance Plan
The federal Clean Air Act requires that each state adopt and submit to the U.S. Environmental Protection Agency (EPA) a plan which provides for implementation, maintenance and enforcement of any new air quality standard within three years of the date EPA designates an area in attainment or nonattainment with the standard. In 1997, EPA revised the ozone air quality standard, changing from a standard based on peak 1-hour average values to a standard based on peak 8-hour average values. In 2004, EPA designated new 8-hour ozone attainment and nonattainment areas. The Portland and Salem areas were historically nonattainment under the 1-hour standard. Both areas are designated as attainment areas under the new 8-hour standard, but require maintenance plans that ensure on-going compliance with the new ozone standard. The DEQ presented background information on the upcoming ozone maintenance plan changes, and described DEQ's proposed revisions. The Commission asked several questions and engaged in significant dialogue with staff.
Andy Ginsburg, Administrator; Marianne Fitzgerald; and David Collier, DEQ Air Quality Division

E. Action Item: Pollution Control Tax Credit Consideration
The Department presented recommendations to the Commission on final certification of pollution control facilities. Vice Chair Bill Blosser moved to approve final certification of facilities as recommended by staff. Commissioner Ken Williamson seconded the motion. Commissioner Blosser moved to deny the request for an extension of time to file application number 7299. Commissioner Judy Uherbelau seconded the motion. Vice Chair Bill Blosser moved to revoke, reissue or transfer certificates as recommended by staff. Commissioner Ken Williamson seconded the motion. All three motions passed unanimously.

F. Informational Item: Budget and Legislative Update
The DEQ presented an update on the agency's budget request.

Greg Aldrich, Department of Environmental Quality

G. Action Item: Draft Proposed Rule regarding Clarifying Proposed Orders in Contested Cases

When DEQ brings an enforcement action, the respondent has the right to a "contested case" hearing before an Administrative Law Judge (ALJ). After the hearing, the ALJ issues a Proposed Order. The EQC hears appeals of Proposed Orders. When the EQC reviews the Proposed Order, the EQC must have access to complete information about the contested case hearing in order to make a decision.

The DEQ presented draft Proposed Rule OAR 340-011-0573 and proposed amendments to OAR 340-011-0575, which would provide a way for the EQC to have more complete information. The Commission directed staff to proceed with rulemaking according to concepts presented at this meeting, and Commissioner Judy Uherbelau suggested that the rule require the ALJ to respond by denying the request for clarification, or by responding. (The proposed rule provided for the ALJ to deny the request by not responding at all.)
Jane Hickman, Administrator, DEQ Office of Compliance and Enforcement
Les Carlough, DEQ Environmental Law Specialist

H. Action Item: Performance Measure for Boards and Commissions as Required by Budget Note

The 2005 legislature directed the Department of Administrative Services and the Legislative Fiscal Office to develop a performance measure for certain boards and commissions to use in evaluating their own performance.

The Environmental Quality Commission has been identified as one of the boards and commissions that should have a performance measure.

The DEQ presented the EQC with a report of requirements, and a recommendation on how the Commission might implement the new measure. The Commissioners directed staff to implement the recommendation, and articulated their intent to provide a more thorough report than is required by the Department of Administrative Services' guidance.
Helen Lottridge, Special Assistant to the DEQ Director and the Environmental Quality Commission

Friday, December 15 – Regular meeting began at 8:30
DEQ Headquarters, 811 SW 6th Avenue, Room 3A

The Environmental Quality Commission (EQC, Commission) held a public meeting beginning at 8:30 a.m. on December 15, 2006, at the DEQ Headquarters building, 811 SW 6th, Room 3A, Portland, Oregon.

The Commission held an Executive Session from approximately 12:00 p.m. to 1:00 p.m. to consult with counsel concerning legal rights and duties regarding current or potential

litigation against the DEQ[2], and to review employment-related performance of the chief executive officer. The executive session was held in Room 4 at the DEQ Headquarters.

I. Action Item: Recommendation for Supporting Commission Involvement

The Department offered a proposal for supporting the Commissioners' desired level of involvement. The Commissioners engaged in a robust dialogue and made a number of comments and suggestions. The EQC directed the Department to implement the proposal with changes, and to provide the final document to current Commissioners and to new Commissioners.
Helen Lottridge, Special Assistant to the DEQ Director and to the Environmental Quality Commission; Larry McAllister, DEQ Rules Coordinator; Nina DeConcini, DEQ Administrator of Communications and Outreach; and Greg Aldrich, DEQ Government Relations Administrator.

J. Informational Item: Director's Dialogue
Stephanie Hallock, DEQ Director, discussed current events and issues involving the Department and the state with Commissioners.

K. Action Item: Rulemaking Agenda and Emerging Issues

Administrative rules are the mechanism by which many laws are implemented. The Department amends rules and adopts new ones to address evolving Department needs. The Environmental Quality Commission (Commission) reviews all rule changes and makes the final decision.

Annually, the Department assembles and reviews its rulemaking plans for the next two years. Review of this Rules Agenda by the Commission is an opportunity for the Commission and the Department to identify rulemaking efforts that will benefit from additional Commission involvement and guidance.

In addition to administrative rules, there is a constant flow of administrative and environmental issues needing to be addressed by the Department. In order for the Commission to provide guidance on these "emerging issues," a forum for studying and discussing these issues will benefit the Department's decision making.

DEQ program administrators reviewed rules underway or proposed for inclusion on the rulemaking agenda. The Commissioners asked questions and commented on the rules. DEQ administrators identified which rules they recommend for increased Commission involvement, and each Commissioner identified the rulemakings in which they would like to participate or to be kept informed throughout the rulemaking process.

The Commissioners also reviewed a list of emerging issues identified by individual commissioners over the past several months. The Commission added more issues to the list, and directed the DEQ to compile and maintain the list. DEQ staff will provide informational

[2] Pursuant to ORS 192.660(1)(h)

updates or workshops on certain issues, and may engage in research or other exploration of other issues.
Helen Lottridge, Special Assistant to DEQ Director and to the Environmental Quality Commission; Larry McAllister, DEQ Rules Coordinator; Lauri Aunan, DEQ Water Quality Administrator; Alan Kiphut, DEQ Land Quality Administrator; and Andy Ginsburg, DEQ Air Quality Administrator

Working Lunch
The Commission held an Executive Session from approximately 12:00 p.m. to 1:30 p.m. to consult with counsel concerning legal rights and duties regarding current or potential litigation against the DEQ, and to review employment-related performance of chief executive officer. Only representatives of the media may attend Executive Sessions and media representatives may not report on any deliberations during the session.[3]

L. Rule Adoption: Utility Mercury Rule and Federal Air Quality Regulations
The DEQ presented the proposed rule package to reduce mercury emissions from coal-fired power plants (i.e., PGE Boardman), and to keep Oregon's rules updated and consistent with the federal rules. The comment period is closed. The Commission discussed the proposal at length. Vice Chair Bill Blosser moved to adopt the rule as presented by staff. Commissioner Ken Williamson seconded the motion, which passed on a role call vote: Commissioner Williamson: Yes. Vice Chair Blosser: Yes. Chair Hampton: Yes. Commissioner Uherbelau: No. Commissioner Uherbelau commented that mercury is a very dangerous substance and has a local effect on public health; trading programs pass along the problem and a health cost may be more than a utility rate increase.
Andy Ginsburg, DEQ Air Quality Administrator

M. Public Forum
The Commission provided members of the public an opportunity to speak to the Commission on environmental issues that were not part of the agenda, or for which there was otherwise no public testimony at this meeting.

Kathryn VanNatta, of the Northwest Pulp and Paper Association, expressed confusion over the Commissioners' comments on trading and whether they are in favor of trading or opposed to it. Commissioners replied that toxics and non-toxics are not the same thing when it comes to trading. Ms. VanNatta also expressed dismay that additional staff for the turbidity rule are not included in the Governor's Budget.

Robert Amundson of the Oregon Toxics Alliance commented in favor of a statewide requirement for Stage I capture equipment at gas stations, and requested a rulemaking to that effect. He also commented that it would be appropriate to make allowances to avoid putting small station operators out of business.

Merlyn Hough of the Lane Regional Air Protection Agency (LRAPA) expressed his interest in air quality partnerships, specifically around small particulate matter (PM2.5) and air toxics. He noted that the Eugene-Springfield area meets air quality standards, but during July

[3] This executive session will be held pursuant to ORS 192.660(1)(h) and ORS 192.660(1)(i).

and August there are high ozone levels with winds from the north. The Heat Smart program is of high interest to LRAPA. Mr. Hough also commented about benzene and the national attention Oregon is receiving.

David Monk, Board Chair of the Oregon Toxics Alliance, commented that he is pleased the Commission is aware of the benzene issue. He suggested that the EQC could take straightforward action by requiring Stage I vapor recovery statewide. He noted that there would be no opposition from the Oregon Petroleum Association. Mr. Monk also suggested giving out "don't top off" stickers to Oregon drivers. Mr. Monk is also a member of the LRAPA Board. The Board has encouraged the Oregon delegation to end field burning—although not unanimously. He would like to see the April EQC meeting focus on public health.

Commissioner Reports

Future Environmental Quality Commission meeting dates for 2007 include:

February 22 – 23, 2007
April 19 – 20, 2007
June 21 – 22, 2007

Agenda Notes

*** Rule Adoptions**: Hearings have been held on Rule Adoption items and public comment periods have closed. In accordance with ORS 183.335(14), no comments may be presented by any party to either the Commission or Department on these items at any time during this meeting.

Staff Reports: Staff reports for each item on this agenda can be viewed and printed from DEQ's Web site at http://www.deq.state.or.us/about/eqc/eqc.htm. To request a particular staff report be sent to you in the mail, contact Helen Lottridge, Department of Environmental Quality, Director's Office, 811 SW Sixth Avenue, Portland, Oregon 97204; telephone 503-229-6725, toll-free 1-800-452-4011 extension 6725, or 503-229-6993 (TTY). Please specify the agenda item letter when requesting reports. If special physical, language or other accommodations are needed for this meeting, please advise Ms. Toneasha Kelly at 503-229-5990 as soon as possible, but at least 48 hours in advance of the meeting.

Public Forum: The Commission will provide members of the public an opportunity to speak to the Commission on environmental issues not part of the agenda for this meeting on Friday afternoon at approximately 3:00. Individuals wishing to speak to the Commission must sign a request form at the meeting and limit presentations to five minutes. The Commission may discontinue public forum after a reasonable time if a large number of speakers wish to appear. In accordance with ORS 183.335(13), no comments may be presented on Rule Adoption items for which public comment periods have closed.

Note: Because of the uncertain length of time needed for each agenda item, the Commission may hear any item at any time during the meeting. If a specific time is indicated for an agenda item, an effort will be made to consider that item as close to that time as possible. However, scheduled times may be modified if participants agree. Those wishing to hear discussion of an item should arrive at the beginning of the meeting to avoid missing the item.

The Environmental Quality Commission is a five-member, all volunteer, citizen panel appointed by the governor for four-year terms to serve as DEQ's policy and rule-making board. Members are eligible for reappointment but may not serve more than two consecutive terms.

Lynn Hampton, Chair
Lynn Hampton serves as Tribal Prosecutor for the Confederated Tribes of the Umatilla Indian Reservation and previously was Deputy District Attorney for Umatilla County. She received her B.A. at University of Oregon and her J.D. at University of Oregon School of Law. Commissioner Hampton was appointed to the EQC in July 2003 and lives in Pendleton.

Bill Blosser, Vice Chair
Bill Blosser is owner of William Blosser Consulting. He is employed by, and has held several positions with, CH2M Hill in Portland. Bill served as Director of the Oregon Department of Land Conservation and Development from 2001-2002 and was formerly president of Sokol Blosser Winery in Dundee, Oregon. Bill has served on and chaired numerous commissions and task forces, including terms as chair of the Water Resources Commission, chair of the Land Conservation and Development Commission and chair of the Policy Advisory Committee on Water Quality to the EQC. Bill has a bachelor of arts degree in history and humanities from Stanford University and a masters degree in regional planning from the University of North Carolina, Chapel Hill. Commissioner Blosser was appointed to the EQC in January 2006 and lives in Portland.

Ken Williamson, Commissioner
Ken Williamson is head of the Department of Civil, Construction and Environmental Engineering at Oregon State University and serves as Co-Director of the Center for Water and Environmental Sustainability. He received his B.S. and M.S. at Oregon State University and his Ph.D. at Stanford University. Commissioner Williamson was appointed to the EQC in February 2004 and he lives in Corvallis.

Judy Uherbelau, Commissioner
Judy Uherbelau is a graduate of Ball State University with a B.S. in Economics/Political Science. She received a J.D. from UCLA School of Law and currently works as an attorney with Thomas C. Howser, PC in Ashland. Judy served in the Peace Corps and the Oregon House of Representatives as well as numerous boards and commissions. Commissioner Uherbelau was appointed to the EQC in February 2005 and lives in Ashland.

Donalda Dodson, Commissioner
Donalda Dodson is currently Interim Executive Director of the Oregon Child Development Coalition. Previously, she served as Administrator of the Department of Human Services Office of Family Health and as Manager of the Maternal/Child Health Program at the Marion County Health Department. Donalda has a bachelor of science degree in nursing and a master's degree in public health. She has chaired or served on nearly a dozen public health committees and task forces and expresses a strong interest in bringing environmental issues into the public health arena. Commissioner Dodson resides in Salem.

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State of Oregon
Department of
Environmental
Quality

Umatilla Chemical Demilitarization Program
Status Update
Environmental Quality Commission
February 22-23, 2007
(Agenda Item B)

Midpoint Milestone

On February 11, 2007, UMCDF destroyed the 110,300th chemical munition. By piece count, half of the 220,599 munitions originally stored at the Umatilla Chemical Depot have been destroyed.

Secondary Waste Trial Burn

On January 31, 2007 UMCDF completed a trial burn for secondary waste combustion in the metal parts furnace. The purpose of this trial burn was to allow the secondary waste processing rate to increase from 50 lbs per tray to 300 lbs per tray. During three months of shakedown preparing for the trial burn, secondary waste in storage was reduced from 106 tons to 68 tons.

Facility Safety Performance

The U.S. Labor Department's Occupational Safety and Health Administration (OSHA) recognized Washington Demilitarization Company's Umatilla Chemical Agent Disposal Facility (UMCDF) in Hermiston for excellence in employee health and safety. OSHA admitted the facility into its Voluntary Protection Program (VPP) at the highest level, the VPP "Star," in a ceremony held Feb.12 at the facility in Hermiston.

Permit Modification Requests (PMRs) for the Umatilla Chemical Agent Disposal Facility (UMCDF) and the Umatilla Chemical Depot (UMCD)

The Department has not approved or received any UMCD PMRs since the last update.

The Department has received the following UMCDF PMRs of note since the last update:

- December 26, 2006, UMCDF-06-049-MON(2), "*Multiagent Monitoring for GB/VX Operations*": This Class 2 PMR proposes the changes necessary to support air monitoring for both GB and VX chemical agents during the upcoming GB to VX changeover process and during processing of secondary waste that is contaminated with both chemical agents. Existing "near real-time" monitoring technology ("ACAMS") can only monitor for one chemical agent at a time. The processing of multi-agent contaminated waste, and the

possibility of residual GB chemical agent in some areas of the facility after the start of the VX agent campaign, requires UMCDF to expand the number of ACAMS in the facility. In addition to the installation of extra monitors, UMCDF is also proposing new sampling and analytical strategies for some of the historical monitors ("DAAMS") that are used to detect very low levels of chemical agents.

- January 16, 2007, UMCDF-07-006-DFS(3TA), "*Minimum Temperature Limit Change on the Deactivation Furnace System*": This Class 3 PMR proposes to change the minimum automatic waste feed cut-off temperature setpoint on the Deactivation Furnace System (DFS) from 1,000°F to 950°F during the treatment of projectile bursters in the DFS. In conjunction with this PMR, the Department has approved two Temporary Authorization Requests (the first on January 18 and the second on January 25) that allowed UMCDF to implement the temperature change prior to the final approval of this PMR. UMCDF had been experiencing numerous issues with molten aluminum adversely affecting throughput rates during the treatment of the 8" projectiles. Although the PMR proposed only a relatively small change in temperature, it appears (from results observed during the current projectile campaign) that the lowering of the temperature setpoint by just 50°F was sufficient to keep the aluminum in the projectile burster casings from melting within the furnace.

- January 30, 2007, UMCDF-07-005-MISC(2), "*Condition II.M-Liability Insurance Requirement Changes*": This Class 2 PMR proposes to modify Condition II.M. to require that Washington Demilitarization Company (WDC) maintain the minimum insurance coverage as specified in 40 CFR §264.147 and Oregon Administrative Rules 340-104-0147 ($1 million per occurrence, $2 million aggregate). Permit Condition II.M. of the UMCDF Hazardous Waste Permit (HW Permit) currently requires that WDC annually provide a compendium of its pollution insurance coverage and attest that "the compendium represents liability coverage equal to, or in excess of, the amounts submitted to demonstrate compliance on July 11, 1997." Condition II.M. was added to the permit by the Environmental Quality Commission ("*Findings and Conclusions of the Commission and Order*," January 15, 1998) as part of the process to add Raytheon (now WDC) to the UMCDF HW Permit as a co-operator and required the maintenance of at least $375 million of liability coverage.

The Department has approved the following UMCDF PMRs of note since the last update:

- December 14, 2006, UMCDF-06-015-CONT(2), "*Annual Contingency Plan Update*": This Class 2 PMR updated the UMCDF Contingency Plan by deleting and/or updating obsolete or outdated material. In addition, the Department agreed to UMCDF's proposal to change the interpretation of when the Contingency Plan has been "implemented," which determines whether certain reporting requirements of the HW Permit are triggered.
- December 21, 2006, UMCDF-05-017-WAP(2), "*Agent-Free for VX and HD*": This Class 2 PMR revised the Waste Analysis Plan (WAP) to establish the Permit Compliance Concentrations (PCCs) for VX and HD chemical agent-related wastes generated by UMCDF. The PCC is used to determine whether a waste is "agent-free" per the requirements of HW Permit Condition II.B.2. that requires "Any chemical agent-related material and/or demilitarization waste being transferred to an off-site...hazardous waste disposal facility...must meet the agent-free criteria as defined in [the Waste Analysis Plan]."

- January 3, 2007, UMCDF-06-033-MPF(2TA) – "*Metal Parts Furnace Secondary Waste Trial Burn Plan*": The Secondary Waste Trial Burn (SWTB) is used to demonstrate that the Metal Parts Furnace (MPF) can meet the emission standards of the HW Permit and the Hazardous Waste Combustor Maximum Achievable Control Technology (MACT) standards. The SWTB was subsequently conducted from January 26 through January 31, 2007. Results of the tests will be used to demonstrate compliance with emissions standards at the feed rates proposed in the plan, which were higher than those currently permitted. Emissions measured during the SWTB will also be used to support the post-trial burn risk assessment.

In addition to the PMRs discussed above, UMCDF has submitted 10 Class 1 Notice PMRs, and five Class 1R PMRs (three have been approved, one is still in process, and one has been withdrawn).

Summary of Agent Processing at UMCDF

The 8" GB projectile campaign was completed on January 3, 2007 when the last of the 14,246 8" projectiles were treated in the Metal Parts Furnace (MPF). The equipment changeover to prepare for the 155 mm GB projectile campaign was completed ahead of schedule on January 25, 2007. The first 155 mm projectiles were processed through the MPF on February 1, 2007 (after the completion of the Secondary Waste Trial Burn on January 31, 2007). As of February 11, UMCDF had treated 2,544 155 mm projectiles in the MPF. UMCDF expects to complete treatment of the remaining 44,862 GB 155 mm projectiles in early June, 2007.

The total amount of GB agent destroyed since the start of agent processing (September 2004) is approximately 1.73 million lbs., or about 85% of the original GB agent stored at UMCD. The 155 mm projectiles are the last of the GB munitions.

Off-site Shipments of Brine

UMCDF's Hazardous Waste Permit requires the site to minimize brine generation, treat as much brine on-site as possible, and to provide prior notice to the Department if the need arises for off-site shipment of brine. No off-site shipments of brine have occurred since the last update.

Renewal of UMCDF's Hazardous Waste Storage and Treatment Facility Permit

The current UMCDF HW Permit will expire on February 12, 2007. The completeness determination that the Department made on November 30, 2006 allows the current HW Permit to continue in effect past its expiration date until the Department issues a new HW Permit. The Chemical Demilitarization Program's lead permitting specialist (Tom Beam) left state employment in late December. The Department is proceeding with the drafting of a new UMCDF HW Permit with the assistance of the U.S. Army and WDC. Issuance of the new HW Permit for public review and comment is expected to occur sometime in 2007. The Department will continue to update the Commission on the status of this effort.

Significant Events at Other Demilitarization Facilities

Aberdeen Chemical Agent Disposal Facility (ABCDF), Maryland

Demolition and closure of processing buildings continues at ABCDF. A total of 2,761 drums of mustard agent-contaminated secondary waste has been shipped by truck from ABCDF to a commercial incineration facility at Port Arthur, Texas. The final stage of demolition is under way and is expected to be completed by spring.

Anniston Chemical Agent Disposal Facility (ANCDF), Alabama

ANCDF continues to process VX M-55 rockets. As of February 12, 2007, ANCDF has processed a total of 29,553 VX rockets (out of an original inventory of 35,636) and destroyed 33,725 gallons of VX nerve agent. Completion of the VX rocket campaign at ANCDF is expected next month (March 2007).

Newport Chemical Agent Disposal Facility (NECDF), Indiana

As of February 6, 2007, NECDF has neutralized 1,040,917 pounds (123,335 gallons) of VX (approximately 41% of the original Newport stockpile). The VX hydrolysate generated as a by-product of the neutralization process continues to be stored onsite. The Army had been working with DuPont since 2003 on a plan to ship the hydrolysate to DuPont's Chamber Works facility in Deepwater, N.J. for final treatment and disposal. However, because of intense opposition from the public and elected officials, DuPont announced in early January that it would no longer consider accepting the hydrolysate. The Army is now considering other options for disposal of the NECDF hydrolysate.

Pine Bluff Chemical Agent Disposal Facility (PBCDF), Arkansas

As of February 5, 2007, PBCDF has processed 78,271 GB M55 rockets (approximately 87% of the original GB rocket inventory) and destroyed a total of 824,717 pounds of GB agent.

Tooele Chemical Agent Disposal Facility (TOCDF), Utah

As of January 16, 2007, TOCDF has processed 440 ton containers containing HD mustard (blister) agent. Processing continues to be limited to only those ton containers that show a concentration of 1 ppm or less of mercury contamination. On January 9, 2007 TOCDF started a three week mustard agent trial burn period for both the Metal Parts Furnace and the Liquid Incinerator. Sampling and analysis of HD ton containers stored at the Deseret Chemical Depot continues. Ton containers of mustard with higher levels of mercury are being stored for processing at a later date (after installation of mercury removal and/or control equipment).

Pueblo Chemical Agent Destruction Pilot Plant (PCAPP), Colorado
Blue Grass Chemical Agent Destruction Pilot Plant (BGCAPP), Kentucky

The Pueblo and Blue Grass stockpile sites are operated by the Department of Defense (DOD) Assembled Chemical Weapons Alternatives (ACWA) Program. DOD originally selected neutralization followed by biotreatment of the hydrolysate to treat the Pueblo stockpile and neutralization followed by supercritical water oxidation for the Blue Grass stockpile. In recent years DOD has been indicating its preference for off-site shipment and treatment of the

hydrolysate from both sites. However, recent studies by the ACWA Program concluded that off-site shipment of hydrolysate would take more time and be more expensive than the originally planned on-site treatment processes.

Both the Colorado and Kentucky environmental permitting agencies have indicated to ACWA that they will not issue operating permits for chemical agent treatment activities until there is a technology in place to treat the hydrolysate or ACWA has demonstrated to the state that an off-site treatment facility has been confirmed and is under contract to accept the hydrolysate. Both PCAPP and BGCAPP are in the early stages of construction site preparation and utility installation and have been issued Research, Development, and Demonstration (RD&D) Permits from the states of Colorado and Kentucky, respectively.

State of Oregon

Department of Environmental Quality Memorandum

Date: January 15, 2007

To: Environmental Quality Commission

From: Stephanie Hallock, Director

Subject: Agenda Item C, Action Item: Recommendation that the EQC Delegate Review of Proposed Facilities and Schedule
February 22, 2007 EQC Meeting

Why this is Important

Windmaster Corners, an area outside the Urban Growth Boundary (UGB) of the City of Hood River has an ongoing public health concern due to failing onsite waste systems. Hood River County has filed a resolution seeking the creation of a sanitary district that would serve this area near the Hood River Airport. The EQC or its delegate will need to approve plans and schedules for facility construction.

Department Recommendation

The Department believes that it would be most efficient for the Commission to delegate the review and certification of approval or disapproval, and also to delegate the review of alternative proposals, if any, under health hazard annexation provisions (ORS 431.705 to 431.750) to the Director or Regional Administrator. This type of review is largely of a technical nature and legal counsel has advised that the Commission has legal authority to delegate this function to the Department.

Background

In 1973, the Legislature enacted a number of statutes designed to bring areas into a city or the service area of a special district when this is necessary to address a public health hazard created by inadequate public water or sewer facilities. One set of statutes, ORS 222.840 to 222.915, authorizes local government to petition the Department of Human Services (DHS) to allow the annexation into a city of property within an urban services boundary without an election or consent of the landowners. In such proceedings, the Public Health Division within DHS generally reviews the adequacy of proposed plans. A majority of electors may propose an alternative plan, however, and if the plan involves sewage collection or treatment facilities the alternative plan must be reviewed and approved by the Commission.

For health hazard areas that are not subject to annexation under ORS 222.840 to 222.915, the statutes allow the affected county or local

board of health to file a petition asking DHS to force either the creation of special district or the annexation of the area into the service territory of an existing district. ORS 431.705 to 431.760. Under these statutes, the county or local health board must adopt a resolution that describes the problem and proposed solution, and then must submit the resolution to the Public Heath Division within DHS. The Public Health Division must determine whether there is a health hazard that is properly addressed through the formation of, or annexation into, a special district and, if so, the facilities that should be constructed and the schedule for construction.

If the resolution calls for the district to provide sewage treatment or collection facilities, the documents describing the system also must be filed with the Environmental Quality Commission. ORS 431.715(4). Further, the Public Health Division may not order the creation of, annexation to, a special district unless the Commission determines that the "proposed facilities and the time schedule for installation of such facilities [is] adequate to remove or alleviate the dangerous conditions." ORS 431.720.

Fifty-one percent of the electors within the affected territory may propose an alternative plan to address the health hazard. ORS 431.745. If that happens, the Commission would be required to review the alternative facility plans and timetable. ORS 431.750. And in such a situation, the Commission also is required to determine which of the competing plans is preferable.

The health hazard statutes at issue merely provide for the creation of a service district or the annexation to the district with the legal authority to finance and construct the needed facilities. These statutes don't specifically provide for a mechanism to force the district to follow through with the construction of the needed facilities. Instead, DEQ and DHS are directed to "use their applicable powers of enforcement to ensure that service facilities are constructed and installed in conformance with the approved plans and schedules." ORS 431.740

Windmaster Corners

Hood River County has filed a resolution seeking the creation of a sanitary district that would serve an area near the Hood River Airport. This area has a longstanding history of failing on-site sewage disposal systems and surfacing sewage. The County proposes to have the district install a sewage collection system. That system would transport waste to the sewage system and treatment works operated by the City of Hood River. Facility plans and a time table have been

filed with the Department of Environmental Quality.

Key Issues

- A public health hazard currently exists in the Windmaster Corners area outside the UGB of the City of Hood River;
- Department of Human Services has the authority to force establishment of a sewer district to alleviate health hazards;
- Plans for facilities and schedules must be approved by the Commission;
- The Commission has the option of retaining approval authority for plans of facilities and schedules, or may delegate this authority to the Director;
- The Commission may choose to delegate this authority for this particular case or for all such cases as they arise.

EQC Action Alternatives

The Commission may review and approve the proposed facilities and schedule. If that is the Commission's preference, staff will prepare a report and presentation for the next regularly scheduled Commission meeting.

The Commission may delegate the review and approval or denial of the proposed plans and schedule for the Windmaster Corners to the Director or some other designated staff person.

The Commission may delegate the pending and any future review and approval or denial of plans and schedules under ORS 431.705 to 431.760 to the Director or some other designated staff person.

Available Upon Request

Resolution of the County Commissioners for Hood River County, Oregon. Including:
Exhibits A through F describing establishment of sewer district and draft plans for construction of sewerage facilities serving Windmaster Corners.

Approved:

Section: _____

Division: _____

Report Prepared By: Eric Nigg
Phone: (541) 388-6146/251

State of Oregon

Department of Environmental Quality Memorandum

Date: February 5, 2007

To: Environmental Quality Commission

From: Stephanie Hallock, Director

Subject: Agenda Item D, Rule Adoption: Portland-Vancouver and Salem Ozone Maintenance Plan and Supporting Rule Revisions
February 22-23, 2007 EQC Meeting

Why this is Important

The federal Clean Air Act requires that each state adopt and submit to the U.S. Environmental Protection Agency (EPA) a plan which provides for implementation, maintenance and enforcement of any new air quality standard within three years of the date EPA designates an area in attainment or nonattainment with the standard. In 1997, EPA revised the ozone air quality standard, changing from a standard based on peak 1-hour average values to a standard based on peak 8-hour average values. On June 15, 2004, EPA designated new 8-hour ozone attainment and nonattainment areas. The Portland and Salem areas were historically nonattainment under the 1-hour standard. Both areas are designated as attainment areas under the new 8-hour standard, but require maintenance plans that ensure on-going compliance with the new ozone standard.

To address the new 8-hour ozone standard, the Department has drafted an update to the existing Portland-Vancouver Ozone Maintenance Plan, and has developed an ozone maintenance plan for the Salem-Keizer area. These plans, together with their supporting rule revisions, ensure that ozone levels in the Portland and Salem areas will remain in compliance with federal health standards.

Department Recommendation

The Department of Environmental Quality (DEQ) recommends that the EQC adopt the Portland-Vancouver Air Quality Maintenance Area (Oregon portion) and Salem-Keizer Area Ozone Maintenance Plan, and amend and repeal rules that implement control strategies described in the plan, as presented in Attachment A, as an amendment to the State Clean Air Act Implementation Plan (SIP).

Background and Need for Rulemaking

Some of the information in this staff report was contained in the Informational Item on the Portland-Vancouver and Salem Ozone Maintenance Plan, Agenda Item D, December 14-15, 2006 EQC meeting.

What is Ozone

Ozone forms naturally in the upper atmosphere surrounding the Earth and protects life from the damaging ultraviolet light emitted by the sun. At ground level, the same ozone is harmful to living things; it is an air pollutant that damages human health, vegetation, and many man-made materials. Ground-level ozone is the key ingredient of urban smog.

Ozone affects your health when it is inhaled. Even at low concentrations, ozone can cause respiratory problems and aggravated asthma in children, people with respiratory diseases, and even otherwise healthy adults who are working or exercising outside on smoggy days. Children are most at risk from exposure to ozone because they are often active outside during the summer and their lungs are not fully developed. Long-term exposure to ozone may lead to premature aging of the lungs and chronic respiratory illnesses.

Ozone is not emitted directly into the air. Instead it is created when gases called oxides of nitrogen (NO_x) and volatile organic compounds (VOCs) react in sunlight and heat. Emissions of NO_x are produced when fossil fuels are burned in motor vehicle engines, power plants, and industrial boilers. Emissions of VOC are produced by thousands of sources including automobile emissions, gasoline vapors, chemical solvents, and consumer products like paint.

Ozone is mainly a daytime problem during the summer months because more sunlight and higher temperatures enhance ozone formation. Ozone levels in the air vary depending on weather and the amount of ozone forming emissions present. In mornings, ozone levels are generally low, so the air is healthy. As each hour of the day passes, pollution from human activities, such as industry, cars and trucks, and natural sources like trees and plants, are injected into the atmosphere. These emissions are then subjected to movement and mixing, which are influenced by weather characteristics such as wind speed, sunlight and temperature. During periods of high temperatures and low wind speeds, pollution can build up to unhealthy levels. This buildup of unhealthy ozone levels can persist over a several day period of poor ventilation and hot temperatures.

Federal Air Quality Health Standard for Ozone

Ozone is one of several pollutants regulated under the Clean Air Act for which the Environmental Protection Agency sets national health-based air quality standards. Other pollutants regulated under the Act include carbon monoxide, nitrogen dioxide, sulfer dioxide, lead, and particulate matter (PM10 and PM2.5).

From 1979 through 1997, the federal standard for ozone was 0.12 parts per million (ppm), based on maximum *1-hour average* ozone values. In 1997, after

reviewing the latest medical research on ozone health effects, EPA changed the federal ozone standard to 0.08 ppm, based on maximum *8-hour average* values. EPA also changed the formula for determining a violation, which is now based on a three-year average of the annual fourth highest daily maximum 8-hour average concentration.

Three areas in Oregon (Portland, Salem and Medford) formerly violated the old 1-hour standard. DEQ developed "control strategies" (administrative rule requirements that reduce emissions from new or existing pollution sources, or programs that encourage people to reduce pollution) to achieve compliance with standard and the on-going maintenance of healthy air quality. Medford achieved compliance with the standard prior to the Clean Air Act Amendments of 1990, but Portland and Salem did not. Now, all communities in Oregon are in compliance with the new 8-hour ozone standard, as well as the former 1-hour ozone standard.

Portland and Salem Air Quality Plans and Strategies for Ozone

Portland was formally designated as a nonattainment area for ozone on March 3, 1978. The first Portland-Vancouver Ozone Attainment Plan was adopted by the Environmental Quality Commission on July 16, 1982 and subsequently approved by EPA. Important control strategies in the 1982 plan included:

- A motor vehicle inspection and maintenance program for the Portland area (1975);
- Motor vehicle trip reduction and traffic flow improvements and measures; and
- VOC controls for existing major industrial sources (1978).

Area source controls on gasoline stations were adopted in 1991 to capture the vapors (VOC's) expelled from underground storage tanks when being refilled by tank trucks.

Under the 1990 Clean Air Act Amendments, the Portland-Vancouver Air Quality Maintenance Area was designated a "marginal" nonattainment area. Ozone Maintenance Plans for Portland and Vancouver were adopted by the Commission on July 12, 1996 and the Board of Directors of the Southwest Air Pollution Control Authority of Southwest Washington on March 19, 1996, respectively. Both plans relied on existing strategies and several new strategies. The 1996 Portland Ozone Maintenance Plan added the following new strategies:

- An enhanced vehicle inspection testing method;
- Emission standards (Reasonably Available Control Technology) for existing major VOC point sources (individual industrial facilities having an air quality permit);

- Employee Commute Option Program Rules and Voluntary Parking Ratio Rules to reduce motor vehicle trips;
- Barge Loading Rules that control VOCs when gasoline from refineries that is barged to Portland is unloaded at the bulk terminal;
- Stage II vapor recovery systems that capture gasoline vapors that would otherwise be vented during individual vehicle refueling;
- Aerosol Paint Rules that lower VOC content from spray paints sold in the Portland area;
- Motor Vehicle Refinishing Rules that require low-emitting painting methods at autobody shops; and
- Public education and outreach that encourages people to voluntarily reduce emissions, such as not mowing lawns and driving less on Clean Air Action Days (now called Air Pollution Advisories).

DEQ and the Southwest Clean Air Agency are now updating the 1996 Portland-Vancouver Ozone Maintenance Plans. DEQ and SWCAA coordinated closely on the data collection, modeling, maintenance analysis and strategies that support the maintenance plans. The SWCAA Board adopted the Vancouver Ozone Maintenance Plan on November 2, 2006.

DEQ is proposing to update the following strategies in the Portland-Vancouver Ozone Maintenance Plan (see Key Issues #2 and 3, pages 11-12):

- Employee Commute Option Program, and
- Industrial Emission Management Program rules.

DEQ is also developing the first Ozone Maintenance Plan for the Salem-Keizer area. The Salem-Keizer area was formally designated as nonattainment for ozone on March 3, 1978, and designated "nonattainment/insufficient data" in 1991. Because Salem is downwind from Portland, strategies that reduce emissions in Portland also benefit Salem's air quality. Salem's strategies to reduce VOC emissions in the Salem-Keizer air quality area include:

- Emission standards for existing industrial sources of VOC;
- New Source Review Program for new and expanding major industrial facilities; and
- An approved maintenance plan for Portland.

DEQ is proposing to amend the technology requirements for new and expanding major industrial sources in Salem (see Key Issue #1, page 9) to be consistent with the proposed maintenance designation and the requirements in Portland.

The attached plan and proposed rule revisions demonstrate that existing rules and strategies will maintain compliance with the 8-hour ozone standard in

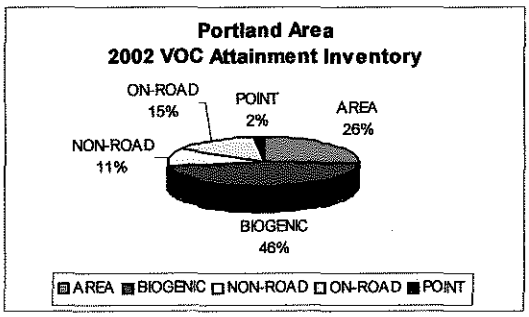
Portland and Salem through at least 2015. The 2006 plans are designed to address the new 8-hour ozone standard rather than the previous standard based on 1-hour averages.

Air Quality Analysis

As the first step in the maintenance planning process, DEQ developed an "emissions inventory" of the total releases of all pollutants that affect the air pollution problem that the plan addresses. The main pollutants that contribute to ozone formation are volatile organic compounds and oxides of nitrogen. Total airshed emissions are estimated by adding up individual emission estimates for a wide variety of different pollution source types like cars, commercial and industrial activity, construction, and personal activities like lawn mowing or painting.

The emission sources for Portland and Salem are summarized in Tables 1 and 2 below, and described in more detail in the Maintenance Plan (Attachment A-1) and in the December 2006 EQC Informational Item D. "*On-road*" mobile sources include emissions from cars, trucks, motorcycles and buses. "*Non-road*" mobile sources include emissions from airplanes, locomotives, farm and construction equipment, lawn and garden equipment, power boats and outboard motors. "*Point*" sources are facilities that have an air quality permit, including manufacturing facilities, power plants and industrial or commercial buildings with large boilers. "*Area*" sources include a wide array of business and citizen activities, such as print shops and gas stations, household products such as house paints and consumer solvents, and open burning. Pollution from individual activities may be small but the collective impact in a community can be substantial. "*Biogenic*" sources are those found in nature, including trees that produce naturally occurring hydrocarbons (terpenes) that contribute to ozone formation.

Table 1
Portland Area 2002 VOC and NO_x Attainment Inventory



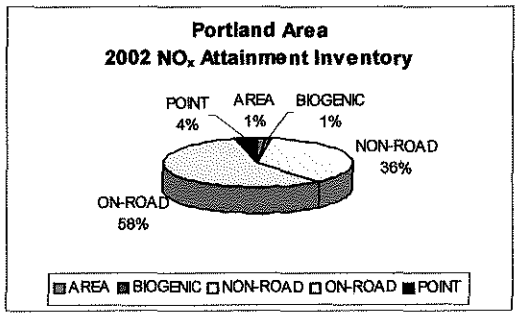
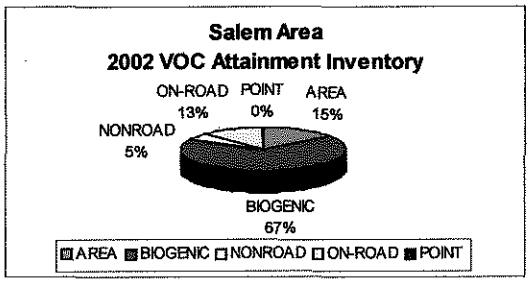
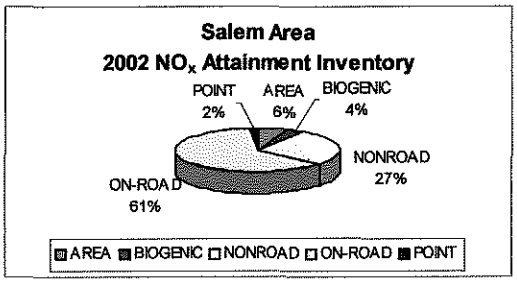


Table 2

Salem Area 2002 VOC and NO_x Attainment Inventory



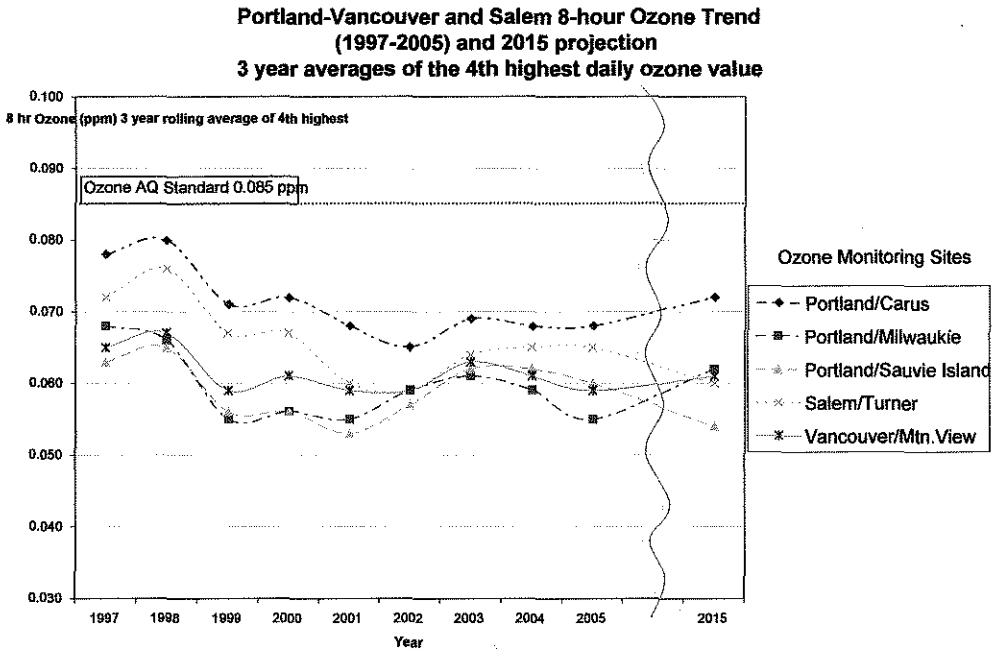


DEQ then analyzed population projections, expected increases in motor vehicle travel, and economic trends to project emissions for 2015, following EPA guidance for developing maintenance plans.

In order to evaluate future compliance with the ozone standard, DEQ used a sophisticated computer model to estimate future ozone concentrations in the Portland and Salem areas. The model combines the forecast of future emissions, worse-case summertime meteorology and atmospheric chemistry to estimate peak ozone levels in 2015.

The future forecast, described in more detail in the maintenance demonstration section of the Maintenance Plan (Attachment A-1) and the figure below, shows that ozone levels will remain well below health standards, with a significant margin of safety through at least 2015.

The Carus monitoring site is located near Canby, Oregon and is located in an area downwind of Portland that has traditionally recorded the highest ozone concentrations in the region. The model predicts that all pollution monitoring sites in the area will remain below the standard.



Effect of the Plan and Rule Revisions

The following is a summary of the proposed rule revisions within Oregon Administrative Rules, Chapter 340:

- Division 200: Adopt the maintenance plan and rules as a revision of the State of Oregon Clean Air Act Implementation Plan.

- Division 242: Revise rules for Employee Commute Options to reduce administrative burdens while maintaining alternative commute programs at larger employers. Changes include focusing the program on employers with 100 or more employees, reducing the survey requirements from annual to every two years, and other changes that modify program requirements;

- Division 242: Retain existing rules for New Source Review in the Portland area, and update the Industrial Emission Management Program to manage growth of new and expanding major industrial sources and ensure that the ozone standard will not be violated;

- Division 204: Designate the Salem-Keizer Area Transportation Study air quality area an ozone maintenance area under state rules;

- Division 224 and 225: Revise rules for New Source Review in the Salem area, to replace the emission control technology requirements for new and expanding major industrial sources in nonattainment areas with

emission control technology requirements for maintenance areas;

- Division 202: Amend DEQ rules to reflect the new federal ozone air quality standard, from the old 1-hour standard (which EPA has revoked) to the current federal 8-hour standard of 0.08 ppm, three year average; and

- Make housekeeping changes to correct the spelling of the Salem-Keizer Area Transportation Study air quality area.

The proposed plan and rule revisions will have the following effects on public health and economic development:

Public Health: The Maintenance Plan ensures continued compliance with the federal air quality health standard for ozone for at least the next ten years. Though not directly addressed in this proposal, many of the strategies in the plan also reduce emissions of air toxics and greenhouse gases.

New and Expanding Industry in Portland: Proposed revisions to the Portland-Area Industrial Emission Management Program continue the use of an emission growth allowance in lieu of offsets as part of a program to manage growth of new and expanding major industrial sources and ensure that the ozone standard will not be violated. See Key Issue #1 (page 9) for further discussion.

New and Expanding Industry in Salem: The proposed rule revisions would change the emission control technology requirements for new and expanding major industrial sources in Salem from Lowest Available Control Technology to Best Available Control Technology. This change would benefit new or expanding major industries seeking to locate in the Salem area while at the same time ensuring a very high level of emission control and protection of public health. The revised requirements are consistent with what is required in the Portland-Vancouver area. See Key Issue #3 (page 12) for further discussion.

Large Businesses in Portland: Proposed revisions to the Portland-area Employee Commute Options (ECO) rule would reduce the number of employers affected by the ECO program and focus efforts on the larger employers that achieve most of the emission reductions through the ECO program. Employers with 50-99 employees would no longer be covered by the rule. The rule change would also streamline reporting requirements for the remaining ECO-affected employers (employers with 100 or more employees). See Key Issue #4 (page 13) for further discussion.

Commission The Commission has authority to take this action under ORS Chapter 468,

Authority

Chapter 468A, 468.020 and 468A.025.

Stakeholder Involvement

DEQ discussed the proposed changes to the Portland-Vancouver Ozone Maintenance Plan and Employee Commute Option Program rules with the three transportation committees of Metro, the formal metropolitan planning organization for the Portland area. On May 25, 2006, Metro adopted Resolution 06-3695 in support of the plan and rules as proposed. The resolution was endorsed by the Joint Policy Advisory Committee on Transportation. JPACT is comprised of elected public officials from the greater metropolitan area of Portland including SW Washington. DEQ, TriMet, the Port of Portland, and the Oregon Dept. of Transportation are also on the committee.

On March 14, 2006, DEQ discussed elements of the proposed Salem-Keizer maintenance plan with the Salem-Keizer Area Transportation Study Area Technical Committee, the metropolitan planning organization for the Salem-Keizer area. Most of the discussion focused on the proposed changes for new and expanding major industrial sources.

Two informational meetings were held in Portland on April 21 and May 4, 2006. DEQ notified interested citizens and the media, and nine people attended the meetings. Two news stories appeared in the Statesman-Journal and one news story appeared in a suburban section of the Oregonian.

Public Comment

A public comment period extended from June 1 to July 14, 2006 and included public hearings in Portland and Salem on July 11, 2006. A summary of comments received and DEQ response, including proposed changes, are described in Key Issues (below); Attachment B, Summary of Public Comment and Agency Response; and Attachment C, Presiding Officer's Report on Public Hearings. A detailed summary of plan and rule changes that were made to the drafts that were available for public comment is available upon request (items #4 and #5).

Key Issues

Key Issue 1. Planning for Major Industrial Growth

There are two ways DEQ could choose to plan for the possibility of future emission increases from new major industrial sources in the Portland area. One way (Option 1) would be to wait until a business proposes to construct a new major facility, like a new factory or power plant, and at that time attempt to evaluate the effect of the proposed facility on future ozone levels and compliance with ozone standards. That analysis would be done under the New Source Review (NSR) process. For ozone however, this NSR analysis presents unique difficulties. The atmospheric chemistry that drives ozone formation is extremely complex. It is technically very difficult, labor intensive, and expensive to try to model the effect on ozone compliance from a single new

source. This complexity would make the air quality permitting process longer, less certain, more expensive, and more cumbersome for both the facility owner and the Department.

A second approach (Option 2) is to anticipate the possibility of future emissions growth from new industry during the maintenance planning process, and build into the plan "up-front" a pre-analyzed growth allowance dedicated for future industrial growth. This allowance serves as a limit on industrial emissions at a level that will not cause ozone violations. Since this growth allowance may never be fully used, the result is a very conservative and protective ozone analysis for the airshed. Evaluating this growth potential up-front, rather that waiting until new facilities are proposed, provides a more comprehensive evaluation of future ozone concentrations, and pre-analyzing these emissions in the maintenance plan helps streamline the industrial permitting process and lessens future workload on Department staff.

For the past ten years the Portland Ozone Maintenance Plan has managed industrial growth by using Option 2 described above. In 1996, the Portland Ozone Maintenance Plan established a growth allowance of 1056 tons of volatile organic compounds (VOC) and 438 tons of nitrogen oxides (NO_x) that could be used by new and expanding major industry. This growth allowance was built into the ozone compliance analysis and maintenance demonstration from the start as a conservative planning assumption. Over the last ten years, new and modified major sources have used only about 30% of the existing growth allowance.

As part of the 2006 Portland Ozone Maintenance Plan update, DEQ proposes to continue the use of the growth allowance approach as a way to plan for, manage, and limit future emission increases from new major industry. In response to Comment #4 and Comment #6 (Attachment B, Summary of Public Comments and Agency Response), DEQ is proposing to add additional safeguards and restrict even further the allocation of the growth allowance. The growth allowance management process proposed by the Department is described in the Maintenance Plan (Attachment A-1) and summarized as follows:

- The plan would establish, and EPA would authorize, a maximum growth limit of 5,000 tons of VOC and 5,000 tons of NO_x.
- DEQ would only authorize the use of the first 1,000 tons of each pollutant for new and expanding major industrial sources, and hold 4,000 tons in reserve.
- If the first 1,000 ton increment is consumed, DEQ would conduct an analysis to determine whether a second 1,000 ton increment could be released. Further allocation of growth increments would be subject to an air quality analysis and public comment period. DEQ would not

release an additional increment if its analysis showed conditions had changed since adoption of the maintenance plan and that such an action would jeopardize compliance with ozone standards.

- Any source that requests more than 1,000 tons of either VOC or NO_x would need to apply to the EQC for approval. If a source requests 1,000 or more tons of either VOC or NO_x, DEQ will evaluate ozone levels and expected trends to determine whether the proposed facility poses any risk to maintaining compliance with the ozone standard prior to making a recommendation to the EQC regarding the source application.

This careful management of the growth allowance will accommodate economic development and growth in the Portland area while still protecting air quality. Actual point source emissions represent only 2% of the 2002 VOC emissions inventory and 4% of the 2002 NO_x emissions inventory. To be conservative, the maintenance demonstration includes maximum permitted levels for existing industry and the proposed new growth allowance. Even under this scenario, future ozone levels are expected to remain well below standards.

Key Issue 2. Stringency of Portland and Salem New Source Review Program

To understand the full context of managing emissions growth from new major sources it is important to understand that the *state* New Source Review requirements used in the Portland Ozone Maintenance Area are significantly more protective than what EPA would require for Portland under the *federal* New Source Review Program. DEQ's NSR program for ozone differs from the federal program in several important ways.

- The federal NSR program only applies to major sources with emissions of 250 tons or more VOC or NO_x (or select sources with 100 tons or more). DEQ's NSR program for ozone applies to all major sources with emissions of 40 tons or more. DEQ's NSR program captures, tracks, and manages emission increases from a much wider universe of sources than the federal program, providing closer scrutiny of airshed impacts.

- Under the federal NSR program, there is no explicit limit on industrial emissions growth and emission offsets are not required. Under the Portland NSR program, the growth allowance establishes explicit growth limits, a strict process for allocation, and requires the use of emission offsets if the growth allowance cannot be used.

- Under the federal NSR program for the new 8-hour ozone standard, there is no requirement for new emission sources outside of the Portland area to assess their impacts on the Portland area. Under the Portland

NSR program, new and modified major sources within 100 km of the maintenance area boundary must obtain an allocation of the growth allowance or obtain an offset.

Both the federal and state NSR programs require the installation of Best Available Control Technology (BACT). The use of BACT in Salem's NSR program is discussed below in Key Issue #3.

During the public comment period, Comment #8 (Attachment B, Summary of Public Comments and Agency Response) recommended that DEQ defer to the minimum federal NSR program for attainment areas. DEQ recommends keeping Portland and Salem's more protective maintenance area NSR requirements in place.

Key Issue 3. Requirements For New And Expanding Major Industrial Sources In Salem

Because Salem is still designated a "nonattainment area" for ozone under state rules, it is subject to the most strict regulatory requirements for new and expanding major industrial sources. The proposed rule would change Salem's state designation from a "nonattainment" to a "maintenance" area, and bring requirements for new and expanding major sources in line with requirements for Portland and other parts of the state.

The effect of this proposed change in Salem's designation is reflected in the control technology required of new or expanding major facilities in the Salem area (it does not affect requirements for existing facilities). New or expanding major sources would no longer be required to install "Lowest Achievable Emission Rate" (LAER) technology, but would instead be required to install "Best Available Control Technology" (BACT). LAER is typically required in areas violating air quality standards and BACT is typically used in maintenance and attainment areas where air quality is in compliance with standards.

The main distinction between LAER and BACT is the consideration of cost and other factors in determining the level of control. A LAER determination does not consider cost, even if a technology would be uniquely expensive to apply because it was developed for another process or would require special modifications to work at a specific location. A LAER determination also does not consider increases in energy use or other emissions (such as greenhouse gases) caused by the control equipment. A BACT determination begins with LAER technology, but may be less stringent if the applicant demonstrates that there are unique costs or if there are significant energy or environmental impacts from LAER in a given case. BACT is still a very high level of control and in some cases may be as stringent as LAER.

Several citizens commented that they did not want DEQ to relax industrial standards from LAER to BACT in Salem (see Comment #1, Attachment B, Summary of Public Comments and Agency Response). The Salem Chamber of Commerce and others (Comment #7) commented that BACT is a very conservative requirement and Salem's new source review requirements should be the same as required in Portland. DEQ considered all of these comments along with historical air quality data and trends. The Salem area has never violated the 8-hour ozone standard, has not violated the 1-hour standard in over ten years, and is not at risk of violating the 8-hour ozone standard. Salem's transition from "nonattainment" to "maintenance" status and the transition from LAER to BACT is consistent with transitions made by other cities in Oregon and across the nation. Therefore, DEQ recommends BACT as an appropriate level of emission control for new and expanding major industry in Salem.

Key Issue 4. Employee Commute Options Program Rules

The 1996 Portland Ozone Maintenance Plan includes the Employee Commute Option (ECO) Program rules that require Portland-area employers with more than 50 employees to implement programs that would reduce single occupancy commute travel by 10%. Affected employers must provide incentives for employee use of alternative commute options, and employers must survey employees annually to measure progress toward meeting the goal. DEQ analyzed survey data and proposed to modify the program to more effectively focus on larger employers that produce the most significant amount of emission reduction benefit, and to streamline reporting requirements. Requirements would continue to apply to employers with more than 100 employees. Local governments in the Portland area were concerned that the proposed changes could have impacts on their efforts to reduce single occupancy vehicle travel among smaller businesses within their communities. These concerns were discussed with the three transportation committees of Metro, the metropolitan planning organization for the Portland Metro area. All of the issues were resolved before the beginning of the public comment period. DEQ received only one comment on the proposed changes to the ECO rules, and that comment was in support of the proposal (see Comment #9, Attachment B, Summary of Public Comments and Agency Response).

The Department of Land Conservation and Development (DLCD) commented that DEQ should not remove the ECO program from the list of programs affecting land use in OAR Chapter 340, Division 18, as was proposed in the rulemaking notice (see Comment #5, Attachment B, Summary of Public Comments and Agency Response). DEQ's Land Use Evaluation Statement focused on ECO's classification as a transportation control measure under federal rules, and did not mention that local governments rely on the ECO

program to meet their requirements under state rules (Goal 12 and the Transportation Planning Rule). DEQ revised the proposal and no longer recommends a revision to Division 18, and will continue to recognize ECO as a program affecting state land use and transportation planning goals.

Key Issue 5. Contingency Plan

The maintenance plans include a contingency process to respond to any unforeseen changes in ozone levels not anticipated by the maintenance analysis. DEQ will track ozone levels in the Portland and Salem areas over the long term. If peak ozone levels exceed early warning action levels established in the plans, DEQ will reevaluate growth and other assumptions in the plan, identify any need for further emission reduction strategies, and modify the plan as needed to protect public health. During this time DEQ can suspend use of the industrial growth allowance and impose the emission offset requirement for new major industrial sources.

Next Steps

Should the EQC elect to adopt the maintenance plan and rules, DEQ will submit them to EPA for approval as an amendment of the Oregon State Clean Air Act Implementation Plan. The maintenance plan is required to be submitted to EPA by June 15, 2007.

The rule revisions which have the most direct impact on affected employers are changes to the Employee Commute Option Rules. DEQ intends to notify employers of the adopted rule revisions and provide any necessary technical assistance to help employers understand the rule revisions. DEQ will use existing staff for this effort. The Rule Implementation Plan is available upon request (item #6).

DEQ is tracking legal issues which may result in a need to amend the maintenance plan in the future. This maintenance plan was prepared under the guidance of EPA's 2004 Final Rule to Implement the 8-Hour Ozone NAAQS-Phase 1 (69 FR 23951, 40 CFR 51.900). On December 22, 2006 the U.S. Court of Appeals released a decision to "vacate the 2004 rule and remand the matter to EPA" (*South Coast Air Quality Management District v. EPA*). In particular, the court ruled that certain requirements adopted for the 1-hour ozone standard, such as conformity and contingency plans, must be retained to prevent backsliding. Depending on how EPA interprets the court's decision in new guidance and rules, this maintenance plan may need to be amended. In the interim, the existing 1-hour ozone maintenance plan requirements will remain federally enforceable until EPA approves the new 8-hour ozone maintenance plan.

Attachments

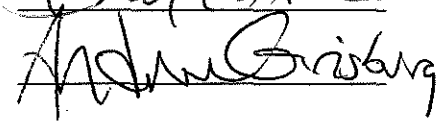
A. Proposed Revisions to the State Implementation Plan
   1. Portland-Vancouver AQMA and Salem-Keizer Area Ozone Maintenance Plan
   2. Supporting Rule Revisions {redlined version}
B. Summary of Public Comments and Agency Responses
C. Presiding Officer's Report on Public Hearings
D. Relationship to Federal Requirements Questions
E. Statement of Need and Fiscal and Economic Impact
F. Land Use Evaluation Statement

Available Upon Request

1. Legal Notice of Hearing
2. Cover Memorandum from Public Notice
3. Written Comments Received
4. Portland-Vancouver AQMA and Salem-Keizer Area Ozone Maintenance Plan (redlined version)
5. Summary of Plan and Rule Changes
6. Rule Implementation Plan
7. Appendices to the Ozone Maintenance Plan

Approved:

Section: 

Division: 

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Portland-Vancouver Air Quality Maintenance Area (Oregon Portion) and Salem-Keizer Area Ozone Maintenance Plan

Oregon Department of Environmental Quality
811 SW Sixth Avenue
Portland, OR 97204

February 5, 2007

Oregon State Implementation Plan
Section 4.50

Portland-Vancouver AQMA
(Oregon portion)
And
Salem-Keizer Area
8-hour Ozone Maintenance Plan

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For more information

If you have questions or would like more information, including a copy of the proposed rule revisions or appendices, please contact Marianne Fitzgerald at DEQ's Air Quality Division in Portland at (503) 229-5946, or fitzgerald.marianne@deq.state.or.us.

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4.50.0 Acknowledgement and Summary

4.50.0.1 Acknowledgements

Without the efforts of numerous individuals in state and local governments who are dedicated to healthy air, this maintenance plan would not have been possible. Special appreciation goes to:

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4.50.0.2 Executive Summary

The Portland area has violated federal clean air standards for ground level ozone (commonly known as smog) as recently as 1998. In 1996, the Oregon Department of Environmental Quality (DEQ) and the Southwest Clean Air Agency (SWCAA) developed Ozone Maintenance Plans for the Portland-Vancouver Air Quality Maintenance Area (AQMA) that included several strategies to reduce air pollutants and ensure compliance with the one-hour ozone standard. These strategies were successful in reducing smog forming emissions and no violations of the ozone standard have occurred in the Portland-Vancouver area since 1998.

In 1997, the U. S. Environmental Protection Agency (EPA) revised the national ambient air quality standard (NAAQS) for ozone from a one-hour average of 0.12 parts per million (ppm) to an 8-hour average of 0.08 ppm, and in 2005 EPA revoked the one-hour ozone standard. This 2006 ozone maintenance plan is a revision to the 1996 maintenance plan for the Portland-Vancouver area, and ensures continued compliance with the new 8-hour ozone standard through at least 2015. The plan also includes an ozone maintenance plan for the Salem-Keizer Area Transportation Study (SKATS) air quality area. Both the Portland-Vancouver and Salem areas are included in the ozone modeling and maintenance analysis. An ozone maintenance plan update for the Vancouver portion of the Portland-Vancouver AQMA is being prepared by the Southwest Clean Air Agency in Vancouver, Washington. These plans are required by the federal Clean Air Act, federal regulations and EPA guidance.

This 2006 maintenance plan continues the same strategies adopted for the Portland-Vancouver AQMA in 1996 to reduce and manage volatile organic compounds (VOC) and nitrogen oxide (NO_x) emissions. Air quality data and projections show that ozone levels can still occasionally approach or exceed the 8-hour ozone standard in the Portland-Vancouver area, but that with the existing strategies in place, both the Portland and Salem areas will maintain compliance with the 8-hour ozone standard. The suite of strategies described below work together to protect air quality as growth and population pressures increase over the next ten years. Implementing this suite of strategies will also reduce emissions of air toxics and greenhouse gases that are important emerging issues of concern.

The following strategies will remain in the Portland-Vancouver Ozone Maintenance Plan as they currently apply to sources in the Portland area:

- Motor Vehicle Inspection Program;
- Emission Standards for Industrial Sources of VOC;
- New Source Review Program for new and expanding major industrial facilities;
- Voluntary Parking Ratio Rules;
- Barge Loading Rules that control VOCs from gasoline delivery operations;
- Aerosol Paint Rules that lower VOC content from spray paints sold in the Portland area;
- Motor Vehicle Refinishing Rules that require low-emitting painting methods at autobody repair shops; and
- Public education and outreach that encourages people to voluntarily reduce emissions, such as not mowing lawns and driving less on Clean Air Action Days (now called Air Pollution Advisories).

Strategies that have reduced VOC emissions in the Salem SKATS air quality area will also remain in place, including emission standards for existing industrial sources of VOC.

The 2006 maintenance plan includes updates to several programs:

- Revised rules for Employee Commute Options in the Portland Area to reduce administrative burdens while maintaining alternative commute programs at larger employers;
- Updated rules for Industrial Emission Management in the Portland area, to reestablish the growth allowance for new and expanding major industrial sources and ensure that the ozone standard will not be violated even under conservative industrial growth assumptions;
- Designated Salem/SKATS as an ozone maintenance area under state rules;
- Revised rules for new and expanding major industrial sources in the Salem area, to remove the most stringent industrial emission control equipment requirements for sources in nonattainment areas, known as Lowest Achievable Emission Rate, and replace them with emission control requirements known as Best Achievable Control Technology that are consistent with what is required in Portland and continue to provide a high level of emission control; and
- Amended DEQ rules to reflect the new federal ozone air quality standard, from the old one-hour standard (which EPA has revoked) to the current federal 8-hour standard of 0.08 ppm, three year rolling average.

DEQ is tracking legal issues which may result in a need to amend the maintenance plan in the future. This maintenance plan was prepared under the guidance of EPA's 2004 Final Rule to Implement the 8-Hour Ozone NAAQS-Phase 1 (69 FR 23951, 40 CFR 51.900). On December 22, 2006 the U.S. Court of Appeals released a decision to "vacate the 2004 rule and remand the matter to EPA" (*South Coast Air Quality Management District v. EPA*). In particular, the court ruled that certain requirements adopted for the 1-hour ozone standard, such as conformity and contingency plans, must be retained to prevent backsliding. Depending on how EPA interprets the court's decision in new guidance and rules, this maintenance plan may need to be amended. In the interim, the existing 1-hour ozone maintenance plan requirements will remain federally enforceable until EPA approves this 8-hour ozone maintenance plan.

4.50.1 Background

Ground level ozone, also known as smog, is an air pollutant formed in the atmosphere by a chemical reaction of volatile organic compounds (VOC) and oxides of nitrogen (NO_x). This reaction is most intense on hot summer days with poor ventilation. Ozone is a strong respiratory system irritant that aggravates respiratory illnesses, impairs athletic performance, and can cause permanent respiratory system damage. Ozone can be especially harmful to older people and children, and can damage crops and other materials. In the past, motor vehicles and industrial operations have been the major sources of ozone precursors. Now, other sources such as household products, paints, construction equipment, watercraft and lawnmowers are major contributors to ozone formation.

Historically, the Portland-Vancouver and Salem-Keizer areas violated the national ambient air quality standard (NAAQS) for ground level ozone[1]. The Portland-Vancouver Air Quality Maintenance Area (AQMA) and the Salem-Keizer Area Transportation Study (SKATS) areas were designated nonattainment for ozone on March 3, 1978 under the 1977 Clean Air Act Amendments. Plans were subsequently developed to reduce ozone precursor emissions of VOC and NO_x, and bring the areas into compliance (attainment) with standards. Under the 1990 Clean Air Act Amendments, the Portland-Vancouver AQMA was designated a "marginal"

[1] Ozone monitoring sites were established in Oregon beginning in the early 1970s (see Appendix D10-1).

4.50.1.1 Portland-Vancouver AQMA

Over several decades, efforts to reduce smog forming emissions in the Portland area have included a combination of federal, state, and local emission control strategies. The first State Implementation Plan was adopted in 1972; the first Portland-Vancouver AQMA Ozone Attainment Plan was adopted on July 16, 1982 and approved by EPA on October 7, 1982. Some of the control strategies in the 1982 ozone attainment plan included a vehicle inspection and maintenance program for Portland-area motor vehicles (1975), motor vehicle trip reduction and traffic flow improvements and measures; and industrial VOC controls (1978). Area source controls on gasoline station vapors were added in 1991. The original ozone maintenance plans for Portland-Vancouver were adopted by the Oregon Environmental Quality Commission (EQC) on July 12, 1996 and the Board of Directors of the Southwest Air Pollution Control Authority on March 19, 1996. The Portland and Vancouver Interstate AQMA Ozone Maintenance Plans were approved by EPA on May 19, 1997 (62 FR 27204).

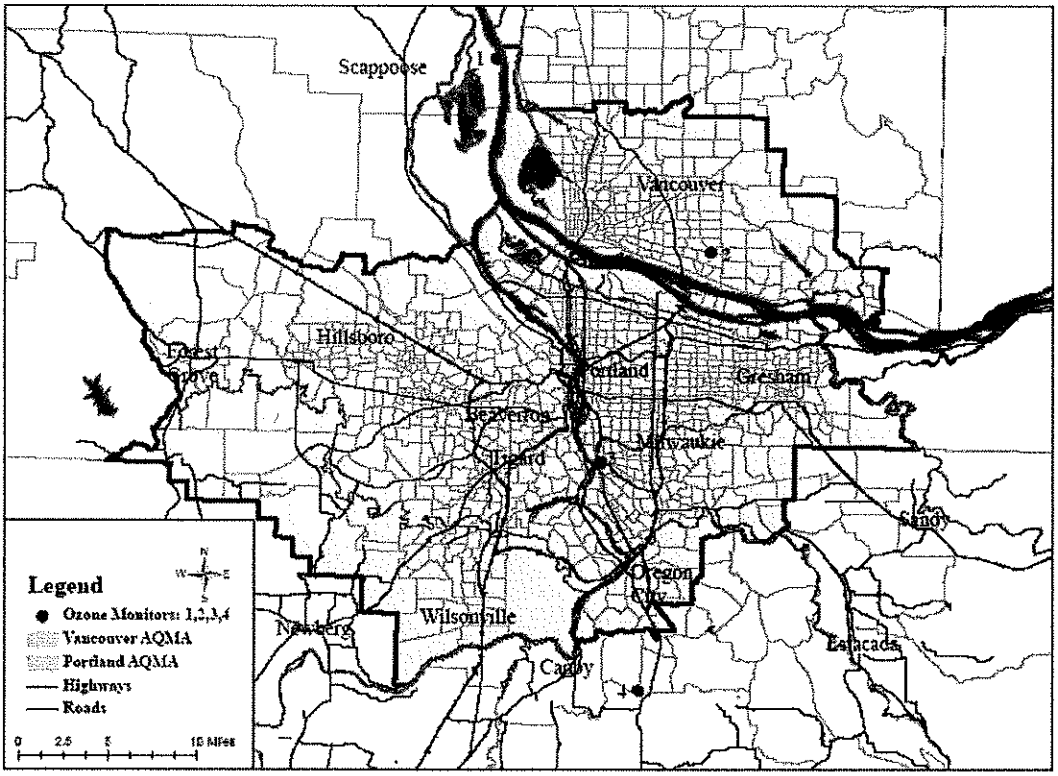
A violation of the one-hour ozone standard did occur in July 1998 at the Carus monitoring site (see Appendix D10-1). The violation occurred during a time when the one-hour ozone standard was temporarily revoked so it did not trigger the one-hour ozone contingency plan. DEQ's analysis demonstrated that this violation occurred before all emission reduction measures had been fully implemented so no additional measures were needed. Since 1998, there have been no violations of the one-hour ozone standard, and no violations of the 8-hour ozone standard.

In 1997, the U. S. Environmental Protection Agency (EPA) revised the ozone standard from a one-hour average of 0.12 parts per million (ppm) to an 8-hour average of 0.08 ppm. After a lengthy legal challenge, the courts upheld the 8-hour ozone standard in 2002. EPA adopted rules to implement the 8-hour ozone standard on April 30, 2004, and revoked the one-hour standard effective June 15, 2005. EPA designated the State of Oregon "Unclassifiable/Attainment" with the 8-hour ozone standard, effective June 15, 2004 (69 FR 23858, April 30, 2004).

EPA rules to implement the 8-hour ozone standard (69 FR 23951, April 30, 2004) require DEQ to prepare this 2006 maintenance plan update for the Portland-Vancouver area to ensure continued compliance with the 8-hour ozone standard. In accordance with the same EPA rules, Oregon also requests that EPA remove the obligation to prepare a second one-hour ozone maintenance plan.

Meteorological and population growth factors over the past ten years indicate that the number of days with elevated ozone levels should have risen, but instead has remained relatively stable (see Appendix D10-2). Ozone levels have been going down slightly while the population and vehicle miles traveled continued to grow. An analysis that compared episodes with the highest ozone values in 1998 with episodes with similar meteorology in 2003 showed that maximum ozone values were lower in 2003 than 1998 despite similar temperatures, wind speeds and solar radiation levels. This stable ozone trend indicates that the ozone strategies that reduced emissions are working.

Figure 1: Portland-Vancouver Interstate Air Quality Maintenance Area

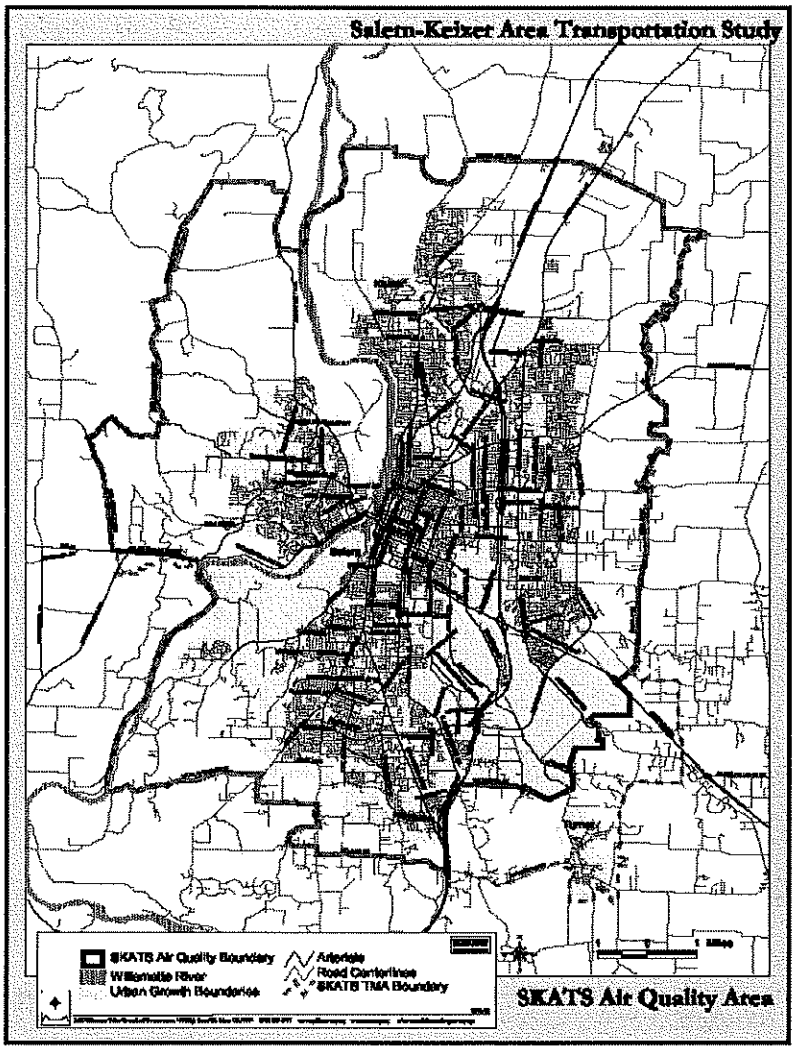


4.50.1.2 Salem-Keizer Area Transportation Study (SKATS) Air Quality Area

The Salem area marginally violated the federal air quality standard for ozone in the 1970s and was designated an ozone nonattainment area on March 3, 1978 under the 1977 Clean Air Act Amendments. The Mid-Willamette Valley Council of Governments recommended the nonattainment area as the area within the Salem-Keizer Area Transportation Study boundary (SKATS) (see Figure 2). This includes portions of Marion and Polk County, including the cities of Salem and Keizer.

Salem's ozone concentrations are influenced by emissions of ozone precursors in the Portland area. In 1979 the Salem area was defined under EPA guidelines as a "rural" ozone nonattainment area, and an Attainment Plan was adopted by the EQC in September, 1980 and approved by EPA on April 12, 1982. Salem's attainment plan under the rural ozone policy consists of three elements: 1) controls on major existing sources of volatile organic compounds under Reasonably Available Control Technology (RACT) rules, 2) controls on major new VOC sources under Lowest Achievable Emission Rate (LAER) rules, and 3) an approved plan for the Portland-Vancouver AQMA, which is the major urban area upwind of Salem. All of these program elements remain in place.

Figure 2: Salem-Keizer Area Transportation Study Air Quality Area



DEQ had developed a maintenance plan and requested redesignation of the Salem SKATS to attainment in 1987, but EPA returned the plan because EPA did not believe it contained sufficient emission inventory data and forecasts. Due to low ambient ozone levels and agency budget cuts, DEQ discontinued the Salem ozone monitor from 1987 through 1994 and was not able to complete the necessary planning work for redesignation. Under the 1990 Clean Air Act Amendments, SKATS was designated a nonattainment area with incomplete data. In 1995, DEQ reinstated the ozone monitor to support development of a maintenance plan for Salem, but was unable to secure staffing resources to complete the plan.

No violations of the federal one-hour standard have been recorded at the Salem/Turner ozone monitoring site since 1996, and no violations of the 8-hour ozone standard have ever been recorded (see Figure 3 and Tables 1 and 2). Salem SKATS was designated in attainment with the 8-hour ozone NAAQS effective June 15, 2004 (69 FR 23858, April 30, 2004).

4.50.2 Ozone Trends and Compliance with Standards

Figure 3 shows the ozone trends measured at monitoring sites for the Portland, Vancouver, and Salem areas for the period 1997 through 2005. Table 1 shows the highest maximum 8-hour average ozone concentrations measured for 1998[2], 2003, 2004, and 2005. While these peak values are important in assessing public health risk, they are not used to determine official compliance with the federal ozone standard. Compliance with the standard is based on a statistical method that looks at the three year average of the 4th highest (maximum 8-hr average) ozone value each year. If the three-year average of the 4th highest value at any monitoring site exceeds the standard, the area is in violation. Table 2 shows the rolling three-year average of 4th high values for 1998, 2003, 2004, and 2005. It is these "design values" that are compared to the 0.08 ppm ozone standard to determine compliance. Under EPA's calculation convention, a value of 0.084 ppm would round down to 0.08 ppm (i.e. in compliance), while a value of 0.085 ppm or higher would be a violation.

Key ozone monitoring sites include the "Carus" site in Portland, "Mountain View" site in Vancouver, and the "Turner" site in Salem (see Appendix D10-1).

The values illustrated in Tables 1 and 2, together with the 2015 Maintenance Demonstration described in Section 4.50.5.4 show that ozone levels can still occasionally approach or exceed the 8-hour ozone standard in the Portland-Vancouver area, but that with the existing strategies in place, the region will maintain compliance with the 8-hour ozone standard. DEQ's analysis in Section 4.50.5.4 suggests that there is not currently a need to add new ozone strategies for the Portland and Salem areas, but that existing emission reduction and growth management strategies should be continued with revisions described in Section 4.50.4.

[2] 1998 is included in the table because that year had the most recent violation of the 1-hour ozone standard in Portland and the July 1998 episode was used in the modeling analysis.

Figure 3: Portland-Vancouver and Salem 8-Hour Ozone Values

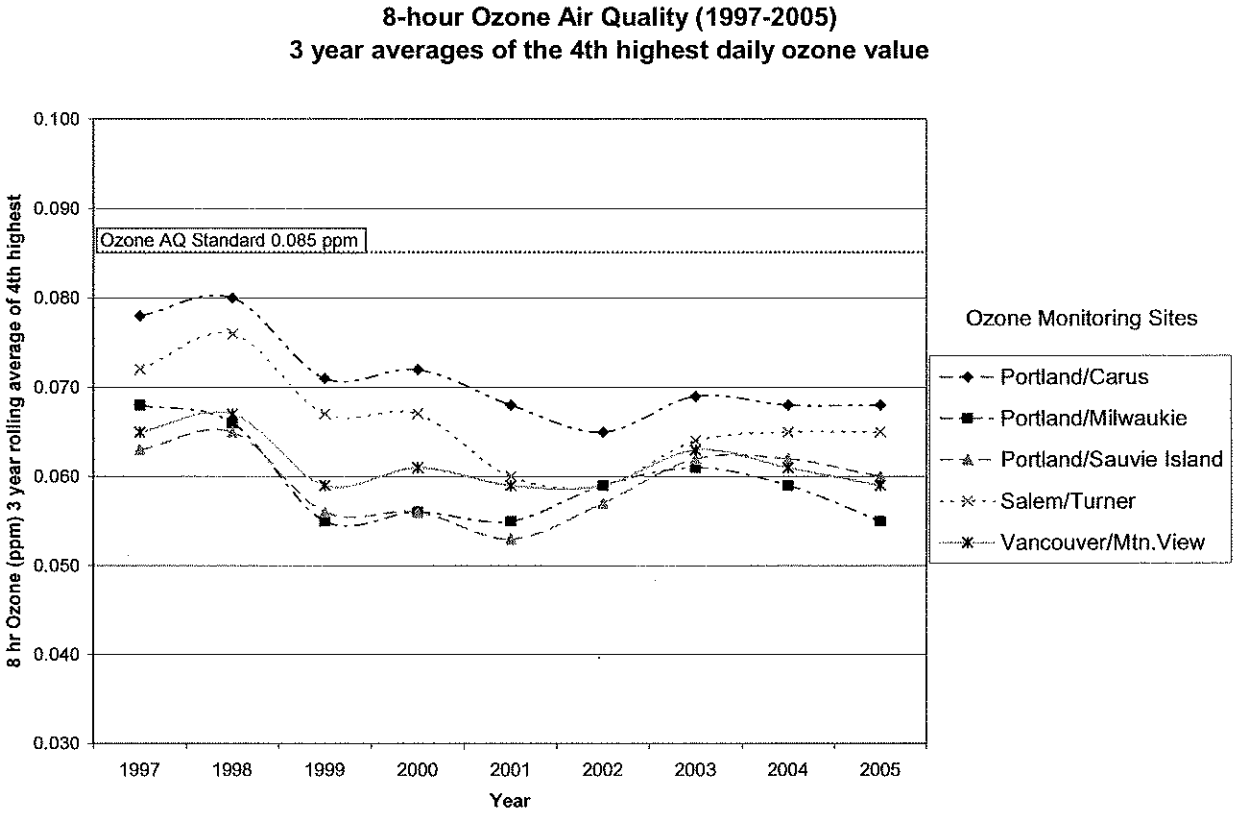


Table 1: 8-Hour Ozone Maximum Values

8-hour ozone standard = 0.08 ppm

Exceedance ≥ 0.085 ppm maximum daily 8-hour average

Monitoring Site	1998 8-hour Maximum	2003 8-hour Maximum	2004 8-hour Maximum	2005 8-hour Maximum
Portland/Carus	0.116	0.084	0.084	0.079
Portland/Milwaukie	0.100	0.068	0.077	0.063
Portland/Sauvie Island	0.077	0.073	0.061	0.065
Vancouver/ Mountain View	0.078	0.077	0.066	0.076
Salem/Turner	0.098	0.080	0.068	0.080

Table 2: 8-Hour Ozone 4th High, Design Values
Design Value = 4th highest 8-hour average, averaged over three years
8-hour ozone standard = 0.08 ppm
Violation ≥ 0.085 ppm design value

Monitoring Site	1998 Design Value	2003 Design Value[3]	2004 Design Value	2005 Design Value
Portland/Carus	0.080	0.070	0.068	0.068
Portland/Milwaukie	0.066	0.060	0.059	0.055
Portland/Sauvie Island	0.065	0.060	0.062	0.060
Vancouver/ Mountain View	0.065	0.063	0.061	0.060
Salem/Turner	0.076	0.060	0.065	0.065

4.50.3 Attainment Inventory

DEQ developed an attainment emission inventory for the year 2002. The emission inventory reflects detailed estimates of emissions from all sources, grouped into four major categories:

- Industrial Point Sources (sources with a DEQ air quality permit),
- On-Road Mobile Sources (e.g. motor vehicles and trucks),
- Non-Road Mobile Sources (e.g. lawnmowers, construction equipment and other engines), and
- Area Sources (e.g. household products, print shops, degreasing and surface coating operations, pesticide application, open burning and wildfires).

The 2002 Consolidated Emissions Reporting Rule (CERR) emissions data submitted by DEQ and SWCAA to EPA's National Emission Inventory (NEI) were used as the basis for the 2002 attainment year inventory. This 2002 county-by-county annual inventory was developed following the currently accepted methodologies for the National Emission Inventory. Appendix D10-3 and Appendix D10-4 describe the emissions inventory calculations in more detail.

Table 3 contains the annual countywide estimates for the Portland-Vancouver AQMA, Oregon portion (Clackamas, Multnomah and Washington Counties) and Salem SKATS (Marion and Polk Counties) in tons/year. Tables 4 and 5 contain the countywide estimates, seasonally adjusted for a typical summer day. Tables 4 and 5 are considered the "attainment inventory" for the Portland-Vancouver AQMA and Salem-Keizer area Ozone Maintenance Plan.

EPA guidance requires an emission inventory for three pollutants: VOC, NO_x and carbon monoxide (CO). VOC and NO_x are the most critical precursor emissions that contribute to ozone formation, so these pollutants are highlighted in the emission inventory tables throughout this maintenance plan.

[3] 2003 Design Value was used to determine the attainment designation for Portland-Vancouver AQMA (January 22, 2004 letter from DEQ to EPA). Design value is calculated using the 4th highest ozone value at each monitoring site, averaged over 3 years.

Table 3: Portland and Salem 2002 Annual Emissions (tons/year)

Portland Area 2002 Attainment Inventory
Annual Emissions (tons/year)
Clackamas, Multnomah, Washington Counti

Source Type	2002 VOC	2002 NO_x	2002 CO
AREA	92,946	5,808	104,621
NON-ROAD	13,247	17,344	153,204
ON-ROAD	23,683	36,786	288,435
POINT	3,056	2,522	2,214
Total	132,931	62,461	548,474

Salem-Area 2002 Attainment Inventory
Annual Emissions (tons/year)
Marion, Polk Counties

Source Type	2002 VOC	2002 NO_x	2002 CO
AREA	20,297	1,646	34,547
NONROAD	2,401	3,159	27,025
ON-ROAD	9,331	11,276	116,116
POINT	218	302	30
Total	32,247	16,383	177,719

Area source emissions were calculated following EPA guidance for the 2002 NEI. Area sources are the largest category of emission sources. Some of the significant area sources of VOC emissions in both Portland and Salem include surface coating and household consumer products. Graphic arts and degreasing operations are also significant area sources of VOC emissions in the Portland area, and agricultural open burning and gasoline storage and transportation are significant sources of VOC emissions in the Salem area, on a typical summer day.

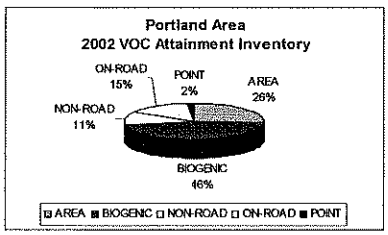
Non-road mobile source emissions were calculated using EPA's draft NONROAD2002 model and other methods following EPA guidance for the NEI. Significant sources of non-road VOC emissions include 2-stroke and 4-stroke gasoline engines such as lawn and garden and construction equipment, as well as diesel engines, boats and personal watercraft.

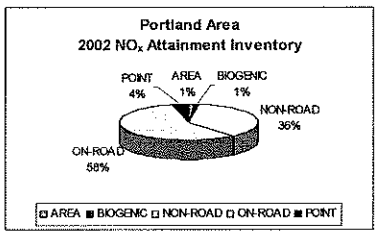
On-road mobile source emissions were calculated using Mobile 6.2 emissions and traffic data from the Oregon Department of Transportation. Gasoline vehicles are a major source of VOC and NO_x emissions, as well as diesel powered vehicles.

Table 4: Portland Area 2002 Attainment Inventories (lb/day)

Portland Area 2002 Attainment Inventory
Typical Summer Day, lb/day
Clackamas, Multnomah, Washington Counties

Source Type	2002 VOC	2002 NO_x	2002 CO
AREA	253,871	5,529	26,644
BIOGENIC	437,910	3,890	
NON-ROAD	110,188	136,713	1,202,805
ON-ROAD	139,542	216,750	1,699,493
POINT	17,020	14,913	12,202
Total	958,531	377,794	2,941,144





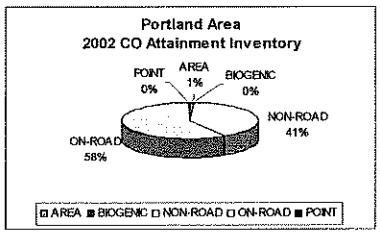
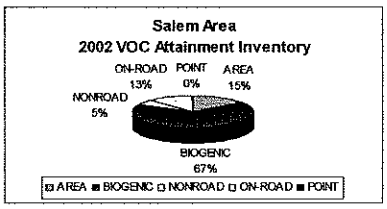
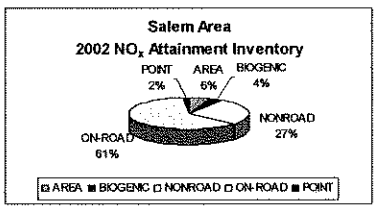


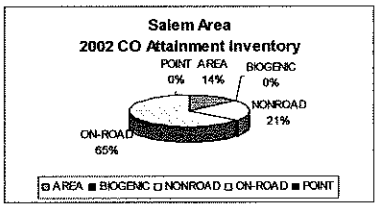
Table 5: Salem Area 2002 Attainment Inventories (lb/day)

Salem-Area 2002 Attainment Inventory
Typical Summer Day, lb/day
Marion, Polk Counties

Source Type	2002 VOC	2002 NO_x	2002 CO
AREA	66,252	6,227	148,513
BIOGENIC	296,719	3,803	
NONROAD	20,462	28,793	219,294
ON-ROAD	54,980	66,442	684,169
POINT	1,198	1,701	188
Total	439,610	106,967	1,052,164







Point source emissions for the 2002 Attainment Inventory are based on data submitted by permitted facilities and reflect actual 2002 emissions reported in annual permit reports to DEQ. Within the Portland-Vancouver AQMA, industrial point sources that emit more than 10 tons/year of VOC, 40 tons/year of NO_x, or 100 tons/year of CO were inventoried. Outside of the Portland-Vancouver AQMA (including Salem), point sources that emit more than 40 tons/year of NO_x or 100 tons/year of VOC or CO were inventoried. Stack parameters, activity, and exact location were collected to provide the most comprehensive accounting possible and to support the ozone dispersion model used in the maintenance demonstration. Point source emissions are a relatively small percentage of the 2002 attainment inventory.

Biogenic emissions are produced by life substances (e.g. terpenes from pine trees) as opposed to anthropogenic emissions that are produced by human activities. Biogenic emissions data was provided by WSU for the modeling study (Appendix D10-4) and calculated by county for this emissions inventory.

4.50.4 Portland and Salem Control Strategies

4.50.4.1 Portland-Vancouver AQMA Ozone Maintenance Plan

The Portland-Vancouver AQMA Ozone Maintenance Plan (Oregon portion) includes federal, state and local emission control programs. All four major source categories of ozone precursor emissions are affected by rules that reduce emissions from these sources. Several of the strategies provide benefits beyond VOC and NO_x emission reductions, such as air toxics and

greenhouse gas emission reductions, traffic congestion reduction, energy savings, and overall cost-savings for the transportation systems.

The existing Portland-Vancouver AQMA Ozone Maintenance Plan strategies will remain in place and work together to protect air quality as the population increases over the next ten years. These strategies have successfully reduced VOC and NO_x emissions and also reduce emissions of air toxics and greenhouse gases that are emerging issues of concern.

The following strategies will remain in the Portland Ozone Maintenance Plan as they currently apply to sources in the Portland area:

- Motor Vehicle Inspection Program (OAR 340-256-0300 through 0470);
- Emission Standards for VOC Point Sources (Reasonably Available Control Technology) for existing major industrial facilities (OAR 340-232-0010 through 0230);
- New Source Review Program for new and expanding major industrial facilities (OAR 340-224-0010 through 0100 and 340-225-0010 through 0090);
- Voluntary Parking Ratio Rules (OAR 340-242-0300 through 0390);
- Barge Loading Rules and Stage I vapor recovery systems that control VOCs from gasoline delivery operations (included within OAR 340-232);
- Aerosol Paint Rules that lower VOC content from spray paints sold in the Portland area (OAR 340-242-0700 through 0750);
- Motor Vehicle Refinishing Rules that require low-emitting painting methods at autobody shops (OAR 340-242-0600 through 0630); and
- Public education and outreach that encourages people to voluntarily reduce emissions, such as not mowing lawns and driving less on Clean Air Action Days (now called Air Pollution Advisories).

The following strategies in the Portland-Vancouver Ozone Maintenance Plan (Oregon portion) have been modified:

- Employee Commute Options Program (OAR 340-242-0010 through 0290): Program requirements now focus on larger employers (100 or more employees) and reduce the survey requirements from annual to every two years (see detail below), and
- Industrial Emission Management Program (OAR 340-242-0400 through 0440): Re-establish the industrial growth allowance for new and modified major industrial sources to ensure that the ozone standard will not be violated even under conservative growth assumptions (see detail below).

In June, 2005, the Environmental Quality Commission amended the Motor Vehicle Inspection Program rules to replace the "enhanced" vehicle inspection test with the "basic" vehicle inspection test for vehicle model years 1981-1995. This change is reflected in the modeling projections and maintenance demonstration of this plan.

Stage II vapor recovery system requirements for gas stations will remain in effect until the motor vehicle fleet reflects widespread use of on-board canister systems. The Stage II rules will be revised at that time (prior to 2015). The eventual shift from Stage II vapor recovery to on-board canisters is reflected in the 2015 modeling projections and maintenance demonstration of this plan.

Transportation control measures are no longer enforceable under conformity rules (40 CFR 51.900) so these measures are removed from the Portland AQMA Ozone Maintenance Plan. However, the Employee Commute Options program will remain in the maintenance plan, and DEQ and Metro will implement a voluntary program to monitor growth in motor vehicle emissions of VOC and NO_x in the Portland area as described in Section 4.50.4.1.3.

4.50.4.1.1 Changes to the Employee Commute Options Rule

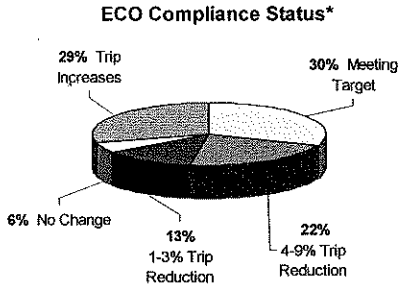
The Employee Commute Options Program rules adopted in 1996 (OAR 340-242-0010 through 0290) require Portland-area employers with more than 50 employees to implement programs that would reduce single-occupancy commute travel by 10%. Affected employers must provide incentives for employee use of alternative commute options. The incentives must have the potential to reduce commute trips to the work site by 10% within three years of completing an initial employee survey. Annual surveys measure progress toward this goal.

Annual survey data indicates that larger employers are more likely to comply with ECO and provide meaningful transportation options to their employees. Larger employers represent most of the employees in the region. For example,

- Employers with more than 100 employees generate 92% of the total trip reduction.
- Employers with more than 100 employees make up 86% of the total ECO affected *employees.*
- Employers with more than 100 employees make up 53% of the total ECO affected *employers.*

Key program statistics*:

- Number of employer work sites >50 employees: 1212
- Estimated number of employees affected: 250,000
- Annual Vehicle Miles Traveled reduced: 35.4 million



*based on survey data from worksites with>50 employees as of August 2005. Not all employers are required to survey.

Smaller companies make up the majority of employers who are behind with ECO compliance. DEQ has modified the ECO program to more effectively focus on larger employers that produce the most significant amount of emission reduction benefit, and to streamline reporting requirements. Program changes include:

- Changing the threshold for rule applicability from "more than 50" employees to "more than 100" employees;
- Changing survey requirements from annual to every two years;
- Requiring all employers with more than 100 employees that have not developed a plan to submit an approved plan, or demonstrate that they participate in an equivalent commute trip reduction program, such as EPA's Best Workplaces for Commuters program or TriMet's Passport program;

- Modifying survey requirements to allow an employer to submit follow-up survey results with less than 75% response rate. DEQ will assign single occupancy vehicle trips to the percentage of employees who did not respond up to the 75% rate;
- Eliminating the 2006 sunset date since the ozone maintenance plan does not sunset; and
- Requiring employers that qualify for exemptions (e.g. through restricted parking ratios) to certify every two years that they continue to qualify for the exemption.

The Employee Commute Option Program has been effective in reducing the amount of vehicle miles traveled by single-occupancy-vehicles in the Portland area, thereby reducing air pollution and traffic congestion in the region. The ECO program has resulted in an estimated annual reduction of over 100 tons of VOCs and over 85 tons of NO_x. In addition to the benefits to ozone air quality, DEQ estimates that the ECO program is also effective in reducing over 22,000 tons per year of carbon dioxide (a greenhouse gas), as well as associated air toxics emissions (most notably benzene). DEQ's proposed rule changes would streamline the program and make it more effective in encouraging alternative commute trips among larger employers while providing relief to smaller employers. The program is one of many efforts in the Portland area to reduce single-occupancy vehicle trips and DEQ will continue to partner with regional alternative transportation programs in these efforts.

DEQ will continue to focus on larger employers (those with over 100 employees) who account for over 90% of the trip and emission reduction achieved by the ECO program. Therefore, DEQ believes there will be no significant loss in emission reduction benefit from ECO by focusing the program on larger employers.

4.50.4.1.2 Industrial Emission Management Rules

The 1996 Portland-Vancouver Ozone Maintenance Plan included an industrial emissions growth allowance that could be used by new and expanding major industry in lieu of obtaining emission offsets. This 2006 maintenance plan update continues this approach to managing industrial emissions growth. The growth allowance program is described below.

Under the existing Industrial Emission Management Rules adopted in 1996 (OAR 340-242-0400 through 0440), new or expanding major industrial sources located within 100 km of the Portland-Vancouver AQMA must "offset" emission increases of more than 40 tons/year of VOC and NO_x by obtaining an equivalent decrease from another facility. However, the offset requirement can be satisfied by obtaining an allocation from an emissions growth allowance set aside for this purpose. This 2006 maintenance plan update reestablishes the growth allowance for new and expanding major VOC and NO_x industrial sources, creates an administrative and public process for releasing the growth allowance in increments, and retains the emission offset requirement as a safeguard. The growth allowance has been included in the modeled 2015 ozone maintenance demonstration.

Growth Allowance Program Procedures

This plan reestablishes the industrial growth allowance at 5,000 tons for VOC and 5,000 tons for NO_x[4]. The owner or operator of a proposed major source or major modification may apply to DEQ for an allocation of the growth allowance in lieu of providing an emission offset. As

[4] The 2006 growth allowance balance is approximately 750 tons for VOC and 200 tons for NO_x. This balance would be replaced with the reestablished growth allowance.

required in the existing rules, the growth allowance will be allocated on a first come first served basis, with one exception. Sources that previously reduced their allowable emissions through the voluntary Plant Site Emission Limit (PSEL) donation program will receive priority access to the growth allowance.

Consumption of the growth allowance will continue to be monitored and tracked by DEQ. DEQ will establish the 5,000 ton limit as a maximum cap. As a safeguard, however, DEQ will only authorize the initial use of up to 1,000 tons of VOC and 1000 tons of NO_x, and hold the balance in reserve. If at some point in the future 750 tons or more of this initial increment is used for either or both pollutants, DEQ will conduct an analysis of ozone levels and expected trends to determine if conditions support the release of another 1,000 ton increment. DEQ will provide an opportunity for the public to comment on the results of the analysis and DEQ's recommendation whether to release the next 1,000 ton increment prior to making its decision. DEQ will not authorize any further allocation of the growth increment if it thought such action could jeopardize compliance with the ozone standard. If conditions show no risk to the health standard, DEQ will authorize allocation of another 1,000 ton increment.

If any single source applies to the Environmental Quality Commission to receive more than 1,000 tons of VOC or NO_x, DEQ will conduct the analysis to determine whether an additional 1,000 tons can be released without jeopardizing ozone air quality prior to making a recommendation to the EQC regarding the source application.

This process will be repeated until the final 1,000 ton increment, or when approximately 4,000 tons of the growth allowance of either pollutant is consumed. The growth allowance cap of 5,000 tons could only be increased through a SIP revision that is approved by EPA. The increase could utilize new federally enforceable emission reductions and shutdown credits that were not relied on in the maintenance demonstration. Any such increase to the growth allowance above the 5,000 ton cap for either VOC or NO_x will be subject to public comment and approval by EPA. Federally enforceable emission reductions include requirements adopted by EPA, requirements adopted by the EQC and approved by EPA as a revision to the Oregon State Implementation Plan, and requirements established by a federally enforceable permit condition. If the growth allowance is consumed, and cannot be reestablished, emission offsets for VOC and NO_x will be required for new and expanding major industry.

This administrative process of incremental allocation will help DEQ better manage future industrial emission increases and respond to any unforeseen changes in future conditions, such as significant increases in summertime temperatures or future changes to the federal ozone standard.

DEQ may temporarily reduce the amount of growth allowance that may be allocated to new or modified major industrial sources if monitored ozone concentrations exceed the "risk of violation" or "actual violation" thresholds described in the contingency plan (Section 4.50.7.2.1). DEQ will provide reasonable advance notice to affected industries if there is a possibility that the growth allowance could be reduced or if contingency plan requirements of OAR 340-224-0060(5) do not allow an allocation from the growth allowance to be used to meet offset requirements.

The emissions growth allowance approach described above works together with several other elements in the maintenance plan, including the tracking of emission growth, ambient ozone monitoring, the emission offset backstop requirement, and the early warning and action elements in the contingency plan, to meet air quality management goals and protect compliance

with standards. The Industrial Emissions Management Rules provide both flexibility for future economic opportunity and protection of public health through compliance with the ozone air quality standard.

4.50.4.1.3 Transportation Conformity and Transportation Control Measures

Under EPA's 2004 ozone implementation rules (40 CFR 51.900), neither general conformity nor transportation conformity is required for areas attaining the 8-hour ozone standard. This means that new transportation project plans will no longer need to demonstrate that they conform to the ozone maintenance plans in the Portland-Vancouver AQMA. Although transportation control measures can no longer be enforced through the conformity process, DEQ and Metro (the Portland-area metropolitan planning organization) have agreed to informally track VOC, NO_x, air toxics and greenhouse gas emissions when Metro assesses conformity for the purposes of the Portland Carbon Monoxide Maintenance Plan as a voluntary program to assess impacts of transportation emissions on air quality over time. In addition, when Metro assesses VMT/Capita for purposes of the Portland Carbon Monoxide Maintenance Plan Contingency Plan, the information will also be used for the Portland-Vancouver AQMA Ozone Contingency Plan (see Section 4.50.7.2.2). This approach is consistent with the EPA ozone implementation rule preamble that recommends states develop voluntary programs to address motor vehicle emissions growth (69 FR 23987-88). The Metro Council adopted Resolution 06-3695, For the Purpose of Recommending Approval by the Oregon Environmental Quality Commission of the Draft 2006 Portland-Vancouver AQMA (Oregon Portion) and Salem Keizer Area Ozone Maintenance Plan, on May 25, 2006.

4.50.4.2 Salem SKATS Ozone Maintenance Plan

DEQ will retain existing strategies in the Salem-Keizer Area Transportation Study (SKATS) Air Quality Area Attainment Plan that was adopted in 1980 and revised in 1982, including Emission Standards for VOC Point Sources (OAR 340-232-0010 through 0230) and continued reliance on the control strategies in the Portland-Vancouver AQMA Ozone Maintenance Plan, with some updates:

- Designate Salem/SKATS as an ozone maintenance area under state rules;
- Modify control technology requirements for new and expanding major industrial sources from "Lowest Achievable Emission Rate" (LAER) to "Best Available Control Technology" (BACT), while retaining all other new source review requirements; and
- Adopt a contingency plan that includes a commitment to adopt measures to reduce emissions if the Salem area is at risk of violating or violates the ozone standard in the future.

Salem was designated an ozone "nonattainment" area under state rules, and major new and modified industrial sources that emit 40 tons/year or more of VOC or NO_x were required to install the most stringent level of emission control technology known as "Lowest Achievable Emission Rate" (LAER). Once designated a "maintenance" area under state rules, the same universe of sources (40 tons/year or more of VOC or NO_x) will be required to install "Best Achievable Control Technology" (BACT) that is the same as is required in Portland.

LAER and BACT are determined by DEQ on a case-by-case basis to prevent air pollution and require installation of pollution control equipment through the facility's air permit. LAER reflects

the most stringent level of emission control achievable at the time of permitting. LAER is typically required in areas violating or at risk of violating air quality standards and must be installed regardless of cost. BACT is established by DEQ using an analysis that starts with a review of EPA's control technology clearinghouse and LAER technologies that are required for similar facilities within the U.S. If the permit applicant demonstrates that the cost to install LAER would be much greater at this facility than it was at other facilities where it has been installed, the applicant may justify a lower control level as BACT. BACT is typically used in maintenance and attainment areas that are in compliance with air quality standards, and can provide an equivalent or very high level of control that will not interfere with maintenance of the ozone standard.

Under the Clean Air Act, Salem is designated as a federal ozone attainment area. Under this federal designation, emission control technology (BACT) would only be required for Federal Major Sources (those sources in 28 categories emitting 100 tons/year or more of VOC or NO_x, or other sources emitting 250 tons/year or more). However, as an Oregon ozone maintenance area, BACT controls will continue to be required for sources emitting 40 tons/year of VOC or NO_x. Keeping the current 40 tons/year threshold for triggering BACT and other New Source Review requirements will better protect future compliance with the ozone standard in the Salem area. All other requirements for New Source Review in Salem remain the same, including the current exemption from the need to provide emission offsets or use a growth allowance for sources locating within SKATS because much of Salem's emissions transport from the Portland area. New or expanding major industrial sources within 100 km of the Portland-Vancouver AQMA (which includes part of the Salem area) will continue to be required to evaluate their impact on ozone levels in Portland.

4.50.5 Maintenance Demonstration (Portland-Vancouver and Salem)

4.50.5.1 Ozone Modeling Study

DEQ and SWCAA teamed with Washington State University (WSU), the Washington Department of Ecology and EPA to study ozone formation using a computer dispersion model (see Appendix D10-4, "Historical and Future Ozone Simulations using the MM5/SMOKE/CMAQ System in the Portland/Vancouver Area", WSU, 12/31/05 final report). The purpose of the study was to develop a predictive tool to forecast future ozone concentrations based on emission projections and summer meteorology in which ozone formation occurs.

The modeling study simulated two historical high ozone episodes that occurred during the summer of 1997 and 1998. The study compared actual ozone levels measured (monitored) during the 1997 and 1998 events to model predicted ozone levels for the same period in order to test and validate model performance. The model performed within EPA guidelines for both episodes. The model performance testing verifies that the CMAQ model can predict future ozone concentrations for the region (see Appendix D10-4 for more information on model performance testing).

The modeling team selected the July 26-28, 1998 episode as the basis for future year projections because ozone levels were much higher in 1998 than in 1997, and meteorology reflected worst case conditions that contribute to ozone formation in the Portland area (high temperatures and low wind speeds, with predominant winds from the north). Methodology for developing the modeling emissions data is detailed in the WSU modeling report (Appendix D10-4).

4.50.5.2 Growth Projections

The 2015 emissions forecast used in the modeling study reflects 2002 emissions, increased by expected growth in various sectors. The 2002 emission inventory reflects the 2002 Consolidated Emissions Reporting Rule (CERR) emissions data submitted by DEQ and SWCAA to the National Emission Inventory (NEI) and documented in Appendix D10-3 and 4. Growth factors for various source sectors were derived from the 2002 "Economic Report to the Metro Council, 2000-2030 Regional Forecast for the Portland-Vancouver, Metropolitan Area" (see Appendix D10-5).

For the 2015 Maintenance Demonstration, the following growth assumptions were included in the forecast:

Area sources: Area source emissions were calculated following EPA guidance for the 2002 NEI. The 2015 emissions inventory assumes a linear, non-compounding population growth rate of 1.8% per year, and household growth rate of 2.0% per year (see Appendix D10-5). Table 6 describes population trends in the Portland and Salem areas, although the Metro data was used in the growth projections.

Table 6: Portland and Salem Area Population Projections

	2000 Estimate	2003 Estimate	2005 Forecast	2010 Forecast	2015 Forecast
Oregon	3,436,750	3,541,500	3,618,200	3,843,900	4,095,708
Portland Area* (Clackamas, Multnomah and Washington Counties)	1,451,650	1,503,900	1,540,055	1,646,124	1,759,470
Portland Area** (Clackamas, Multnomah, Washington and Clark Counties)	1,789,460		1,956,300	2,134,300	2,287,000
Salem Area* (Marion and Polk Counties)	349,000	359,900	368,347	395,973	427,781

* Prepared by the Oregon Office of Economic Analysis, April 2004
**"Economic Report to the Metro Council, 2002-2030 Regional Forecast," page 4

Non-road mobile sources: EPA's draft NONROAD2004 model was used to estimate non-road mobile source emissions for 2015. This model incorporates the latest assumptions and rules, including EPA's Tier 4 non-road diesel engine standards and non-road diesel fuel sulfur standards associated with the Tier 4 rule. Railroads, marine vessels and airports were estimated independently of the NONROAD model (see Appendix D10-4). Aircraft emissions for the four airports with the Portland AQMA were calculated using Port of Portland data (Aviation Demand Forecast Update for Portland International Airport, Port of Portland, November 4, 1999, and associated spreadsheets), which was also used in the 2002 NEI submittal.

On-road mobile sources: 2015 emissions estimates used in the modeling analysis are based on travel demand forecast models run by Metro and the Southwest Regional Transportation Council for the Portland-Vancouver AQMA, and Department of Transportation data and projections for the modeling domain outside of the AQMA. This includes full implementation of federal motor vehicle emission control programs and the DEQ Vehicle Inspection Program rule revisions adopted in June 2005.

Point sources: DEQ developed two different growth scenarios for major industrial (point) sources, and their purpose is discussed in more detail below in Section 4.50.5.3. The two scenarios include:

- 2015 Projection: reflecting actual 2002 emissions from existing industry, increased by expected employment projections in the "Economic Report to Metro Council, 2000-2030 Regional Forecast for the Portland-Vancouver Metropolitan Area".

- 2015 Maintenance Demonstration: reflecting a conservative estimate of maximum permitted levels for existing industry and the reestablished industrial growth allowance.

4.50.5.3 Forecast and Maintenance Inventory

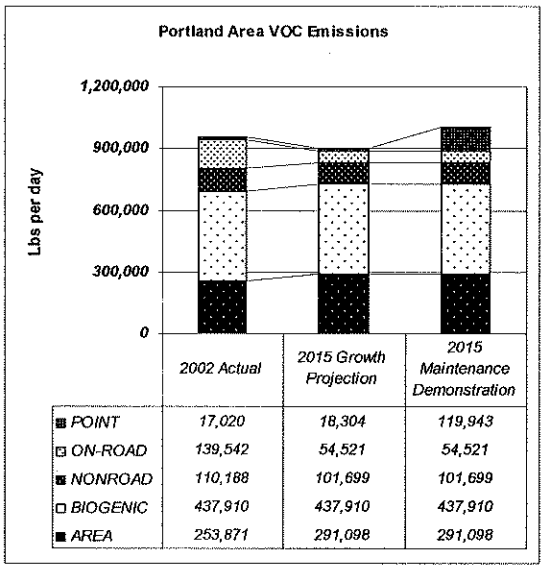
As noted above, DEQ developed two different growth scenarios for major industrial (point) sources, and they are used for different purposes. The first growth scenario (called "2015 Projection" as seen in Figures 4 and 5) reflects the 2002 estimate of actual industrial emissions, increased by Metro's regional employment projections for that sector. This projection represents a baseline estimate of actual future year emissions, given expected growth, and is described in the WSU modeling report as the managed growth simulation projection (Appendix D10-4).

The second growth scenario (called "2015 Maintenance Demonstration" as seen in Figures 4 and 5) represents a very conservative estimate of possible future year emissions. The 2015 Maintenance Demonstration reflects maximum "legally allowable" emission levels currently permitted for existing industry, plus the emissions growth allowance reestablished for new industry growth. This 2015 Maintenance Demonstration represents the most conservative estimate of possible future industrial emissions for purposes of the maintenance plan.

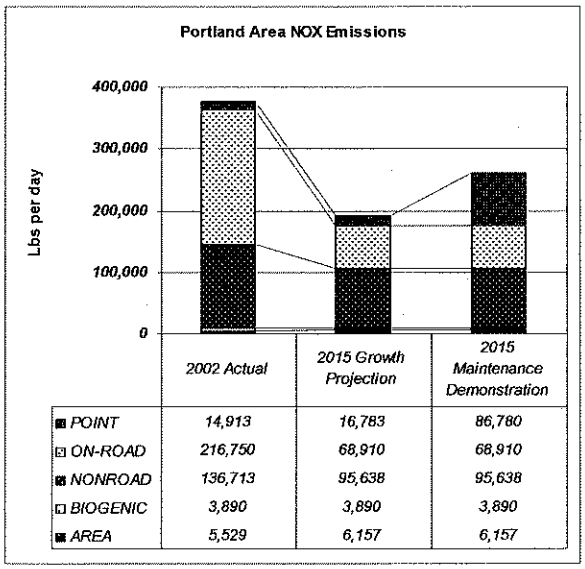
Table 7 and 8 and Figures 4 and 5 below show the 2002 estimate of actual emissions and the conservative growth scenario "2015 Maintenance Demonstration" described above. Figures 4 and 5 also show the intermediate 2015 Growth Projection described in the WSU report. Some sources, such as on-road vehicles, are projected to emit less VOC and NO_x in 2015 than in 2002. Overall, the total emissions of VOC and NO_x will be lower in 2015 than in 2002, even though the projections are based on very conservative assumptions.

Both VOC and NO_x emissions are involved in the formation of ozone and the relative amounts of each (VOC/NO_x ratio) can influence the level of ozone formation. DEQ's modeling analysis shows that of the two pollutants, VOC is the primary driver of ozone formation in the urban Portland and Salem areas. Both VOC and NO_x emission reduction strategies continue to be important to reducing ozone formation.

Figure 4: Portland Area VOC and NOx Emissions (lb/day) and 2015 Maintenance Demonstration

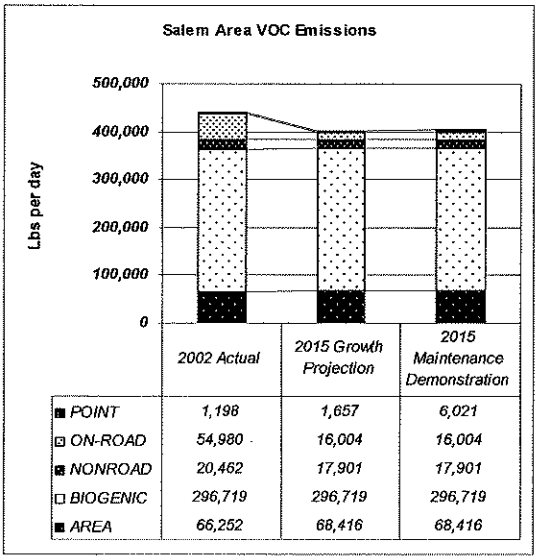


	2002 Actual	2015 Growth Projection	2015 Maintenance Demonstration
POINT	17,020	18,304	119,943
ON-ROAD	139,542	54,521	54,521
NONROAD	110,188	101,699	101,699
BIOGENIC	437,910	437,910	437,910
AREA	253,871	291,098	291,098

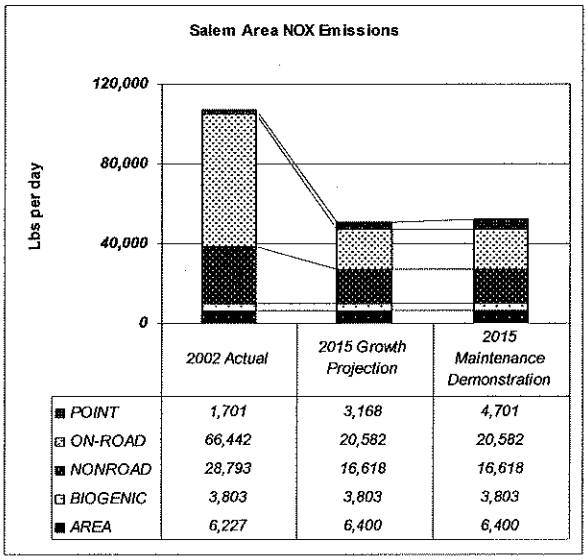


	2002 Actual	2015 Growth Projection	2015 Maintenance Demonstration
POINT	14,913	16,783	86,780
ON-ROAD	216,750	68,910	68,910
NONROAD	136,713	95,638	95,638
BIOGENIC	3,890	3,890	3,890
AREA	5,529	6,157	6,157

Figure 5: Salem Area VOC and NOx Emissions (lb/day) and 2015 Maintenance Demonstration



	2002 Actual	2015 Growth Projection	2015 Maintenance Demonstration
POINT	1,198	1,657	6,021
ON-ROAD	54,980	16,004	16,004
NONROAD	20,462	17,901	17,901
BIOGENIC	296,719	296,719	296,719
AREA	66,252	68,416	68,416



	2002 Actual	2015 Growth Projection	2015 Maintenance Demonstration
POINT	1,701	3,168	4,701
ON-ROAD	66,442	20,582	20,582
NONROAD	28,793	16,618	16,618
BIOGENIC	3,803	3,803	3,803
AREA	6,227	6,400	6,400

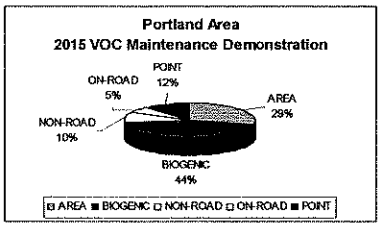
Table 7

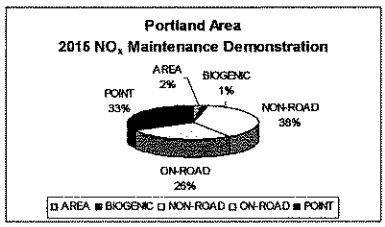
Portland Area 2015 Maintenance Demonstration
Typical Summer Day, lb/day
Clackamas, Multnomah, Washington Counties

Source Type	2015 VOC	2015 NO_x	2015 CO
AREA	291,098	6,157	29,373
BIOGENIC	437,910	3,890	--
NON-ROAD	101,699	95,638	2,260,810
ON-ROAD	54,521	68,910	560,955
POINT	119,943	86,780	108,526
Total	1,005,171	261,375	2,959,664

Portland Area 2015 Maintenance Demonstration
Annual Emissions (tons/year)
Clackamas, Multnomah, Washington Counties

Source Type	2015 VOC	2015 NO_x	2015 CO
AREA	108,109	5,822	139,992
NON-ROAD	13,308	17,223	330,324
ON-ROAD	8,538	10,339	127,923
POINT	21,721	15,191	19,768
Total	151,675	48,574	618,007





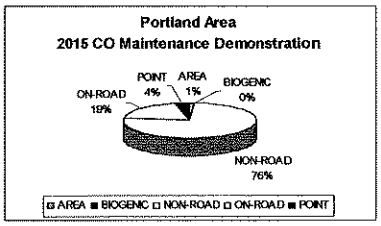


Table 8

Portland Area VOC and NO_x Emissions, (lb/day), % Change 2002-2015

(Clackamas, Multnomah, Washington Counties)

Source Type	--- VOC, lbs per day --- 2002 Actual	2015 Maintenance Demonstration	% Change
AREA	253,871	291,098	14.7%
BIOGENIC	437,910	437,910	
NONROAD	110,188	101,699	-7.7%
ON-ROAD	139,542	54,521	-60.9%
POINT	17,020	119,943	604.7%
Totals	958,531	1,005,171	

Source Type	--- NOX, lbs per day --- 2002 Actual	2015 Maintenance Demonstration	% Change
AREA	5,529	6,157	11.4%
BIOGENIC	3,890	3,890	
NONROAD	136,713	95,638	-30.0%
ON-ROAD	216,750	68,910	-68.2%
POINT	14,913	86,780	481.9%
Totals	377,794	261,375	

The Portland area on-road emissions are expected to decrease significantly: 61% less VOC emissions and 68% less NO_x emissions. This is primarily due to implementation of federal motor vehicle emission and fuel standards and continuing implementation of the vehicle inspection program. Non-road emissions also show a 30% decrease in NO_x emissions due to the phase-in of federal emission and fuel standards. Area source emissions are expected to increase due to increases in population that affect categories such as architectural surface coating and consumer solvent use. Point source "actual" emissions are not expected to change significantly (see Figure 4), although Table 8 describes the difference between "actual"

emissions in the 2002 attainment inventory and the "allowable" emissions and growth allowance in the 2015 Maintenance Demonstration[5].

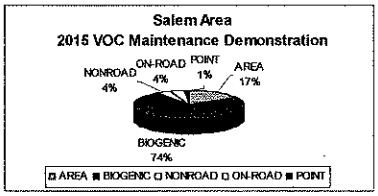
Table 9

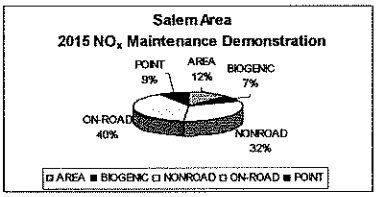
Salem Area 2015 Maintenance Demonstration
Typical Summer Day, lb/day
Marion, Polk Counties

Source Type	2015 VOC	2015 NO_x	2015 CO
AREA	68,416	6,400	150,443
BIOGENIC	296,719	3,803	--
NONROAD	17,901	16,618	386,600
ON-ROAD	16,004	20,582	167,507
POINT	6,021	4,701	4,435
Total	405,062	52,103	708,985

Salem-Area 2015 Maintenance Demonstration
Annual Emissions (tons/year)
Marion, Polk Counties

Source Type	2015 VOC	2015 NO_x	2015 CO
AREA	22,594	1,581	42,428
NONROAD	2,334	3,062	55,138
ON-ROAD	2,724	3,326	42,445
POINT	1,079	846	767
Total	28,731	8,815	140,779





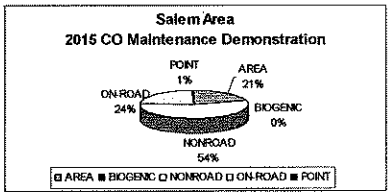


Table 10

Salem Area VOC and NO_x Emissions, (lb/day), % Change 2002-2015

(Marion & Polk Counties)

Source Type	--- VOC, lbs per day --- 2002 Actual	2015 Maintenance Demonstration	% Change	Source Type	--- NOX, lbs per day --- 2002 Actual	2015 Maintenance Demonstration	% Change
AREA	66,252	68,416	3.3%	AREA	6,227	6,400	2.8%
BIOGENIC	296,719	296,719		BIOGENIC	3,803	3,803	
NONROAD	20,462	17,901	-12.5%	NONROAD	28,793	16,618	-42.3%
ON-ROAD	54,980	16,004	-70.9%	ON-ROAD	66,442	20,582	-69.0%
POINT	1,198	6,021	402.8%	POINT	1,701	4,701	176.4%
	439,610	405,062			106,967	52,103	

Salem area on-road emissions are also expected to decrease significantly: 71% less VOC emissions and 69% less NO_x emissions. This is primarily due to implementation of federal motor vehicle emission and fuel standards. Non-road emissions also show a 42% decrease in NO_x emissions due to the phase-in of federal emission and fuel standards.

Point source "actual" emissions are not expected to change significantly (see Figure 5), although Table 10 describes the difference between "actual" emissions in the 2002 attainment inventory and the "allowable" emissions and growth allowance in the 2015 Maintenance

[5] The projected point source increase in the 2015 Maintenance Demonstration is based on the most conservative assumptions for industrial sources, and includes maximum allowable (permitted) emissions from existing sources plus the growth allowance.

Demonstration. The 2015 Maintenance Demonstration also includes one proposed energy facility that has since withdrawn its permit application.

Area sources in the Salem area are projected to increase slightly due to increases in population. The Salem area will also benefit from the phase in of on-board canister systems in motor vehicles that control gasoline vapors while refueling. This change is not as noticeable in the Portland area due to existing Stage II gasoline vapor controls.

4.50.5.4 Maintenance Demonstration

DEQ used the "2015 Maintenance Demonstration" emission forecast and worst-case meteorology from the 1998 high ozone event in the CMAQ model to estimate future ozone concentrations for the Portland and Salem areas in 2015. Compliance with the 8-hour ozone NAAQS is demonstrated when the fourth highest daily maximum 8-hour average ozone concentration, averaged over three consecutive years (i.e. Design Value), is equal to or less than 0.08 ppm[6] .

Figure 6: Portland-Vancouver and Salem Ozone Maintenance Demonstration

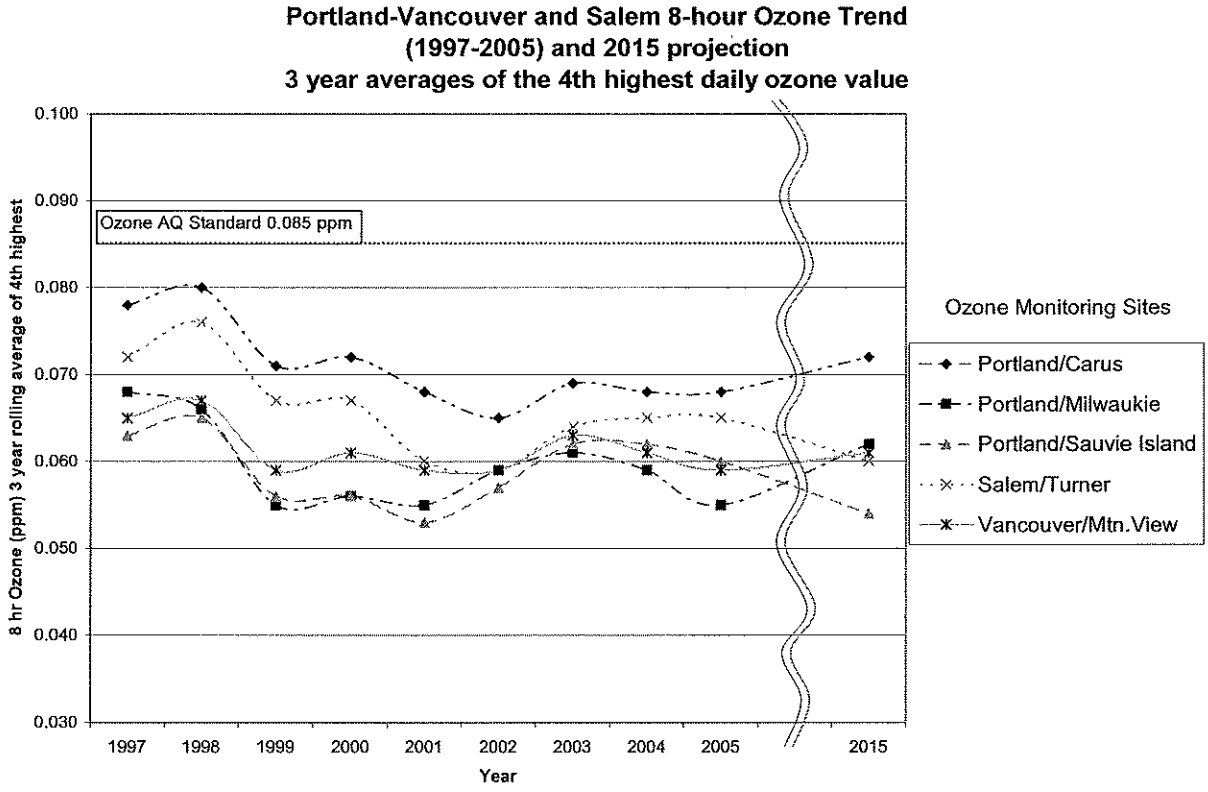


Figure 6 shows the ozone compliance trend for the Portland-Vancouver and Salem areas, including the 2015 maintenance demonstration forecast. Figure 6 and Table 11 show that the Portland-Vancouver and Salem-Keizer areas will remain in compliance with the 8-hour ozone standard. Table 11 also shows that peak ozone concentrations can exceed the standard,

[6] Under EPA's calculation convention, a value of 0.084 ppm would round down to 0.08 ppm (i.e. in compliance), while a value of 0.085 ppm or higher would be a violation.

illustrating the need to continue the suite of emission reduction strategies that limit ozone formation in the Portland and Salem areas, and for actively managing emissions growth from new industry.

Table 11 shows the maximum 8-hour ozone concentrations predicted for the key Portland, Vancouver, and Salem monitoring sites. Table 11 also shows the 2015 predicted "Design Value", which is used to compare to the ozone standard for purposes of determining compliance. WSU's modeling analysis also confirms that the existing monitoring network is capturing the areas of highest ozone concentrations. For more information on the modeled attainment test calculation of design values, see Appendix D10-6.

Table 11: 2015 Maintenance Demonstration
8-hour ozone standard = 0.08 ppm
Exceedance ≥ 0.085 ppm maximum
Violation ≥0.085 ppm predicted design value

Monitoring Site	1998 Predicted Maximum	2015 Predicted Maximum	2015 Predicted Design Value*
Portland/Carus	0.098	0.094	0.072
Portland/Milwaukie	0.092	0.096	0.062
Portland/Sauvie Island	0.082	0.076	0.054
Vancouver/ Mountain View	0.083	0.081	0.061
Salem/Turner	0.088	0.075	0.060

*Predicted Design Value is calculated using the EPA statistical procedure called the Relative Reduction Factor described in Appendix D10-5 and EPA 8-hour ozone modeling guidance. Predicted design value is compared to the 8-hour ozone standard to determine compliance.

Again, Figure 6 and Table 11 illustrate that the Portland-Vancouver AQMA and Salem SKATS will maintain compliance with the 8-hour ozone standard through 2015, with concentrations ranging from 14% to 29% below the standard. The Carus monitoring site, downwind of Portland, has traditionally been the site with the highest ozone readings in the region. The model predicted that the Milwaukie site would produce a slightly higher maximum value under meteorological conditions similar to the 1998 episode, and the maximum values at both Milwaukie and Carus would exceed the standard. However, the model also confirmed that the Carus site is expected to remain the highest and most important site for determining compliance with the ozone standard. The 4th high predicted design values at Carus and all other sites demonstrate continued compliance with the ozone NAAQS.

4.50.6 Air Quality Monitoring (Portland and Salem)

DEQ will continue to operate an ozone air quality monitoring network in accordance with 40 CFR 58 to verify maintenance of the 8-hour ozone standard in Portland and Salem (see Appendix D10-1). Any modification to the ambient air monitoring network, such as removal of duplicative or unnecessary monitors, will be accomplished through close consultation with EPA Region 10. Proposed network modifications would be accompanied by technical and statistical analysis sufficient to document a given monitor may be removed because it is unnecessary or

duplicative in the case of network reductions, or to justify the value of investing in monitoring network enhancements. In accordance with 40 CFR 58, the final network design will be subject to the approval of the EPA Regional Administrator.

4.50. 7 Contingency Plan

The maintenance plan must include a process to quickly prevent or correct any measured violation of the 8-hour ozone standard. This process of investigation and (if needed) corrective action is called the "contingency plan". Contingency plans typically have several stages of action depending on the severity of monitored ozone levels. Ambient ozone thresholds are established in the contingency plan as early-warning action levels. If monitored ozone levels exceed these action levels, the contingency provisions are triggered.

4.50.7.1 Request To Replace the Portland-Vancouver AQMA 1-Hour Contingency Plan With an 8-Hour Contingency Plan

EPA revoked the one-hour ozone standard, effective June 15, 2005 (69 FR 23951, April 30, 2004). In accordance with EPA rules implementing the 8-hour ozone standard (40 CFR 51.900), DEQ requests that the one-hour ozone contingency plan be removed from the Portland-Vancouver AQMA Ozone Maintenance Plan, and replaced with a contingency plan that addresses the 8-hour ozone standard as described below.

4.50.7.2 Portland-Vancouver AQMA 8-hour Ozone Contingency Plan

This contingency plan includes two sets of contingency measures. The provisions specified under Part A of the Contingency Plan for the Portland-Vancouver AQMA are linked to ambient concentrations of ozone and would be triggered if measured ozone levels at any of the ozone monitoring sites (Mountain View, Sauvie Island, Milwaukie, or Carus) exceed the early-warning thresholds below, or if a violation of the 8-hour ozone standards occurs. The provisions specified under Part B of the Contingency Plan are linked to increases in the average amount of vehicle use per person in the Portland metropolitan area, and would only affect the Oregon portion of the Portland-Vancouver AQMA.

4.50.7.2.1 Part A, Contingency Plan Based On Ambient Concentrations in Portland or Vancouver

PHASE 1: ELEVATED OZONE LEVELS
If the air quality index (AQI) is forecast to be within the "orange" range for ozone air quality (unhealthy for sensitive populations), or 8-hour daily maximum ozone values approach 0.100 ppm or greater, and meteorological conditions conducive to ozone formation are expected to persist, DEQ and SWCAA will issue an advisory to inform the public of air quality levels and voluntary actions they can take to limit exposure to unhealthy air pollution levels and reduce emissions.

PHASE 2: RISK OF VIOLATION
If monitored 8-hour ozone levels at any site within the Portland-Vancouver area registers an annual fourth high monitored value of 0.085 ppm or greater within a single ozone season or 0.080 ppm or greater averaged over two years, DEQ and SWCAA will assess the likely emissions and meteorological events contributing to elevated ozone levels. DEQ may form a planning group to assist DEQ in its review. The DEQ could recommend that no action be taken if it is determined that: (a) elevated ozone levels were caused by an event that is unlikely to

occur again, or (b) high ozone levels were caused by an uncontrollable event, such as a severe wildfire, or (c) federal regulations that will reduce ozone precursor emissions are scheduled to be implemented within two years. If it is determined that the event did not meet the criteria above, DEQ will evaluate options for appropriate action, including the option for additional emission reduction strategies to prevent future exceedances or a violation of the 8-hour ozone standard.

PHASE 3: ACTUAL VIOLATION
If a violation of the 8-hour ozone standard occurs, DEQ and SWCAA will determine the emissions and meteorological events contributing to the violation. If the violation is not due to an uncontrollable event or other criteria in Phase 2, DEQ will identify new strategies necessary to ensure compliance with the 8-hour ozone standard within 18 months of the conclusion of the ozone season that prompted the contingency plan, and revise the maintenance plan as needed to correct the violation. A revised maintenance plan would be submitted to EPA for approval.

Measures that would be considered for implementation include the following:

- Reinstatement of applicable measures as defined in 40 CFR 51.900, which includes the Enhanced Inspection/Maintenance Test for certain model year vehicles[7];
- Contingency Plan Requirements described in OAR 340-224-0060(5) that reinstate the LAER and offset requirements and eliminate the growth allowance until a revised maintenance plan is adopted by the EQC and approved by EPA;
- Other measures as appropriate.

4.50.7.2.2 Part B, Contingency Plan Based on Significant Increase in Vehicle Miles Traveled in the Oregon portion of the Portland-Vancouver AQMA

EPA's 8-hour ozone implementation rule (69 FR 23987-88, April 30, 2004) notes that although states cannot implement conformity for attainment areas as a matter of federal law, they could still work with their metropolitan planning organizations to develop a voluntary program to address motor vehicle emissions growth. Metro has agreed to informally track motor vehicle VOC and NO_x emissions at the same time as they are demonstrating conformity with the Portland Carbon Monoxide Maintenance Plan emissions budget. In addition, Metro has agreed to the following contingency measures for the Portland Carbon Monoxide Maintenance Plan that are also appropriate as voluntary measures for addressing ozone precursor emissions within the Portland metropolitan area. Although transportation control measures cannot be enforced and are removed from the Portland AQMA Ozone Maintenance Plan, other measures to reduce vehicle miles traveled (VMT) such as the Employee Commute Option program and public education and outreach remain in the ozone maintenance plan. In addition, DEQ participates in Metro's Regional Transportation Options program which includes many efforts in the Portland area designed to reduce single-occupancy vehicle trips.

PHASE 1: 5% VMT INCREASE
Metro will review and verify the local average vehicle miles traveled per capita (VMT/capita) for the Oregon portion of the Portland-Vancouver Air Quality Maintenance Area derived from the

[7] Although EPA requires all former applicable measures such as the Enhanced Inspection/Maintenance test be included in the contingency plan, DEQ believes that reinstating enhanced testing would not be feasible or cost effective, and would evaluate other more effective measures if the contingency plan is triggered.

most recent estimates of population and daily vehicle miles traveled from federal and state sources.

If daily VMT/capita exceeds a 5 % increase above the 2002 rate for two successive years, the Standing Committee [TPAC, as defined at OAR 340-252-0060(2)(b)(A)(iii)] shall be convened to:

a) determine whether there is a data problem with the trigger;

b) if there is not a data problem with the trigger, identify and analyze the effectiveness of those local actions that could reduce air pollutant emissions; and,

c) determine whether a recommendation should be made to JPACT to initiate local action to reduce VMT/capita until the 2002 level is once again attained.

PHASE 2: 10% VMT INCREASE

Metro will review and verify local VMT/capita values derived from the most recent estimates of population and daily vehicle miles traveled from federal and state sources.

If average daily VMT/capita exceeds a 10 percent increase above the 2002 rate for the Oregon portion of the Portland-Vancouver Air Quality Maintenance Area for two successive years, the following measures will become required Transportation Control Measures for the region (as determined by the programming of funds for specified projects) under the Portland Carbon Monoxide Maintenance Plan:

a) Washington County Commuter Rail within six years after exceeding the 10% increase above the 2002 VMT/capita rate,

b) Interstate 205 Light Rail Transit (I-205 LRT) within six years after exceeding the 10% increase above the 2002 VMT/capita rate;

c) An increase of efforts for the Regional Travel Options Program sufficient to increase the number of employers reached by the program by at least 5 % per year the number of employers currently subject to the DEQ Employee Commute Options program. Alternatively, specific projects from the Regional Transportation Options program could be substituted.

d) An increase of funding of at least 5% per year greater than current funding for Transit Oriented Development projects.

e) Other programs or projects consistent with state and federal law as may be determined by the Metro Council after consultation with the Joint Policy Advisory Committee on Transportation.

4.50.7.3 Salem SKATS 8-Hour Ozone Contingency Plan

PHASE 1: ELEVATED OZONE LEVELS
If the air quality index (AQI) is forecast to be within the "orange" range for ozone air quality (unhealthy for sensitive populations), or 8-hour daily maximum ozone values reach 0.100 ppm or greater, and meteorological conditions conducive to ozone formation are expected to persist,

DEQ will issue an advisory to inform the public of air quality levels and actions they can take to limit exposure to unhealthy air pollution levels and reduce emissions.

PHASE 2: RISK OF VIOLATION
If monitored 8-hour ozone levels at any site within the Salem/Turner area registers an annual fourth high monitored value of 0.085 ppm or greater within a single ozone season, or 0.080 ppm or greater averaged over two years, DEQ will assess the likely emissions and meteorological events contributing to elevated ozone levels. DEQ may form a planning group to assist DEQ in its review. The DEQ could recommend that no action be taken if it is determined that: (a) elevated ozone levels were caused by an event that is unlikely to occur again, or (b) high ozone levels were caused by an uncontrollable event, such as a severe wildfire, or (c) federal regulations that will reduce ozone precursor emissions are scheduled to be implemented within two years. If it is determined that the event did not meet the criteria above, DEQ will evaluate options for appropriate action, including the option for additional emission reduction strategies to prevent future exceedances or a violation of the 8-hour ozone standard.

PHASE 3: ACTUAL VIOLATION
If a violation of the 8-hour ozone standard occurs, DEQ will determine the probable emissions and meteorological events contributing to the violation. If the violation is not due to an uncontrollable event or other criteria in Phase 2, DEQ will identify new strategies necessary to ensure compliance with the 8-hour ozone standard within 18 months of the conclusion of the ozone season that prompted the contingency plan, and revise the maintenance plan as needed to correct the violation. Contingency plan requirements described in OAR 340-224-0060(5) that reinstate the LAER requirement would also apply until a revised maintenance plan is adopted by the EQC and approved by EPA.

4.50.8 Verification of Continued Attainment (Portland-Vancouver and Salem)

DEQ will continue to monitor ambient air quality ozone levels as described in the Contingency Plan. The Contingency Plan triggers that are based on ambient concentrations are intended to prevent violations of the 8-hour standard in the Portland-Vancouver and Salem areas. DEQ will update countywide emission inventories every three years as required by the Consolidated Emission and Reporting Rule (CERR) update of the National Emissions Inventory. If ambient ozone levels increase, DEQ will compare CERR updates with the 2002 and 2015 emissions inventories and evaluate the assumptions used in the 2015 emissions projections to determine whether emissions are increasing at a rate not anticipated in the maintenance plan.

Appendices

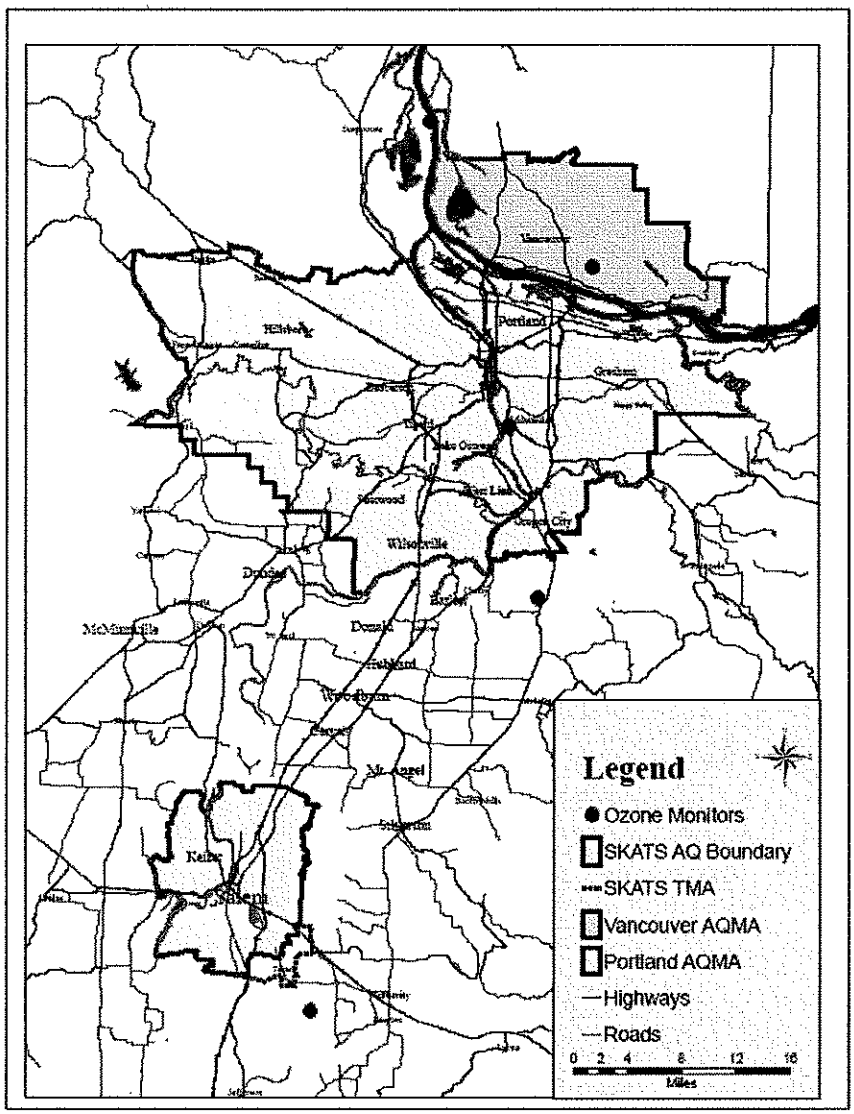
1. Ozone Monitoring Network (Vancouver-Portland-Salem regional area map and site description)
2. 1992 to 2005 Meteorological Factors Conducive to Ozone Formation in the Portland-Vancouver Area (ODEQ, April 2006)
3. Emission Inventory
    a. Annual Emissions Inventory
    b. Typical Summer Day Emissions Inventory
    c. Summary of Portland Area Emissions
    d. Summary of Salem Area Emissions
4. Historical and Future Ozone Simulations Using the MM5/SMOKE/CMAQ System in the Portland-Vancouver Area (WSU, December 31, 2005)
5. Economic Report to the Metro Council, 2000-2030 Regional Forecast for the Portland-Vancouver Metropolitan Area (Metro's Data Resource Center, December 2002 final draft)

6. Modeled Attainment Test

References

- "Maintenance Plan Guidance Document for Certain 8-hour Ozone Areas Under Section 110(a)(1) of the Clean Air Act" (memo dated May 20, 2005 from Lydia Wegman, EPA). The May 20, 2005 guidance applies to areas designated in attainment with the 8-hour ozone standard and preparing maintenance plans under Section 110(a)(1) of the Clean Air Act and 40 CFR 51.905(c) and (d).
- "Demonstrating Noninterference Under Section 110(l) of the Clean Air Act When Revising a State Implementation Plan" (draft EPA Guidance, 6/8/05)
- "1-Hour Ozone Maintenance Plans Containing Basic I/M Programs (memo dated May 12, 2004 from Tom Helms, EPA)
- April 30, 2004 Federal Register (69 FR 23951), Final Rule to Implement the 8-Hour Ozone NAAQS-Phase 1
- July 8, 2005 Federal Register (70 FR 39413), Notice of Final Rulemaking regarding Nonattainment Major New Source Review Implementation under 8-Hour Ozone NAAQS
- "Guidance on the Use of Models and Other Analyses in Attainment Demonstrations for the 8-hour Ozone NAAQS" (EPA-450/R-05-002, October, 2005)
- "Emission Inventory Guidance for Implementation of Ozone and Particulate Matter NAAQS and Regional Haze" (EPA-454/R-05-001, August 2005, updated November 2005)
- "2002 Base Year Emission Inventory SIP Planning: 8-hr Ozone, PM 2.5 and Regional Haze Programs" (memo dated November 18, 2002 from Lydia Wegman, EPA)
- "Procedures for Processing Requests to Redesignate Areas to Attainment" (memo dated September 4, 1992 from John Calcagni, EPA)

Appendix D10-1
Portland-Vancouver AQMA and Salem SKATS
Ozone Monitoring Network



Monitoring Sites (north to south):

1. Sauvie Island (Portland, OR) (background site)
2. Mountain View (Vancouver, WA)
3. Milwaukie (Portland, OR)
4. Carus (Portland, OR) (traditionally highest ozone values)
5. Turner (Salem, OR)

DEQ and SWCAA Continuous Air Monitoring Method for Ozone: Ultraviolet Photometry
The air sample enters a chamber with an ultraviolet lamp at one end and detector at the other. The ozone in the sample stream absorbs the ultraviolet light at a specific wavelength. The amount absorbed is proportional to the amount of ozone in the air stream. The detector then sends an amplified signal to the recorder. This is an EPA Federal Reference Method.

8-hour Ozone Air Quality Data (DEQ Air Quality Annual Report, 2004)

STATION LOCATION AND NUMBER	Year	SUMMER AVERAGE	1-HOUR MAXIMUM (date)	# OF DAYS >0.125 ppm	8-HOUR AVERAGE MAXIMUM	4TH HIGHEST 8-HOUR AVERAGE	# OF DAYS >0.085 ppm	3 YEAR AVG OF 4TH HIGH
Portland Area	1994	0.029	0.117 (07/21)	0	0.084 (07/21)	0.078 (07/27)	2	0.079†
Carus (SPR)	1995	0.027	0.099 (06/30)	0	0.084 (09/01)	0.073 (09/14)	1	0.072†
13575 Spangler Road	1996	0.029	0.149 (07/26)	1	0.112 (07/26)	0.099 (07/27)	7	0.083†
Canby	1997	0.025	0.085 (07/04)	0†	0.074 (07/04)	0.062 (05/13)	0	0.078
DEQ# 10093	1998	0.026	0.137 (07/28)	3†	0.116 (07/26)	0.081 (09/01)	3	0.080
EPA# 410050004	1999	0.028	0.102 (07/10)	0†	0.080 (07/09)	0.072 (07/28)	0	0.071
	2000	0.025	0.086 (06/28)	0†	0.071 (06/03)	0.065 (07/30)	0	0.072
	2001	0.025	0.099 (08/09)	0†	0.080 (08/09)	0.069 (06/20)	0	0.068
	2002	0.025	0.101 (07/22)	0†	0.085 (07/10)	0.063 (07/21)	1	0.065
	2003	0.029	0.097 (07/29)	0†	0.084 (09/03)	0.075 (07/28)	0	0.069
	2004	0.025	0.105 (07/24)	0†	0.084 (07/24)	0.067 (08/11)	0	0.068
	2005	0.025	0.093 (08/04)	0†	0.079 (08/04)	0.064 (07/27)	0	.068
Milwaukie High Sch (MHS)	1994	0.018	0.103 (07/20)	0	0.087 (07/20)	0.057 (07/21)	1	0.060†
11300 SE 23rd	1995	0.018	0.110 (07/18)	0	0.092 (07/18)	0.067 (05/29)	1	0.059†
DEQ# 10095	1996	0.019	0.145 (07/14)	2	0.120 (07/14)	0.085 (07/13)	4	0.069†
EPA# 410052001	1997	0.016	0.101 (07/20)	0	0.082 (07/04)	0.054 (07/19)	0	0.068†
	1998	0.018	0.124 (07/26)	0†	0.100 (07/26)	0.061 (08/31)	1	0.066†
	1999	0.015	0.080 (06/14)	0†	0.054 (07/09)	0.051 (05/23)	0	0.055†
Milwaukie (MSJ)	2000	0.018	0.085 (06/04)	0†	0.068 (06/04)	0.056 (08/23)	0	0.056
St. Johns Church	2001	0.018	0.082 (08/10)	0†	0.066 (08/10)	0.059 (08/12)	0	0.055
DEQ# 23306	2002	0.020	0.116 (07/22)	0†	0.082 (07/22)	0.063 (08/13)	0	0.059
EPA# 410052002	2003	0.021	0.091 (06/07)	0†	0.068 (06/06)	0.061 (07/28)	0	0.061
	2004	0.017	0.094 (07/24)	0†	0.077 (07/24)	0.054 (08/15)	0	0.059
	2005	0.016	0.083 (05/27)	0†	0.063 (05/27)	0.050 (08/14)	0	0.055

Sauvie Island (SIS)	1994	0.023	0.102 (07/20)	0	0.086 (07/20)	0.062 (07/21)	1	0.066†
Social Security Beach	1995	0.022	0.103 (07/18)	0	0.089 (07/18)	0.061 (07/17)	1	0.063†
DEQ# 14152 EPA# 410090004	1996	0.026	0.096 (08/10)	0	0.084 (07/13)	0.076 (07/26)	0	0.066†
	1997	0.022	0.081 (07/04)	0†	0.064 (07/04)	0.053 (05/11)	0	0.063
	1998	0.023	0.093 (07/26)	0†	0.077 (07/27)	0.066 (08/28)	0	0.065
	1999	0.021	0.070 (07/09)	0†	0.056 (07/09)	0.049 (09/22)	0	0.056
	2000	0.022	0.080 (06/04)	0†	0.066 (06/27)	0.054 (06/03)	0	0.056
	2001	0.025	0.089 (08/10)	0†	0.068 (08/10)	0.056 (05/10)	0	0.053
	2002	0.025	0.084 (07/10)	0†	0.067 (08/13)	0.061 (06/12)	0	0.057
	2003	0.025	0.088 (09/03)	0†	0.073 (09/03)	0.069 (07/28)	0	0.062
	2004	0.023	0.074 (07/24)	0†	0.061 (07/23)	0.058 (07/22)	0	0.062
	2005	0.023	0.080 (08/04)	0†	0.065 (08/04)	0.055 (08/14)	0	0.060
	1995	0.022	0.105 (06/30)	0	0.072 (09/01)	0.064 (07/16)	0	-
Salem Area								
Cascade Jr High (CJH)	1996	0.028	0.130 (07/26)	1	0.104 (07/26)	0.092 (08/10)	10	-
10226 Marion Rd. SE	1997	0.024	0.082 (07/04)	0†	0.067 (07/04)	0.061 (08/12)	0	0.072
Turner	1998	0.024	0.121 (07/27)	0†	0.098 (07/27)	0.077 (08/28)	1	0.076
DEQ# 10130 EPA# 410470004	1999	0.023	0.083 (09/21)	0†	0.074 (07/09)	0.065 (07/10)	0	0.067
	2000	0.020	0.075 (07/30)	0†	0.064 (07/30)	0.059 (06/26)	0	0.067
	2001	0.021	0.087 (08/09)	0†	0.068 (07/03)	0.057 (08/12)	0	0.060
	2002	0.023	0.097 (07/10)	0†	0.072 (07/12)	0.063 (08/13)	0	0.059
	2003	0.028	0.096 (09/04)	0†	0.080 (09/03)	0.072 (07/30)	0	0.064
	2004	0.021	0.086 (08/11)	0	0.068 (08/11)	0.062 (07/24)	0	0.065
	2005	0.023	0.100 (08/04)	0†	0.080 (08/04)	0.063 (05/27)	0	0.065

*Parts per million
† The 8hour ozone standard became effective in 1998;
1-hour values are no longer evaluated for attainment purposes.
The 8 hr standard is the 3-year average of the 4th highest value.

STATION LOCATION AND NUMBER	Year	SUMMER AVERAGE	1-HOUR MAXIMUM (date)	# OF DAYS >0.125 ppm	8-HOUR AVERAGE MAXIMUM	4TH HIGHEST 8-HOUR AVERAGE	# OF DAYS >0.085 ppm	3 YEAR AVG OF 4TH HIGH
Vancouver Area	1995	0.021	0.117 (7/19)	0	n/a	n/a	0	n/a
Mt. View High School 1500 SE Blairmont Dr Vancouver	1996	0.022	0.112 (07/19)	0	n/a	n/a	0	n/a
AIRS #530110011	1997	0.02	0.077 (07/04)	0	n/a	n/a	0	n/a
	1998	0.021	0.102 (07/28)	0	0.078 (07/27)	0.07 (08/28)	0	n/a
	1999	0.021	0.080 (09/22)	0	0.061 (07/09)	0.057 (08/23)	0	n/a
	2000	0.021	0.104 (06/04)	0	0.073 06/04)	0.059 (06/27)	0	0.062
	2001	0.022	0.089 (05/22)	0	0.071 (08/10)	0.063 (06/20)	0	0.06
	2002	0.023	0.086 (07/10)	0	0.073 (7/22)	0.056 (06/25)	0	0.059
	2003	0.026	0.098 (09/03)	0	0.077 (09/03)	0.069 (06/07)	0	0.063
	2004	0.021	0.083 (08/09)	0	0.066 (07/24)	0.056 (06/21)	0	0.06
	2005	0.023	0.090 (05/27)	0	0.076 (005/27)	0.057 (08/19)	0	0.060

Appendix D10-2

1992 to 2005 Meteorological Factors Conducive to Ozone Formation in the Portland-Vancouver Area (ODEQ, April 2006)

Please contact DEQ for a copy of this appendix

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Appendix D10-3
Emission Inventory

The Portland-Vancouver AQMA and the Salem-Keizer Area Transportation Study air quality area were designated "Unclassifiable/Attainment" with the 8-hour ozone National Ambient Air Quality Standard (NAAQS) on April 30, 2004 (69 FR 23829-30), as demonstrated through air quality monitoring data. EPA requires this maintenance plan to demonstrate continued compliance for at least ten years following EPA designation. WSU performed a modeling analysis that forecasted ozone levels to 2015 and determined that these areas will continue to meet the standard.

The maintenance plan accommodates future growth and provides for the protection of public health by ensuring compliance with the 8-hour ozone standard. The maintenance plan continues emission reduction strategies needed to maintain compliance. To approve the maintenance plan, EPA requires permanent and enforceable reductions in emissions to remain in effect throughout the maintenance period.

In compliance with published EPA requirements, this emission inventory is provided as a part of the State's revisions to its State Implementation Plan (SIP) to formulate a strategy to maintain the NAAQS. The principal components for development and documentation for the maintenance plan inventories include stationary point sources, stationary area sources, non-road mobile sources, on-road mobile sources, biogenic emission sources, quality assurance implementation, and emissions summaries. The geographic focus for this emission inventory is the Oregon portion of the Portland-Vancouver AQMA and the Salem-Keizer Area Transportation Study (SKATS) air quality area. Countywide estimates are used to facilitate comparison with future year National Emission Inventory submittals. The emissions inventory for the Portland-Vancouver AQMA (Oregon portion) includes Clackamas, Multnomah and Washington counties. The emissions inventory for the Salem-Keizer SKATS air quality area includes Marion and Polk counties. A complete copy of the emission inventory is on file at DEQ and available upon request.

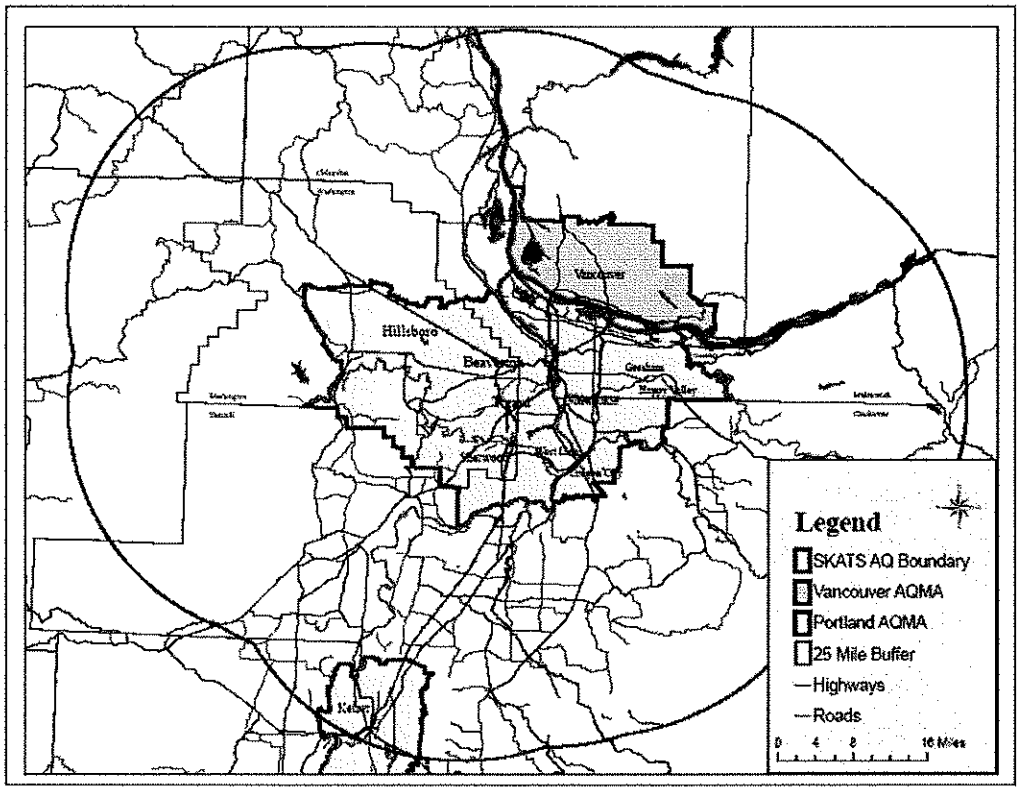
The WSU modeling study (Appendix D10-4) describes the emissions inventory that was used to validate the model and evaluate the 2015 projection. The model meteorology was based on a July 1998 episode in which the Portland area violated the one-hour ozone NAAQS at the Carus monitoring site.

Point source emissions from sources that are not Title 5 point sources were inventoried by DEQ regional staff and SWCAA using the following parameters:

Geographic Area	VOC	NOx	CO
AQMA	>10 tons/year	>40 tons/year	>100 tons/year
25-mile buffer	>100 tons/year	>40 tons/year	>100 tons/year
Modeling domain	>100 tons/year	>40 tons/year	>100 tons/year

In this document the terms "annual emissions" and "typical summer day" emissions are used to categorize the estimated emissions for a particular time period. The annual emissions, in tons per year, are a total amount of emissions for the source category that occurred throughout the year. The typical summer day emissions, in pounds per day, are based on the ozone season period from May 1st through September 30th as one in which, historically, the 8-hour ozone standard would most likely be exceeded.

Point Source Inventory Area



Annual Emission Inventory

The attainment year emission inventory (2002) for area sources, non-road mobile and on-road mobile sources and Title 5 point sources was developed from the DEQ 2002 Consolidated Emissions Reporting Rule (CERR) National Emission Inventory (NEI) submittal. For point sources, DEQ used 2002 "actual" data generated from point source annual reports for the attainment year inventory. For the 2015 maintenance demonstration, DEQ used "allowable" data generated from point source permits that represents the maximum allowable emissions that could be generated at each facility. Washington sources were grown proportionally. The 2015 maintenance demonstration also included a growth allowance in both Oregon and Washington. 5,000 tons VOC and 5,000 tons NO_x were added to areas zoned for industrial growth in the Oregon portion of the Portland-Vancouver AQMA, and a proportional amount of 411 tons of VOC and 1,313 tons of NO_x was added to areas zoned for industrial growth in the Washington portion of the Portland-Vancouver AQMA.

The annual emission inventory is summarized in Tables 12 and 13 below. The annual emissions are included for ease of comparison with future year CERR National Emission Inventory submittals.

Table12: Portland Area VOC and NO_x Emissions (tons/year)

Portland Area VOC Emissions
Annual Emissions (tons/year)
Clackamas, Multnomah, Washington Counties

Source Type	2002 Actual	2015 Growth Projection	2015 Maintenance Demonstration
AREA	92,946	108,109	108,109
NON-ROAD	13,247	13,308	13,308
ON-ROAD	23,683	8,538	8,538
POINT	3,056	3,292	21,721
Total	132,931	133,246	151,675

Portland Area NO_x Emissions
Annual Emissions (tons/year)
Clackamas, Multnomah, Washington Counties

Source Type	2002 Actual	2015 Growth Projection	2015 Maintenance Demonstration
AREA	5,808	5,822	5,822
NON-ROAD	17,344	17,223	17,223
ON-ROAD	36,786	10,339	10,339
POINT	2,522	2,862	15,191
Total	62,461	36,245	48,574

Portland Area CO Emissions
Annual Emissions (tons/year)
Clackamas, Multnomah, Washington Counties

Source Type	2002 Actual	2015 Growth Projection	2015 Maintenance Demonstration
AREA	104,621	139,992	139,992
NON-ROAD	153,204	330,324	330,324
ON-ROAD	288,435	127,923	127,923
POINT	2,214	2,364	19,768
Total	548,474	600,603	618,007

Table13: Salem Area VOC and NO_x Emissions (tons/year)

Salem Area VOC Emissions
Annual Emissions (tons/year)
Marion, Polk Counties

Source Type	2002 Actual	2015 Growth Projection 2015 Maintenance Demonstration	
AREA	20,297	22,594	22,594
NON-ROAD	2,401	2,334	2,334
ON-ROAD	9,331	2,724	2,724
POINT	218	302	1,079
Total	32,247	27,954	28,731

Salem Area NO_x Emissions
Annual Emissions (tons/year)
Marion, Polk Counties

Source Type	2002 Actual	2015 Growth Projection 2015 Maintenance Demonstration	
AREA	1,646	1,581	1,581
NON-ROAD	3,159	3,062	3,062
ON-ROAD	11,276	3,326	3,326
POINT	302	577	846
Total	16,383	8,547	8,815

Salem Area CO Emissions
Annual Emissions (tons/year)
Marion, Polk Counties

Source Type	2002 Actual	2015 Growth Projection 2015 Maintenance Demonstration	
AREA	34,547	42,428	42,428
NON-ROAD	27,025	55,138	55,138
ON-ROAD	116,116	42,445	42,445
POINT	30	329	767
Total	177,719	140,341	140,779

Typical Summer Day Emission Inventory

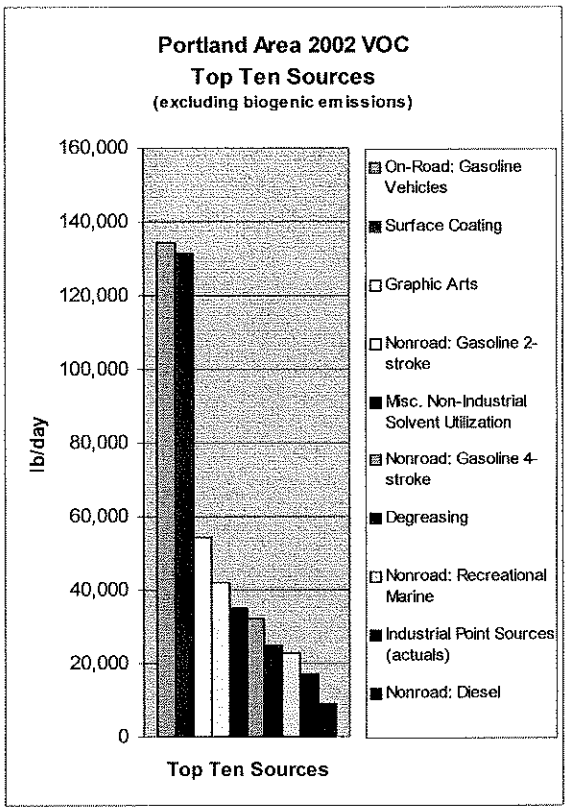
For the 2002 base year and 2015 maintenance demonstration, DEQ used the countywide inventory for area, on-road and non-road sources. DEQ generated the typical summer day emission inventory using the Sparse Matrix Operator Kernel Emissions Modeling System (SMOKE) model to make the seasonal adjustments to the annual emissions inventory. Complete descriptions of the seasonal adjustment factors used to develop typical summer day emissions can be found in the Inventory Preparation Plan, available from DEQ. The SMOKE model was used to seasonally adjust the emissions for the CMAQ model validation, 2002 attainment inventory and 2015 maintenance demonstration emissions inventories.

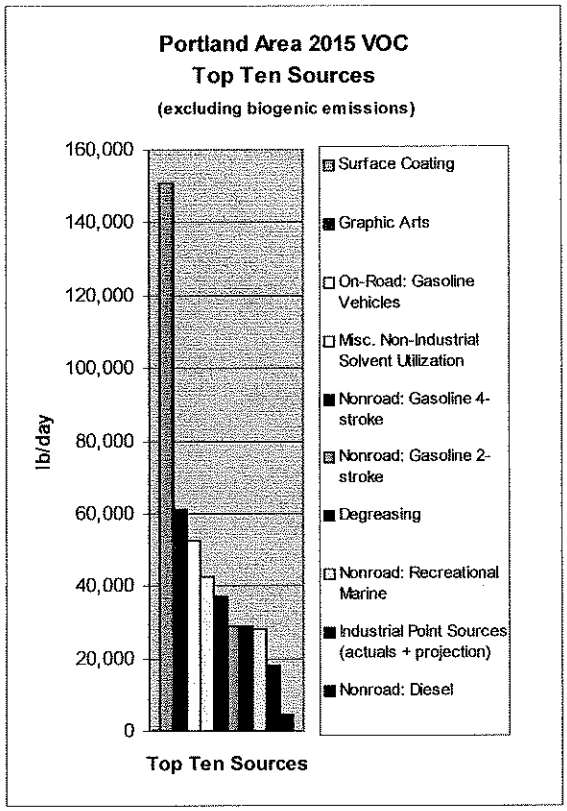
Fireplace and woodstove emissions were not included in the seasonally-adjusted area source inventory because they would not likely be used during meteorological conditions conducive to ozone formation (hot, stagnant summer days). Wildfires, prescribed fires and structural fires were also not included in the 2002 Attainment Inventory and 2015 maintenance demonstration inventory because the modeling team's research on source activity during the July 1998 episode indicated that these emissions were not significant during the 1998 episode.

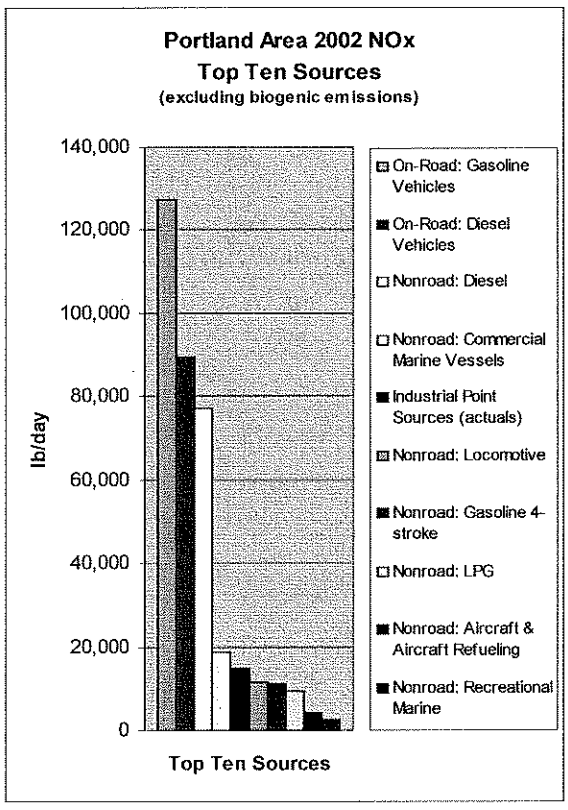
Typically, industrial production and emissions are fairly constant throughout the year.

Figures 7 and 8, and Tables 14 and15, describe the typical summer day emissions inventories in Portland and Salem.

Figure 7: Top Ten Sources, Portland







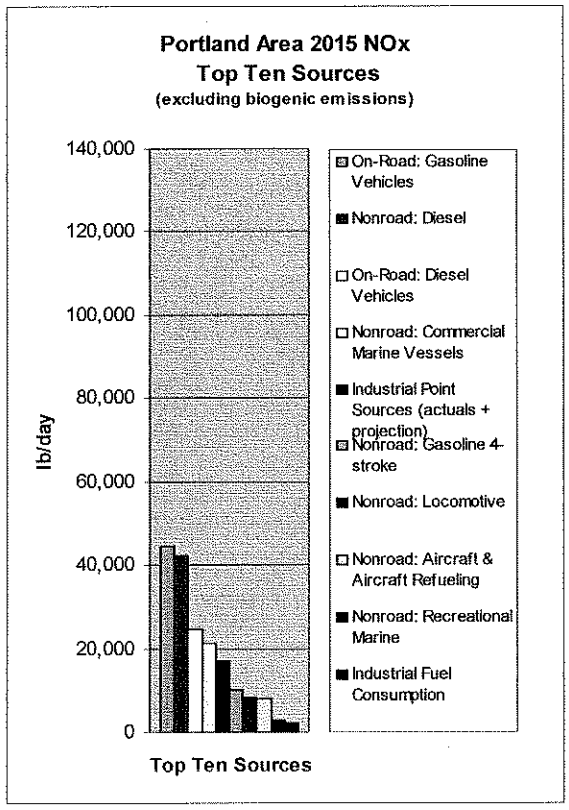
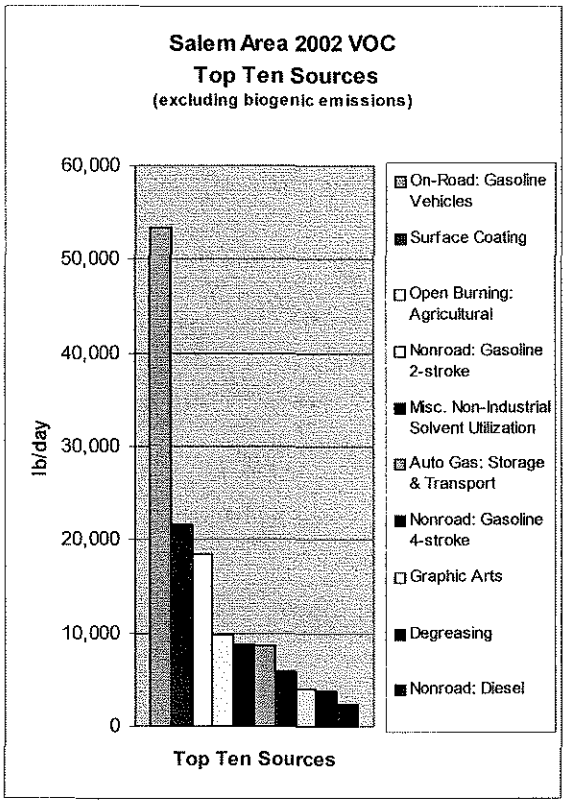
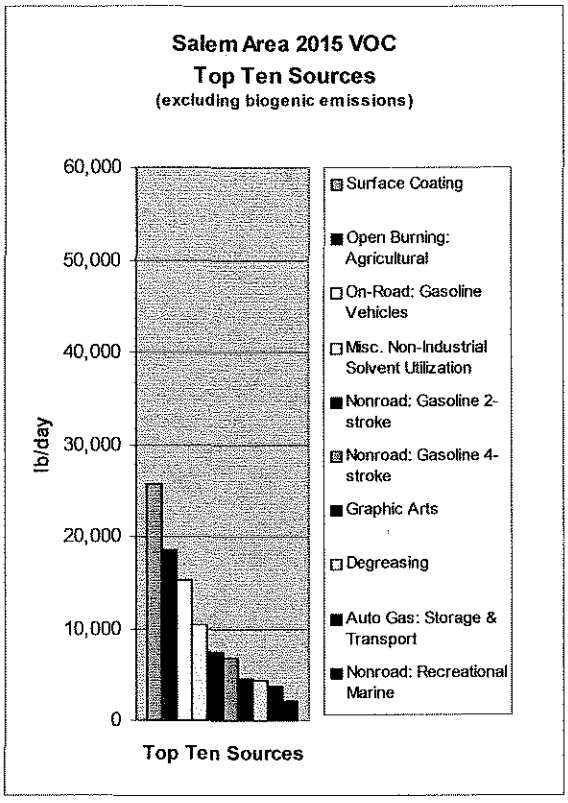
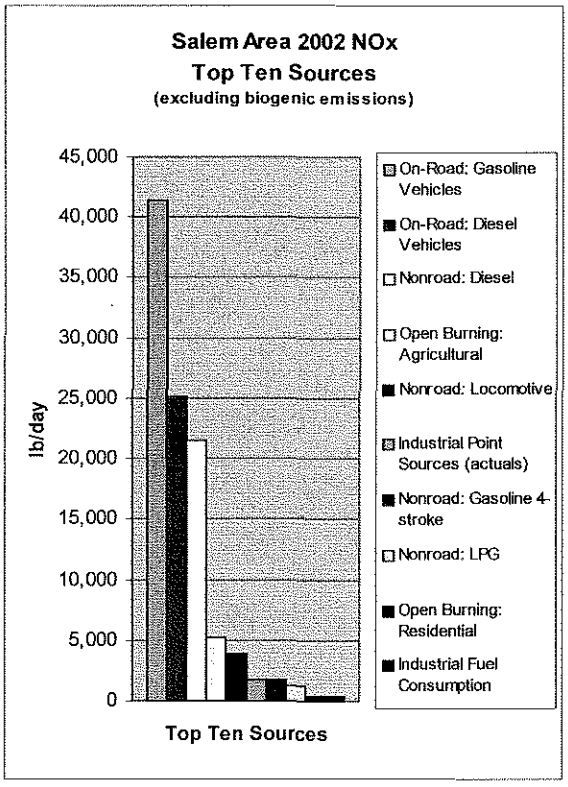
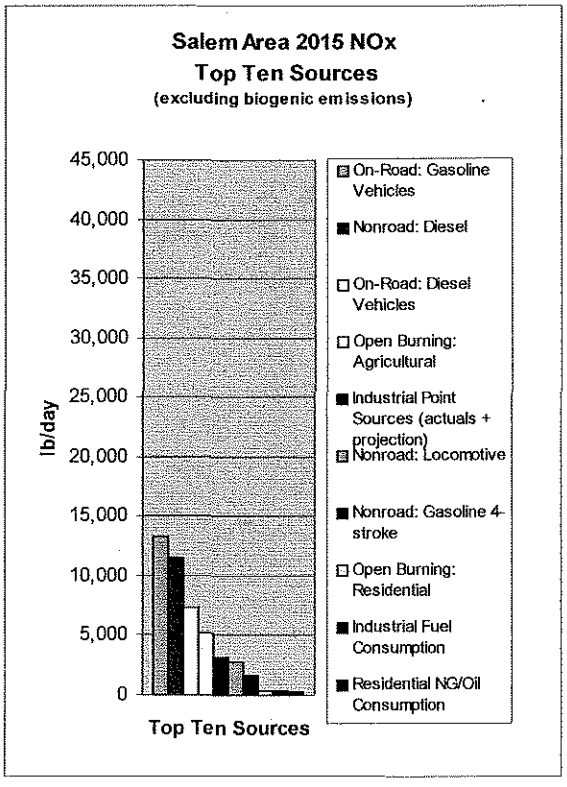


Figure 8: Top Ten Sources, Salem









Summary of Portland AQMA Emissions (Clackamas, Multnomah, and Washington Counties)

A summary of the Portland-Vancouver AQMA Ozone Maintenance Plan Emission Inventory for Point, Area, Non-road Mobile and On-road Mobile sources of VOC and NO_x emissions is presented in the following section. Percentages reflect anthropogenic (human-caused) emissions; biogenic emissions have been subtracted from this summary (see Tables 14 and 15). A full copy of the emission inventory is available upon request from DEQ.

Portland Area VOC and NO_x Emissions, (lb/day)

(Clackamas, Multnomah, Washington Counties)

	VOC, lbs per day				NO_x, lbs per day		
Source Type	2002 Actual	2015 Growth Projection	2015 Maintenance Demonstration	Source Type	2002 Actual	2015 Growth Projection	2015 Maintenance Demonstration
AREA	253,871	291,098	291,098	AREA	5,529	6,157	6,157
BIOGENIC	437,910	437,910	437,910	BIOGENIC	3,890	3,890	3,890
NONROAD	110,188	101,699	101,699	NONROAD	136,713	95,638	95,638
ON-ROAD	139,542	54,521	54,521	ON-ROAD	216,750	68,910	68,910
POINT	17,020	18,304	119,943	POINT	14,913	16,783	86,780
Totals	958,531	903,531	1,005,171	Totals	377,794	191,378	261,375
Totals Minus Biogenic	520,621	465,621	567,260		373,904	187,487	257,485

2002 Attainment Inventory (Clackamas, Multnomah, and Washington Counties)

During an ozone season day, on-road mobile sources contribute 27% of the VOC and 58% of the total NO_x air emissions in the Oregon portion of the Portland-Vancouver AQMA. On-road mobile source emissions are based on motor vehicle travel on a typical summer day and the seasonal adjustment factor reflects the fact that emissions would likely increase during the summer months when tourism traffic picks up. Gasoline vehicles contribute 26% of the VOC emissions and 34% of the NO_x emissions within the on-road mobile category; diesel vehicles contribute 24% of the NO_x emissions.

Stationary area sources comprise 49% of the VOC and 1% of the NO_x air emissions in the Portland area on a typical summer day. Within the area source category, surface coating contributes 25% of the VOC emissions while consumer solvents contribute 7% and graphic arts contribute 10% of the VOC emissions. NO_x emissions from area sources are insignificant.

Non-road mobile sources contribute 21% of the VOC and 37% of the NOx emissions on a typical summer day. Off-highway diesel equipment comprises 21% of the daily NO_x emissions; 8% of the VOC emissions originate from 2-cycle engines within the non-road mobile source category.

Stationary point sources comprise 3% of the VOC and 4 % of the NO_x emissions in the Portland area on a typical summer day.

Biogenic emissions which are produced by life substances (e.g. terpenes from pine trees) contribute 46% of the total VOC during a typical summer day. Washington State University provided the biogenic emissions data and these emissions are assumed to remain unchanged in the future, although urban development does modify the amount, location and type of vegetation over time.

2015 Maintenance Demonstration (Clackamas, Multnomah, and Washington Counties)
During an ozone season day, on-road mobile sources contribute 12% of the VOC and 37% of the NO_x air emissions in the Oregon portion of the Portland-Vancouver AQMA. On-road mobile source emissions are based on motor vehicle travel on a typical summer day and the seasonal adjustment factor reflects the fact that emissions would likely increase during the summer months when tourism traffic picks up. Gasoline vehicles contribute 11% of the VOC emissions and 24% of the NO_x emissions within the on-road mobile category; diesel vehicles contribute 13% of the NO_x emissions.

Stationary area sources comprise 63% of the VOC and 3% of the NO_x emissions in the Portland area on a typical summer day. Within the area source category, surface coating contributes 32% of the VOC emissions while consumer solvents contributes 9% and graphic arts contribute 13% of the VOC emissions.

Non-road mobile sources contribute 22% of the VOC and 51% of the NO_x emissions on a typical summer day. Off-highway diesel equipment comprises 23% of the daily NO_x emissions.

Stationary point sources comprise 4% of the VOC and 9 % of the NO_x emissions in the Portland area on a typical summer day.

Biogenic emissions which are produced by life substances (e.g. terpenes from pine trees) contribute 48% of the total VOC during a typical summer day. Washington State University provided the biogenic emissions data and these emissions are assumed to remain unchanged in the future, although urban development does modify the amount, location and type of vegetation over time.

Summary of Salem-Keizer (SKATS) Emissions (Marion and Polk Counties)

A summary of the Salem-Keizer Area Ozone Maintenance Plan Emission Inventory for Point, Area, Non-road Mobile and On-road Mobile sources of VOC and NO_x emissions is presented in the following section. Percentages reflect anthropogenic (human-caused) emissions; biogenic emissions have been subtracted from this summary (see Tables 12 and 13). A full copy of the emission inventory is available upon request from DEQ.

Salem Area VOC and NO_x Emissions, (lb/day)

(Marion & Polk Counties)

	VOC, lbs per day				NO_x, lbs per day		
Source Type	2002 Actual	2015 Growth Projection	2015 Maintenance Demonstration	Source Type	2002 Actual	2015 Growth Projection	2015 Maintenance Demonstration
AREA	66,252	68,416	68,416	AREA	6,227	6,400	6,400
BIOGENIC	296,719	296,719	296,719	BIOGENIC	3,803	3,803	3,803
NONROAD	20,462	17,901	17,901	NONROAD	28,793	16,618	16,618
ON-ROAD	54,980	16,004	16,004	ON-ROAD	66,442	20,582	20,582
POINT	1,198	1,657	6,021	POINT	1,701	3,168	4,701
Totals	439,610	400,698	405,062	Totals	106,967	50,571	52,103
Totals Minus Biogenic	142,891	103,979	108,343		103,163	46,768	48,300

2002 Attainment Inventory (Marion and Polk Counties)

During an ozone season day, on-road mobile sources contribute 38% of the VOC and 64% of the NO_x emissions in the Salem-Keizer area. On-road mobile source emissions are based on motor vehicle travel on a typical summer day and the seasonal adjustment factor reflects the fact that emissions would likely increase during the summer months when tourism traffic picks up. Gasoline vehicles contribute 35% of the VOC emissions and 40% of the NO_x emissions within the on-road mobile category. On-road diesel vehicles contribute 24% of the NO_x emissions.

Stationary area sources comprise 46% of the VOC and 6% of the NO_x emissions in the Salem area on a typical summer day. Within the area source category, surface coating contributes 15% of the VOC emissions while agricultural open burning contributes 13% and consumer solvents contributes 6% of the VOC emissions.

Non-road mobile sources contribute 14% of the VOC and 28% of the NO_x emissions on a typical summer day. Off-highway diesel equipment comprises 21% of the daily NO_x emissions; 7% of the total VOC emissions originate from 2-cycle engines within the non-road mobile source category.

Stationary point sources comprise 1% of the VOC and 2 % of the NO_x emissions in the Salem area on a typical summer day.

Biogenic emissions contribute 67% of the total VOC during a typical ozone season day. Biogenic emissions data was provided by Washington State University and these emissions were assumed to remain unchanged in the future, although urban development does modify the amount, location and type of vegetation over time.

2015 Maintenance Demonstration (Marion and Polk Counties)

During an ozone season day, on-road mobile sources contribute 15% of the VOC and 44% of the NO_x emissions in the Salem-Keizer area. On-road mobile source emissions are based on motor vehicle travel on a typical summer day and the seasonal adjustment factor reflects the fact that emissions would likely increase during the summer months when tourism traffic picks up. Gasoline vehicles contribute 15% of the VOC emissions and 28% of the NO_x emissions within the on-road mobile category. On-road diesel vehicles contribute 16% of the NO_x emissions.

Stationary area sources comprise 66% of the VOC and 13% of the NO_x emissions in the Salem area on a typical summer day. Within the area source category, surface coating contributes 25% of the VOC emissions while agricultural open burning contributes 18% and consumer solvents contributes 10% of the VOC emissions.

Non-road mobile sources contribute 17% of the VOC and 36% of the NO_x emissions on a typical summer day. Off-highway diesel equipment comprises 25% of the daily NOx emissions; 7% of the VOC emissions originate from 2-cycle engines within the non-road mobile source category.

Stationary point sources comprise 2% of the VOC and 7 % of the NO_x emissions in the Salem area on a typical summer day. This includes one proposed energy facility that has since withdrawn its permit application and will not be constructed.

Biogenic emissions contribute 74% of the total VOC during a typical ozone season day. Biogenic emissions data was provided by Washington State University and these emissions were assumed to remain unchanged in the future, although urban development does modify the amount, location and type of vegetation over time.

Table14: 2002 Emission Inventory grouped by SCC codes

Multnomah/Washington/Clackamas County 2002 Totals			
Sector	GroupDesc	VOC tpy	VOC lbs per day
BIOGENIC	Biogenic Emissions	--	437,910
ON-ROAD	On-Road: Gasoline Vehicles	22,782.1	134,234
AREA	Surface Coating	21,607.8	131,550
AREA	Graphic Arts	8,233.3	54,416
NONROAD	Nonroad: Gasoline 2-stroke	5,133.6	42,041
AREA	Misc. Non-Industrial Solvent Utilization	5,729.8	35,026
NONROAD	Nonroad: Gasoline 4-stroke	4,149.6	32,054
AREA	Degreasing	4,428.0	25,049
NONROAD	Nonroad: Recreational Marine	2,311.1	22,692
POINT	Industrial Point Sources (actuals)	3,055.6	17,020
NONROAD	Nonroad: Diesel	882.6	9,035
ON-ROAD	On-Road: Diesel Vehicles	900.9	5,308
AREA	Auto Gas: Storage & Transport	674.7	3,888
NONROAD	Nonroad: LPG	431.7	2,513
AREA	Open Burning: Agricultural	83.4	1,874
NONROAD	Nonroad: Aircraft & Aircraft Refueling	173.8	953
AREA	Open Burning: Residential	125.4	774
NONROAD	Nonroad: Locomotive	94.1	516
AREA	Municipal (non-TV) Landfills	89.5	490
NONROAD	Nonroad: Commercial Marine Vessels	67.2	368
AREA	POTWs	64.8	355
AREA	Food Preperation	55.3	299
AREA	Non-Perc Drycleaning	8.6	50
AREA	Industrial Fuel Consumption	45.4	46
AREA	Residential NG/Oil Consumption	27.5	27
AREA	Commercial/Institutional Fuel Consumption	25.1	26
NONROAD	Nonroad: CNG	2.9	17
AREA	Residential Wood Combustion	51,141.0	--
AREA	Prescribed Burning	209.3	--
AREA	Structure Fires	194.9	--
AREA	Wildfires	2.0	--
	Totals	**132,930.8**	**958,531**
	Totals minus BIOGENIC	**--**	**520,621**

Marion/Polk County 2002 Totals			
Sector	GroupDesc	VOC tpy	VOC lbs per day
BIOGENIC	Biogenic Emissions	--	296,719
ON-ROAD	On-Road: Gasoline Vehicles	9,079.5	53,497
AREA	Surface Coating	3,470.3	21,586
AREA	Open Burning: Agricultural	814.6	18,503
NONROAD	Nonroad: Gasoline 2-stroke	1,166.2	9,854
AREA	Misc. Non-Industrial Solvent Utilization	1,455.4	8,829
AREA	Auto Gas: Storage & Transport	1,502.6	8,660
NONROAD	Nonroad: Gasoline 4-stroke	733.7	5,921
AREA	Graphic Arts	602.9	3,985
AREA	Degreasing	666.8	3,772
NONROAD	Nonroad: Diesel	223.0	2,409
NONROAD	Nonroad: Recreational Marine	168.6	1,656
ON-ROAD	On-Road: Diesel Vehicles	251.6	1,483
POINT	Industrial Point Sources (actuals)	218.2	1,198
AREA	Open Burning: Residential	110.9	719
NONROAD	Nonroad: LPG	59.4	347
NONROAD	Nonroad: Locomotive	29.3	161
AREA	POTWs	22.0	121
NONROAD	Nonroad: Aircraft & Aircraft Refueling	20.2	111
AREA	Food Preperation	10.8	58
AREA	Industrial Fuel Consumption	7.8	8
AREA	Residential NG/Oil Consumption	6.0	6
AREA	Commercial/Institutional Fuel Consumption	3.7	4
AREA	Non-Perc Drycleaning	0.4	3
NONROAD	Nonroad: CNG	0.4	2
AREA	Residential Wood Combustion	11,133.3	--
AREA	Prescribed Burning	464.6	--
AREA	Structure Fires	15.5	--
AREA	Wildfires	9.1	--
	Totals	**32,247.1**	**439,610**
	Totals minus BIOGENIC	**--**	**142,891**

Sector	GroupDesc	NOX tpy	NOX lbs per day
ON-ROAD	On-Road: Gasoline Vehicles	21,588.6	127,204
ON-ROAD	On-Road: Diesel Vehicles	15,197.7	89,546
NONROAD	Nonroad: Diesel	7,393.6	77,376
NONROAD	Nonroad: Commercial Marine Vessels	3,444.7	18,875
POINT	Industrial Point Sources (actuals)	2,522.0	14,913
NONROAD	Nonroad: Locomotive	2,136.6	11,707
NONROAD	Nonroad: Gasoline 4-stroke	1,494.6	11,174
NONROAD	Nonroad: LPG	1,619.4	9,441
NONROAD	Nonroad: Aircraft & Aircraft Refueling	795.2	4,357
BIOGENIC	Biogenic Emissions	--	3,890
NONROAD	Nonroad: Recreational Marine	241.4	2,371
AREA	Industrial Fuel Consumption	1,695.3	1,940
NONROAD	Nonroad: CNG	179.9	1,089
AREA	Residential NG/Oil Consumption	1,030.4	1,003
AREA	Commercial/Institutional Fuel Consumption	972.8	996
AREA	Open Burning: Agricultural	106.0	854
AREA	Open Burning: Residential	100.9	545
NONROAD	Nonroad: Gasoline 2-stroke	38.3	322
AREA	Municipal (non-TV) Landfills	34.9	191
AREA	Residential Wood Combustion	1,545.2	--
AREA	Prescribed Burning	97.2	--
AREA	Structure Fires	24.8	--
AREA	Wildfires	0.8	--
	Totals	**62,460.5**	**377,794**
	Totals minus BIOGENIC	**--**	**373,904**

Sector	GroupDesc	NOX tpy	NOX lbs per day
ON-ROAD	On-Road: Gasoline Vehicles	7,018.7	41,355
ON-ROAD	On-Road: Diesel Vehicles	4,257.7	25,087
NONROAD	Nonroad: Diesel	1,959.4	21,479
AREA	Open Burning: Agricultural	344.2	5,201
NONROAD	Nonroad: Locomotive	713.4	3,909
BIOGENIC	Biogenic Emissions	--	3,803
POINT	Industrial Point Sources (actuals)	301.6	1,701
NONROAD	Nonroad: Gasoline 4-stroke	211.0	1,692
NONROAD	Nonroad: LPG	222.5	1,302
AREA	Open Burning: Residential	63.0	341
AREA	Industrial Fuel Consumption	313.6	321
AREA	Residential NG/Oil Consumption	225.6	220
NONROAD	Nonroad: Recreational Marine	17.6	173
NONROAD	Nonroad: CNG	24.4	152
AREA	Commercial/Institutional Fuel Consumption	141.7	145
NONROAD	Nonroad: Gasoline 2-stroke	7.8	70
NONROAD	Nonroad: Aircraft & Aircraft Refueling	2.8	16
AREA	Residential Wood Combustion	336.4	--
AREA	Prescribed Burning	215.7	--
AREA	Wildfires	3.8	--
AREA	Structure Fires	2.0	--
	Totals	**16,383.0**	**106,967**
	Totals minus BIOGENIC	**--**	**103,163**

Sector	GroupDesc	CO tpy	CO lbs per day
ON-ROAD	On-Road: Gasoline Vehicles	284,222.4	1,674,671
NONROAD	Nonroad: Gasoline 4-stroke	120,950.2	938,194
NONROAD	Nonroad: Recreational Marine	8,674.4	87,136
NONROAD	Nonroad: Gasoline 2-stroke	9,639.3	79,662
NONROAD	Nonroad: Diesel	4,016.7	41,986
NONROAD	Nonroad: LPG	6,341.5	36,886
ON-ROAD	On-Road: Diesel Vehicles	4,212.7	24,822
AREA	Open Burning: Agricultural	692.9	15,341
POINT	Industrial Point Sources (actuals)	2,214.3	12,202
NONROAD	Nonroad: Aircraft & Aircraft Refueling	2,179.3	11,942
AREA	Open Burning: Residential	1,708.1	9,732
NONROAD	Nonroad: CNG	713.3	4,319
NONROAD	Nonroad: CMV	274.2	1,502
NONROAD	Nonroad: Locomotive	215.2	1,179
AREA	Industrial Fuel Consumption	644.9	660
AREA	Residential NG/Oil Consumption	393.2	383
AREA	Commercial/Institutional Fuel Consumption	350.1	358
AREA	Municipal (non-TV) Landfills	30.8	169
AREA	Residential Wood Combustion	97,247.4	--
AREA	Prescribed Burning	2,466.6	--
AREA	Structure Fires	1,063.3	--
AREA	Wildfires	23.4	--
	Totals	548,474.2	2,941,144

Sector	GroupDesc	CO tpy	CO lbs per day
ON-ROAD	On-Road: Gasoline Vehicles	114,928.6	677,172
NONROAD	Nonroad: Gasoline 4-stroke	21,578.1	173,631
AREA	Open Burning: Agricultural	6,223.8	140,948
NONROAD	Nonroad: Gasoline 2-stroke	2,199.2	18,979
NONROAD	Nonroad: Diesel	1,040.6	11,390
AREA	Open Burning: Residential	1,236.9	7,315
ON-ROAD	On-Road: Diesel Vehicles	1,187.6	6,997
NONROAD	Nonroad: Recreational Marine	647.6	6,358
NONROAD	Nonroad: LPG	871.8	5,093
NONROAD	Nonroad: Aircraft & Aircraft Refueling	519.5	2,846
NONROAD	Nonroad: CNG	97.1	607
NONROAD	Nonroad: Locomotive	71.2	390
POINT	Industrial Point Sources (actuals)	30.0	188
AREA	Industrial Fuel Consumption	111.0	114
AREA	Residential NG/Oil Consumption	86.1	84
AREA	Commercial/Institutional Fuel Consumption	51.3	53
AREA	Residential Wood Combustion	21,170.5	--
AREA	Prescribed Burning	5,476.1	--
AREA	Wildfires	107.4	--
AREA	Structure Fires	84.3	--
	Totals	**177,718.7**	**1,052,164**

Table15: 2015 Emission Inventory grouped by SCC codes

Multnomah/Washington/Clackamas County 2015 Totals			
Sector	GroupDesc	VOC tpy	VOC lbs per day
BIOGENIC	Biogenic Emissions	--	437,910
AREA	Surface Coating	24,883.0	151,071
AREA	Graphic Arts	9,287.4	61,383
ON-ROAD	On-Road: Gasoline Vehicles	8,211.7	52,324
AREA	Misc. Non-Industrial Solvent Utilization	7,026.0	42,764
NONROAD	Nonroad: Gasoline 4-stroke	5,429.7	37,204
NONROAD	Nonroad: Gasoline 2-stroke	3,603.6	28,890
AREA	Degreasing	5,101.8	28,861
NONROAD	Nonroad: Recreational Marine	2,860.5	28,087
POINT	Industrial Point Sources (actuals + projection)	3,291.9	18,304
NONROAD	Nonroad: Diesel	890.1	4,685
AREA	Auto Gas: Storage & Transport	453.9	2,616
ON-ROAD	On-Road: Diesel Vehicles	326.0	2,197
AREA	Open Burning: Agricultural	83.4	1,874
NONROAD	Nonroad: Aircraft & Aircraft Refueling	287.2	1,573
AREA	Open Burning: Residential	157.9	974
AREA	Municipal (non-TV) Landfills	110.8	607
NONROAD	Nonroad: Locomotive	89.6	491
AREA	POTWs	80.2	440
NONROAD	Nonroad: CMV	75.8	415
NONROAD	Nonroad: LPG	70.7	351
AREA	Food Preparation	62.3	337
AREA	Non-Perc Drycleaning	10.7	62
AREA	Industrial Fuel Consumption	46.6	48
AREA	Residential NG/Oil Consumption	34.6	33.7
AREA	Commercial/Institutional Fuel Consumption	28.4	29
NONROAD	Nonroad: CNG	0.5	3
AREA	Residential Wood Combustion	60,285	--
AREA	Structure Fires	245.5	--
AREA	Prescribed Burning	209.3	--
AREA	Wildfires	2	--
	Totals	**133,246.1**	**903,531**
	Totals minus BIOGENIC	**--**	**465,621**

Marion/Polk County 2015 Totals			
Sector	GroupDesc	VOC tpy	VOC lbs per day
BIOGENIC	Biogenic Emissions	--	296,719
AREA	Surface Coating	4,108	25,702
AREA	Open Burning: Agricultural	815	18,503
ON-ROAD	On-Road: Gasoline Vehicles	2,629	15,341
AREA	Misc. Non-Industrial Solvent Utilization	1,743	10,409
NONROAD	Nonroad: Gasoline 2-stroke	880	7,461
NONROAD	Nonroad: Gasoline 4-stroke	957	6,872
AREA	Graphic Arts	680	4,495
AREA	Degreasing	783	4,432
AREA	Auto Gas: Storage & Transport	648	3,732
NONROAD	Nonroad: Recreational Marine	209	2,049
POINT	Industrial Point Sources (actuals + projection)	302	1,657
NONROAD	Nonroad: Diesel	229	1,193
AREA	Open Burning: Residential	140	905
ON-ROAD	On-Road: Diesel Vehicles	95	563
NONROAD	Nonroad: Locomotive	28	152
AREA	POTWs	27	149
NONROAD	Nonroad: Aircraft & Aircraft Refueling	23	125
AREA	Food Preparation	12	66
NONROAD	Nonroad: LPG	10	48
AREA	Industrial Fuel Consumption	8	8
AREA	Residential NG/Oil Consumption	8	7
AREA	Commercial/Institutional Fuel Consumption	4	4
AREA	Non-Perc Drycleaning	1	3
NONROAD	Nonroad: CNG	0.1	0.3
AREA	Residential Wood Combustion	13,124	--
AREA	Prescribed Burning	465	--
AREA	Structure Fires	19	--
AREA	Wildfires	9	--
	Totals	**27,954.4**	**400,698**
	Totals minus BIOGENIC	**--**	**103,979**

Multnomah/Washington/Clackamas County 2015 Totals			
Sector	GroupDesc	NOX tpy	NOX lbs per day
ON-ROAD	On-Road: Gasoline Vehicles	6,742.5	44,490
NONROAD	Nonroad: Diesel	8,033.4	42,327
ON-ROAD	On-Road: Diesel Vehicles	3,596.5	24,420
NONROAD	Nonroad: Commercial Marine Vessels	3,885.7	21,292
POINT	Industrial Point Sources (actuals + projection)	2,861.9	16,783
NONROAD	Nonroad: Gasoline 4-stroke	1,556.6	10,248
NONROAD	Nonroad: Locomotive	1,539.7	8,437
NONROAD	Nonroad: Aircraft & Aircraft Refueling	1,425.5	7,811
BIOGENIC	Biogenic Emissions	--	3,890
NONROAD	Nonroad: Recreational Marine	298.8	2,934
AREA	Industrial Fuel Consumption	1,947.1	1,993
NONROAD	Nonroad: LPG	363.9	1,803
AREA	Residential NG/Oil Consumption	626.9	1,264
AREA	Commercial/Institutional Fuel Consumption	1,097.3	1,123
AREA	Open Burning: Agricultural	106.0	854
AREA	Open Burning: Residential	127.1	687
NONROAD	Nonroad: Gasoline 2-stroke	73.3	558
AREA	Municipal (non-TV) Landfills	43.2	237
NONROAD	Nonroad: CNG	45.6	228
AREA	Residential Wood Combustion	1,744.9	--
AREA	Prescribed Burning	97.2	--
AREA	Structure Fires	31.3	--
AREA	Wildfires	0.8	--
	Totals	**36,245.2**	**191,378**
	Totals minus BIOGENIC	**--**	**187,487**

Marion/Polk County 2015 Totals			
Sector	GroupDesc	NOX tpy	NOX lbs per day
ON-ROAD	On-Road: Gasoline Vehicles	2,279.6	13,239
NONROAD	Nonroad: Diesel	2,222.7	11,560
ON-ROAD	On-Road: Diesel Vehicles	1,046.6	7,343
AREA	Open Burning: Agricultural	344.2	5,201
BIOGENIC	Biogenic Emissions	--	3,803
POINT	Industrial Point Sources (actuals + projection)	577.5	3,166
NONROAD	Nonroad: Locomotive	512.6	2,809
NONROAD	Nonroad: Gasoline 4-stroke	230.8	1,615
AREA	Open Burning: Residential	79.3	430
AREA	Industrial Fuel Consumption	322.2	330
AREA	Residential NG/Oil Consumption	73.5	277
NONROAD	Nonroad: LPG	49.4	246
NONROAD	Nonroad: Recreational Marine	21.8	214
AREA	Commercial/Institutional Fuel Consumption	159.9	164
NONROAD	Nonroad: Gasoline 2-stroke	15.6	126
NONROAD	Nonroad: CNG	5.8	29
NONROAD	Nonroad: Aircraft & Aircraft Refueling	3.2	18
AREA	Prescribed Burning	215.7	--
AREA	Residential Wood Combustion	379.9	--
AREA	Structure Fires	2.5	--
AREA	Wildfires	3.8	--
	Totals	**8,546.7**	**50,571**
	Totals minus BIOGENIC	**--**	**46,768**

Multnomah/Washington/Clackamas County 2015 Totals			
Sector	GroupDesc	CO tpy	CO lbs per day
NONROAD	Nonroad: Gasoline 4-stroke	294,269.2	1,988,938
ON-ROAD	On-Road: Gasoline Vehicles	127,031.9	554,972
NONROAD	Nonroad: Recreational Marine	10,983.9	107,848
NONROAD	Nonroad: Gasoline 2-stroke	14,200.1	106,586
NONROAD	Nonroad: Diesel	4,190.5	22,012
NONROAD	Nonroad: Aircraft & Aircraft Refueling	3,901.2	21,376
AREA	Open Burning: Agricultural	692.9	15,341
POINT	Industrial Point Sources (actuals)	2,364.1	13,026
AREA	Open Burning: Residential	2,151.5	12,258
NONROAD	Nonroad: LPG	1,990.2	9,836
ON-ROAD	On-Road: Diesel Vehicles	891.2	5,983
NONROAD	Nonroad: CMV	309.3	1,695
NONROAD	Nonroad: Locomotive	263.0	1,441
NONROAD	Nonroad: CNG	216.7	1,077
AREA	Industrial Fuel Consumption	662.5	678
AREA	Residential NG/Oil Consumption	495.2	482
AREA	Commercial/Institutional Fuel Consumption	394.9	404
AREA	Municipal (non-TV) Landfills	38.2	209
AREA	Residential Wood Combustion	131,727.3	--
AREA	Prescribed Burning	2,466.6	--
AREA	Structure Fires	1,339.3	--
AREA	Wildfires	23.4	--
	Totals	**600,603.2**	**2,864,167**

Marion/Polk County 2015 Totals			
Sector	GroupDesc	CO tpy	CO lbs per day
NONROAD	Nonroad: Gasoline 4-stroke	49,162.9	343,740
ON-ROAD	On-Road: Gasoline Vehicles	42,184.9	165,709
AREA	Open Burning: Agricultural	6,223.8	140,948
NONROAD	Nonroad: Gasoline 2-stroke	3,102.8	24,101
AREA	Open Burning: Residential	1,558.0	9,214
NONROAD	Nonroad: Recreational Marine	801.5	7,670
NONROAD	Nonroad: Diesel	1,098.7	5,719
NONROAD	Nonroad: Aircraft & Aircraft Refueling	586.0	3,211
POINT	Industrial Point Sources (actuals)	329.5	1,813
ON-ROAD	On-Road: Diesel Vehicles	260.2	1,799
NONROAD	Nonroad: LPG	272.2	1,349
NONROAD	Nonroad: Locomotive	86.0	471
NONROAD	Nonroad: CNG	28.1	139
AREA	Industrial Fuel Consumption	114.0	117
AREA	Residential NG/Oil Consumption	108.4	106
AREA	Commercial/Institutional Fuel Consumption	57.9	59
AREA	Residential Wood Combustion	28,676.7	--
AREA	Prescribed Burning	5,476.1	--
AREA	Structure Fires	106.2	--
AREA	Wildfires	107.4	--
	Totals	**140,341.1**	**706,364**

Appendix D10-4
Modeling and Maintenance Demonstration
Historical and Future Ozone Simulations Using the MM5/SMOKE/CMAQ System
in the Portland-Vancouver Area

WSU Modeling Study

The Oregon Dept. of Environmental Quality, Washington Dept. of Ecology (Ecology), Southwest Clean Air Agency (SWCAA), Washington State University (WSU) and EPA Region 10 teamed together to perform photochemical modeling for the Portland-Vancouver Air Quality Maintenance Area to improve our understanding of the potential for ozone exceedances in the future. The modeling work involved simulation of a July 1998 episode meteorology that had the highest ozone levels observed in recent years. The model results were compared to available observed data, and the 1998 episode was used as a basis for evaluation of future year (2015) growth projections.

The agencies contracted with WSU to use the CMAQ dispersion model to help assess the status of the Portland-Vancouver airshed with respect to the national ambient air quality standard for tropospheric ozone. The Turner monitoring site is included within the modeling domain and allowed DEQ to asses the status of the Salem-Keizer airshed at the same time.

The modeling effort is documented in the report, "Historical and Future Ozone Simulations Using the MM5/SMOKE/CMAQ System in the Portland-Vancouver Area" (WSU, December 31, 2005), in this Appendix. Although most of the modeling effort has been performed by WSU, DEQ recently developed the technical capability to run the SMOKE and CMAQ simulations in-house.

2015 Projection

The "managed growth projection simulation" in the WSU modeling report is the modeling results described as the "2015 Projection" in the Portland-Vancouver and Salem-Keizer Ozone Maintenance Plan. The emission inventory that was used in that modeling simulation is detailed in an appendix to the WSU report.

2015 Maintenance Demonstration

The "2015 Maintenance Demonstration" in the Portland-Vancouver and Salem-Keizer Ozone Maintenance Plan uses the same emission inventory as the "2015 Projection," except for point sources. Point sources within Oregon were based on the maximum allowable permitted emission limits (Plant Site Emission Limits), and within Washington were based on proportional growth. A point source growth allowance was added to both inventories: 5,000 tons VOC and 5,000 tons NO_x were added to areas zoned for industrial growth in the Oregon portion of the Portland-Vancouver AQMA, and a proportional amount of 411 tons of VOC and 1,313 tons of NOx was added to areas zoned for industrial growth in the Washington portion of the Portland-Vancouver AQMA. The results of the modeled attainment test are described in Appendix D10-6.

Please contact DEQ for a copy of this appendix

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Appendix D10-5

Economic Report to the Metro Council
2000-2030 Regional Forecast
for the Portland-Vancouver Metropolitan Area
(Data Resource Center, Metro, December 2002 final draft)

Please contact DEQ for a copy of this appendix

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Appendix D10-6
Modeled Attainment Test

Appendix D10-6 details how DEQ, Ecology and SWCAA applied the modeled attainment test to the 2015 Maintenance Demonstration modeling results.

The modeled attainment test is an exercise in which an air quality model is used to simulate current and future air quality. The 8-hour NAAQS for ozone requires the fourth highest 8-hour daily maximum ozone concentration, averaged over three consecutive years, to be less than 80 ppb[8] . The recommended attainment test is one in which model estimates are used in a "relative" rather than "absolute" sense. That is, take the ratio of the model's future to current (baseline) predictions at ozone monitors. EPA calls these ratios "relative reduction factors". Future ozone concentrations are estimated at existing monitoring sites by multiplying a modeled relative reduction factor at locations near each monitor by the observation-based, monitor-specific, "baseline" ozone design value. The resulting predicted future concentrations are compared to 84 ppb.

For more information, see "Guidance on the Use of Models and Other Analyses in Attainment Demonstrations for the 8-hour Ozone NAAQS" (EPA-450/R-05-002, October, 2005).

[8] Because of rounding conventions in which non-significant figures are truncated, a modeling estimate of <85 ppb is equivalent to <= 84 ppb. Attainment is demonstrated when a modeling target of future estimates of ozone concentrations are <=84 ppb.

Portland-Vancouver AQMA and Salem SKATS Analysis of 8-Hour Ozone Maintenance using the CMAQ dispersion model attainment test
(see "Guidance on the Use of Models and Other Analyses in Attainment Demonstrations for the 8-hour Ozone NAAQS" (EPA-450/R-05-002, October 2005)

Step 1. Current Design Value (1998 "observed" values)

Year	4th High (ppb)						Monitoring Site	Design Values			Current Design Value (DVC)
	Carus	Milwaukie	Sauvie Island	Mt View	Turner	Wishram*		1996-1998	1997-1999	1998-2000	
1996	99	85	76	81	92	70	Carus	81	72	73	75.0
1997	62	54	53	53	61	60	Milwaukie	67	55	56	59.3
1998	81	61	66	69	77	63	Sauvie Island	65	56	56	59.1
1999	72	51	49	57	65	63	Mountain View	68	60	61	62.9
2000	65	56	54	58	59	66	Turner	77	68	67	70.4
							Wishram*	64	62	64	63.4

Step 2. Determination of Maintenance, 2015 projection including growth allowance

Carus

Day	Current Design Value (DVC)	1998 Baseline 8-Hour Max	2015 Predicted 8-Hour Max	Relative Reduction Factor (RRF)	Future Design Value (DVF)
1		90	86		
2		97	92		
3		107	103		
Mean	75.0	98	94	0.955	71.7

Milwaukie

Day	Current Design Value (DVC)	1998 Baseline 8-Hour Max	2015 Predicted 8-Hour Max	Relative Reduction Factor (RRF)	Future Design Value (DVF)
1		86	93		
2		91	92		
3		98	102		
Mean	59.3	92	96	1.046	62.1

Sauvie Island

Day	Current Design Value (DVC)	1998 Baseline 8-Hour Max	2015 Predicted 8-Hour Max	Relative Reduction Factor (RRF)	Future Design Value (DVF)
1		70	69		
2		90	79		
3		87	80		
Mean	59.1	82	76	0.923	54.5

Mountain View

Day	Current Design Value (DVC)	1998 Baseline 8-Hour Max	2015 Predicted 8-Hour Max	Relative Reduction Factor (RRF)	Future Design Value (DVF)
1		76	81		
2		86	77		
3		88	87		
Mean	62.9	83	81	0.975	61.3

Turner

Day	Current Design Value (DVC)	1998 Baseline 8-Hour Max	2015 Predicted 8-Hour Max	Relative Reduction Factor (RRF)	Future Design Value (DVF)
1		74	64		
2		101	88		
3		89	73		
Mean	70.4	88	75	0.852	60.0

Wishram*

Day	Current Design Value (DVC)	1998 Baseline 8-Hour Max	2015 Predicted 8-Hour Max	Relative Reduction Factor (RRF)	Future Design Value (DVF)
1		55	51		
2		56	51		
3		59	52		
Mean	63.4	57	52	0.910	57.7

*The Wishram monitoring site is not within the Portland-Vancouver AQMA or Salem Area Ozone Maintenance Plan areas.
Wishram data is included here for informational purposes only.

OREGON ADMINISTRATIVE RULES
Chapter 340, Department of Environmental Quality

DEPARTMENT OF ENVIRONMENTAL QUALITY

DIVISION 200

GENERAL AIR POLLUTION PROCEDURES AND DEFINITIONS

340-200-0040

State of Oregon Clean Air Act Implementation Plan

(1) This implementation plan, consisting of Volumes 2 and 3 of the State of Oregon Air Quality Control Program, contains control strategies, rules and standards prepared by the Department of Environmental Quality and is adopted as the state implementation plan (SIP) of the State of Oregon pursuant to the federal Clean Air Act, 42 U.S.C.A 7401 to 7671q.

(2) Except as provided in section (3), revisions to the SIP will be made pursuant to the Commission's rulemaking procedures in division 11 of this chapter and any other requirements contained in the SIP and will be submitted to the United States Environmental Protection Agency for approval. The State Implementation Plan was last modified by the Commission on ~~March 3, 2006~~ February 22, 2007.

(3) Notwithstanding any other requirement contained in the SIP, the Department may:

(a) Submit to the Environmental Protection Agency any permit condition implementing a rule that is part of the federally-approved SIP as a source-specific SIP revision after the Department has complied with the public hearings provisions of 40 CFR 51.102 (July 1, 2002); and

(b) Approve the standards submitted by a regional authority if the regional authority adopts verbatim any standard that the Commission has adopted, and submit the standards to EPA for approval as a SIP revision.

NOTE: Revisions to the State of Oregon Clean Air Act Implementation Plan become federally enforceable upon approval by the United States Environmental Protection Agency. If any provision of the federally approved Implementation Plan conflicts with any provision adopted by the Commission, the Department shall enforce the more stringent provision.

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.035
Hist.: DEQ 35, f. 2-3-72, ef. 2-15-72; DEQ 54, f. 6-21-73, ef. 7-1-73; DEQ 19-1979, f. & ef. 6-25-79; DEQ 21-1979, f. & ef. 7-2-79; DEQ 22-1980, f. & ef. 9-26-80; DEQ 11-1981, f. & ef. 3-26-81; DEQ 14-1982, f. & ef. 7-21-82; DEQ 21-1982, f. & ef. 10-27-82; DEQ 1-1983, f. & ef. 1-21-83; DEQ 6-1983, f. & ef. 4-18-83; DEQ 18-1984, f. & ef. 10-16-84; DEQ 25-1984, f. & ef. 11-27-84; DEQ 3-1985, f. & ef. 2-1-85; DEQ 12-1985, f. & ef. 9-30-85; DEQ 5-1986, f. & ef. 2-21-86; DEQ 10-1986, f. & ef. 5-9-86; DEQ 20-1986, f. & ef. 11-7-86; DEQ 21-1986, f. & ef. 11-7-86; DEQ 4-1987, f. & ef. 3-2-87; DEQ 5-1987, f. & ef. 3-2-87; DEQ 8-1987, f. & ef. 4-23-87; DEQ 21-1987, f. & ef. 12-16-87; DEQ 31-1988, f. 12-20-88, cert. ef. 12-23-88; DEQ 2-1991, f. & cert. ef. 2-14-91; DEQ 19-1991, f. & cert. ef. 11-13-

91; DEQ 20-1991, f. & cert. ef. 11-13-91; DEQ 21-1991, f. & cert. ef. 11-13-91; DEQ 22-1991, f. & cert. ef. 11-13-91; DEQ 23-1991, f. & cert. ef. 11-13-91; DEQ 24-1991, f. & cert. ef. 11-13-91; DEQ 25-1991, f. & cert. ef. 11-13-91; DEQ 1-1992, f. & cert. ef. 2-4-92; DEQ 3-1992, f. & cert. ef. 2-4-92; DEQ 7-1992, f. & cert. ef. 3-30-92; DEQ 19-1992, f. & cert. ef. 8-11-92; DEQ 20-1992, f. & cert. ef. 8-11-92; DEQ 25-1992, f. 10-30-92, cert. ef. 11-1-92; DEQ 26-1992, f. & cert. ef. 11-2-92; DEQ 27-1992, f. & cert. ef. 11-12-92; DEQ 4-1993, f. & cert. ef. 3-10-93; DEQ 8-1993, f. & cert. ef. 5-11-93; DEQ 12-1993, f. & cert. ef. 9-24-93; DEQ 15-1993, f. & cert. ef. 11-4-93; DEQ 16-1993, f. & cert. ef. 11-4-93; DEQ 17-1993, f. & cert. ef. 11-4-93; DEQ 19-1993, f. & cert. ef. 11-4-93; DEQ 1-1994, f. & cert. ef. 1-3-94; DEQ 5-1994, f. & cert. ef. 3-21-94; DEQ 14-1994, f. & cert. ef. 5-31-94; DEQ 15-1994, f. 6-8-94, cert. ef. 7-1-94; DEQ 25-1994, f. & cert. ef. 11-2-94; DEQ 9-1995, f. & cert. ef. 5-1-95; DEQ 10-1995, f. & cert. ef. 5-1-95; DEQ 14-1995, f. & cert. ef. 5-25-95; DEQ 17-1995, f. & cert. ef. 7-12-95; DEQ 19-1995, f. & cert. ef. 9-1-95; DEQ 20-1995 (Temp), f. & cert. ef. 9-14-95; DEQ 8-1996(Temp), f. & cert. ef. 6-3-96; DEQ 15-1996, f. & cert. ef. 8-14-96; DEQ 19-1996, f. & cert. ef. 9-24-96; DEQ 22-1996, f. & cert. ef. 10-22-96; DEQ 23-1996, f. & cert. ef. 11-4-96; DEQ 24-1996, f. & cert. ef. 11-26-96; DEQ 10-1998, f. & cert. ef. 6-22-98; DEQ 15-1998, f. & cert. ef. 9-23-98; DEQ 16-1998, f. & cert. ef. 9-23-98; DEQ 17-1998, f. & cert. ef. 9-23-98; DEQ 20-1998, f. & cert. ef. 10-12-98; DEQ 21-1998, f. & cert. ef. 10-12-98; DEQ 1-1999, f. & cert. ef. 1-25-99; DEQ 5-1999, f. & cert. ef. 3-25-99; DEQ 6-1999, f. & cert. ef. 5-21-99; DEQ 10-1999, f. & cert. ef. 7-1-99; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-020-0047; DEQ 15-1999, f. & cert. ef. 10-22-99; DEQ 2-2000, f. 2-17-00, cert. ef. 6-*f*1-01; DEQ 6-2000, f. & cert. ef. 5-22-00; DEQ 8-2000, f. & cert. ef. 6-6-00; DEQ 13-2000, f. & cert. ef. 7-28-00; DEQ 16-2000, f. & cert. ef. 10-25-00; DEQ 17-2000, f. & cert. ef. 10-25-00; DEQ 20-2000 f. & cert. ef. 12-15-00; DEQ 21-2000, f. & cert. ef. 12-15-00; DEQ 2-2001, f. & cert. ef. 2-5-01; DEQ 4-2001, f. & cert. ef. 3-27-01; DEQ 6-2001, f. 6-18-01, cert. ef. 7-1-01; DEQ 15-2001, f. & cert. ef. 12-26-01; DEQ 16-2001, f. & cert. ef. 12-26-01; DEQ 17-2001, f. & cert. ef. 12-28-01; DEQ 4-2002, f. & cert. ef. 3-14-02; DEQ 5-2002, f. & cert. ef. 5-3-02; DEQ 11-2002, f. & cert. ef. 10-8-02; DEQ 5-2003, f. & cert. ef. 2-6-03; DEQ 14-2003, f. & cert. ef. 10-24-03; DEQ 19-2003, f. & cert. ef. 12-12-03; DEQ 1-2004, f. & cert. ef. 4-14-04; DEQ 10-2004, f. & cert. ef. 12-15-04; DEQ 1-2005, f. & cert. ef. 1-4-05; DEQ 2-2005, f. & cert. ef. 2-10-05; DEQ 4-2005, f. 5-13-05, cert. ef. 6-1-05; DEQ 7-2005, f. & cert. ef. 7-12-05; DEQ 9-2005, f. & cert. ef. 9-9-05; DEQ 2-2006, f. & cert. ef. 3-14-06

340-200-0025
Abbreviations and Acronyms

(91) "SKATS" means Salem-~~Kaiser~~Keizer Area Transportation Study.

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A
Hist.: DEQ 6-2001, f. 6-18-01, cert. ef. 7-1-01

DEPARTMENT OF ENVIRONMENTAL QUALITY

DIVISION 202

AMBIENT AIR QUALITY STANDARDS AND PSD INCREMENTS

[**NOTE:** Administrative Order DEQ 37 repealed previous OAR 340-031-0005 through 340-031-0020 (DEQ 5 and 6).]

340-202-0090

Ozone

Concentrations of ozone in ambient air as measured by an approved method must not exceed ~~0.12~~ 0.08 ppm as a ~~one~~daily maximum eight-hour average concentration. This standard is attained when, at any site the ~~expected number of days per calendar year with maximum hourly concentrations greater than 0.12 ppm~~ average of the annual fourth-highest daily maximum eight-hour average ozone concentration is equal to or less than ~~one~~ 0.08 as determined by the method of **Appendix ~~H~~I, 40 CFR 50**.

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.]

[Publications: The publication(s) referenced in this rule is available from the agency.]

Stat. Auth.: ORS 468 & ORS 468A
Stats. Implemented: ORS 468A.025
Hist.: DEQ 37, f. 2-15-72, ef. 3-1-72; DEQ 15-1979, f. & ef. 6-22-79; DEQ 7-1980, f. & ef. 3-5-80; DEQ 4-1982, f. & ef. 1-29-82; DEQ 8-1988, f. & cert. ef. 5-19-88 (corrected 9-30-88); DEQ 24-1991, f. & cert. ef. 11-13-91; DEQ 4-1993, f. & cert. ef. 3-10-93; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-031-0030; DEQ 6-2001, f. 6-18-01, cert. ef. 7-1-01

DIVISION 204

DESIGNATION OF AIR QUALITY AREAS

340-204-0010

Definitions

The definitions in OAR 340-200-0020 and this rule apply to this division. If the same term is defined in this rule and OAR 340-200-0020, the definition in this rule applies to this division. Definitions of boundaries in this rule also apply to OAR 340 Division 200 through 268 and throughout the State of Oregon Clean Air Act Implementation Plan adopted under OAR 340-200-0040.

(27) "Salem-~~Kaiser~~Keizer Area Transportation Study" or "SKATS" means the area within the bounds beginning at the intersection of U.S. Interstate Highway 5 (I-5) with Battle Creek Road SE and Wiltsey Road, south along I-5 to the intersection with the western boundary of Section 24, T8S, R3W; thence due south on a line to the intersection with Delaney Road; thence easterly along Delaney Road to the intersection with Sunnyside Road; thence north along Sunnyside Road to the intersection with Hylo Road SE; thence west along Hylo Road SE to the intersection with Liberty Road; thence north along Liberty Road to the intersection with Cole Road; thence west along Cole Road to the intersection with Bates Road; thence northerly and easterly along Bates Road to the intersection with Jory Hill Road; thence west along Jory Hill Road to the intersection with Stone Hill Avenue; thence north along Stone Hill Avenue to the intersection with Vita Springs Road; thence westerly along Vita Springs Road to the Willamette River; thence northeasterly downstream the Willamette River to a point adjacent to where the western boundary of Section 30, T7S, R3W intersects the Southern Pacific Railroad Line; thence westerly along the Southern Pacific Railroad Line to the intersection with State Highway 51; thence northeasterly along State Highway 51 to the intersection with Oak Grove Road; thence northerly along Oak Grove Road to the intersection with State Highway 22; thence west on State Highway 22 to the intersection with Oak Grove Road; thence north along Oak Grove Road to the intersection with Orchard Heights Road; thence east and north along Orchard Heights Road to the intersection with Eagle Crest Drive; thence northerly along Eagle Crest Drive to the intersection with Hunt Road; thence north along Hunt Road to the intersection with Fourth Road; thence east along Fourth Road to the intersection with Spring Valley Road; thence north along Spring Valley to the intersection with Oak Knoll Road; thence east along Oak Knoll Road to the intersection with Wallace Road; thence south along Wallace Road to the intersection with Lincoln Road; thence east along Lincoln Road on a line to the intersection with the Willamette River; thence northeasterly downstream the Willamette River to a point adjacent to where Simon Street starts on the East Bank; thence east and south along Simon Street to the intersection with Salmon; thence east along Salmon to the intersection with Ravena Drive; thence southerly and easterly along Ravena Drive to the intersection with Wheatland Road; thence northerly along Wheatland Road to the intersection with Brooklake Road; thence southeast along Brooklake Road to the intersection with 65th Avenue; thence south along 65th Avenue to the intersection with Labish Road; thence east along Labish Road to the intersection with the West Branch of the Little Pudding River; thence southerly along the West Branch of the Little Pudding River to the

intersection with Sunnyview Road; thence east along Sunnyview Road to the intersection with 63rd Avenue; thence south along 63rd Avenue to the intersection with State Street; thence east along State Street to the intersection with 62nd Avenue; thence south along 62nd Avenue to the intersection with Deer Park Drive; thence southwest along Deer Park Drive to the intersection with Santiam Highway 22; thence southeast along Santiam Highway 22 to the point where it intersects the Salem Urban Growth Boundary (SUGB); thence following the southeast boundary of the SUGB generally southerly and westerly to the intersection with Wiltsey Road; thence west along Wiltsey Road to the intersection with I-5 (the point of beginning).

340-204-0030

Designation of Nonattainment Areas

The following areas are designated as Nonattainment Areas:

(1) Carbon Monoxide Nonattainment Areas: The Salem Nonattainment Area for Carbon Monoxide is the Salem-~~Kaiser~~Keizer Area Transportation Study as defined in OAR 340-204-0010.

(2) PM10 Nonattainment Areas:

(a) The Eugene Nonattainment Area for PM10 is the Eugene-Springfield UGB as defined in OAR 340-204-0010.

(b) The Oakridge Nonattainment Area for PM10 is the Oakridge UGB as defined in OAR 340-204-0010.

~~(3) Ozone Nonattainment Areas: The Salem Nonattainment Area for Ozone is the Salem-Kaiser Area Transportation Study as defined in OAR 340-204-0010.~~

NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.025
Hist.: DEQ 14-1995, f. & cert. ef. 5-25-95; DEQ 18-1996, f. & cert. ef. 8-19-96; DEQ 15-1998, f. & cert. ef. 9-23-98; DEQ 1-1999, f. & cert. ef. 1-25-99; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-031-0520; DEQ 15-1999, f. & cert. ef. 10-22-99; DEQ 16-2000, f. & cert. ef. 10-25-00; DEQ 6-2001, f. 6-18-01, cert. ef. 7-1-01; DEQ 11-2002, f. & cert. ef. 10-8-02; DEQ 1-2005, f. & cert. ef. 1-4-05; DEQ 9-2005, f. & cert. ef. 9-9-05

340-204-0040

Designation of Maintenance Areas

The following areas are designated as Maintenance Areas:

(1) Carbon Monoxide Maintenance Areas:

(a) The Eugene Maintenance Area for Carbon Monoxide is the Eugene-Springfield AQMA as defined in OAR 340-204-0010.

(b) The Portland Maintenance Area for Carbon Monoxide is the Portland Metropolitan Service District as referenced in OAR 340-204-0010.

(c) The Medford Carbon Monoxide Maintenance Area is the Medford UGB as defined in OAR 340-204-0010.

NOTE: EPA maintenance plan approval and redesignation pending.

(d) The Grants Pass Carbon Monoxide Maintenance Area is the Grants Pass CBD as defined in OAR 340-204-0010.

(e) The Klamath Falls Carbon Monoxide Maintenance Area is the Klamath Falls UGB as defined in OAR 340-204-0010.

(2) Ozone Maintenance Areas:

(a) The Medford Maintenance Area for Ozone is the Medford-Ashland AQMA as defined in OAR 340-204-0010.

(b) The Oregon portion of the Portland-Vancouver Interstate Maintenance Area for Ozone is the Portland AQMA, as defined in OAR 340-204-0010.

(c) The Salem Maintenance Area for Ozone is the Salem-Keizer Area Transportation Study as defined in OAR 340-204-0010.

(3) PM10 Maintenance Areas:

(a) The Grants Pass PM10 Maintenance Area is the Grants Pass UGB as defined in OAR 340-204-0010.

(b) The Klamath Falls PM10 Maintenance Area is the Klamath Falls UGB as defined in OAR 340-204-0010.

(c) The Medford-Ashland PM10 Maintenance Area is the Medford-Ashland AQMA as defined in OAR 340-204-0010.

NOTE: EPA maintenance plan approval and redesignation pending.

(d) The La Grande PM10 Maintenance Area is the La Grande UGB as defined in OAR 340-204-0010.

NOTE: EPA maintenance plan approval and redesignation pending.

(e) The Lakeview PM10 Maintenance Area is the Lakeview UGB as defined in OAR 340-204-0010.

NOTE: EPA maintenance plan approval and redesignation pending.

NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.025
Hist.: DEQ 14-1995, f. & cert. ef. 5-25-95; DEQ 18-1996, f. & cert. ef. 8-19-96; DEQ 15-1998, f. & cert. ef. 9-23-98; DEQ 1-1999, f. & cert. ef. 1-25-99; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-031-0530; DEQ 15-1999, f. & cert. ef. 10-22-99; DEQ 16-2000, f. & cert. ef. 10-25-00; DEQ 11-2002, f. & cert. ef. 10-8-02; DEQ 1-2005, f. & cert. ef. 1-4-05; DEQ 9-2005, f. & cert. ef. 9-9-05

DIVISION 224

MAJOR NEW SOURCE REVIEW

340-224-0050

Requirements for Sources in Nonattainment Areas

Proposed major sources and major modifications that would emit a nonattainment pollutant within a designated nonattainment area, including VOC or NOx in a designated Ozone Nonattainment Area must meet the requirements listed below:

(1) Lowest Achievable Emission Rate (LAER). The owner or operator must demonstrate that the source or modification will comply with the LAER for each nonattainment pollutant emitted at or above the significant emission rate (SER).

(a) For a major modification, the requirement for LAER applies only to each emissions unit that emits the pollutant in question and was installed since the baseline period or the most recent New Source Review construction approval for that pollutant, and to each modified emission unit that increases actual emissions of the pollutant in question above the netting basis.

(b) For phased construction projects, the LAER determination must be reviewed at the latest reasonable time before commencing construction of each independent phase.

(c) When determining LAER for a change that was made at a source before the current NSR application, the Department will consider technical feasibility of retrofitting required controls provided:

(A) The change was made in compliance with NSR requirements in effect when the change was made, and

(B) No limit will be relaxed that was previously relied on to avoid NSR.

(d) Individual modifications with potential to emit less than 10 percent of the SER are exempt from this section unless:

(A) They are not constructed yet;

(B) They are part of a discrete, identifiable, larger project that was constructed within the previous 5 years and is equal to or greater than 10 percent of the SER; or

(C) they were constructed without, or in violation of, the Department's approval.

(2) Offsets and Net Air Quality Benefit. The owner or operator must obtain offsets and demonstrate that a net air quality benefit will be achieved as specified in OAR 340-225-0090.

(3) Additional Requirements for Federal Major Sources:

(a) The owner or operator of a source that emits or has the potential to emit 100 tons per year of any regulated NSR pollutant must evaluate alternative sites, sizes, production processes, and environmental control techniques for the proposed source or modification and demonstrate that benefits of the proposed source or modification will significantly outweigh the environmental and social costs imposed as a result of its location, construction or modification.

(b) The owner or operator of a source that emits or has the potential to emit 100 tons per year of any regulated NSR pollutant must demonstrate that all major sources owned or operated by such person (or by an entity controlling, controlled by, or under common control with such person) in the state are in compliance, or are on a schedule for compliance, with all applicable emission limitations and standards under the Act.

(c) The owner or operator of a federal major source must meet the visibility impact requirements in OAR 340-225-0070.

~~(4) Special Exemption for the Salem Ozone Nonattainment area. Proposed major sources and major modifications located in or that impact the Salem Ozone Nonattainment Area are exempt from OAR 340-225-0090 and section (2) of this rule for VOC and NOx emissions with respect to ozone formation in the Salem Ozone Nonattainment area.~~

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-200-0040.]

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.025
Hist.: DEQ 25-1981, f. & ef. 9-8-81; DEQ 5-1983, f. & ef. 4-18-83; DEQ 27-1992, f. & cert. ef. 11-12-92; DEQ 4-1993, f. & cert. ef. 3-10-93; DEQ 12-1993, f. & cert. ef. 9-24-93; Renumbered from 340-020-0240; DEQ 19-1993, f. & cert. ef. 11-4-93; DEQ 10-1995, f. & cert. ef. 5-1-95; DEQ 22-1995, f. & cert. ef. 10-6-95; DEQ 26-1996, f. & cert. ef. 11-26-96; DEQ 16-1998, f. & cert. ef. 9-23-98; DEQ 1-1999, f. & cert. ef.1-25-99; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-028-1930; DEQ 6-2001, f. 6-18-01, cert. ef. 7-1-01; DEQ 1-2004, f.& cert. ef. 4-14-04

340-224-0060

Requirements for Sources in Maintenance Areas

Proposed major sources and major modifications that would emit a maintenance pollutant within a designated maintenance area, including VOC or NOx in a designated ozone maintenance area, must meet the requirements listed below:

(1) Best Available Control Technology (BACT). Except as provided in section (5) and (6) of this rule, the owner or operator must apply BACT for each maintenance pollutant emitted at a SER.

(a) For a major modification, the requirement for BACT applies only to:

(A) Each new emissions unit that emits the pollutant in question and was installed since the baseline period or the most recent New Source Review construction approval for that pollutant; and

(B) Each modified emissions unit that increases the actual emissions of the pollutant in question above the netting basis.

(b) For phased construction projects, the BACT determination must be reviewed at the latest reasonable time before commencement of construction of each independent phase.

(c) When determining BACT for a change that was made at a source before the current NSR application, the technical and economic feasibility of retrofitting required controls may be considered, provided:

(A) The change was made in compliance with NSR requirements in effect when the change was made; and

(B) No limit is being relaxed that was previously relied on to avoid NSR.

(d) Individual modifications with potential to emit less than 10 percent of the significant emission rate are exempt from this section unless:

(A) They are not constructed yet;

(B) They are part of a discrete, identifiable larger project that was constructed within the previous 5 years and that is equal to or greater than 10 percent of the significant emission rate; or

(C) They were constructed without, or in violation of, the Department's approval.

(2) Air Quality Protection:

(a) Offsets and Net Air Quality Benefit. Except as provided in subsections (b), (c), (d) and (~~d~~e) of this section, the owner or operator must obtain offsets and demonstrate that a net air quality benefit will be achieved in the area as specified in OAR 340-225-0090.

(b) Growth Allowance. The requirements of this section may be met in whole or in part in an ozone or carbon monoxide maintenance area with an allocation by the Department from a growth allowance, if available, in accordance with the applicable maintenance plan in the SIP adopted by the Commission and approved by EPA. An allocation from a growth allowance used to meet the requirements of this section is not subject to OAR 340-225-0090. Procedures for allocating

the growth allowances for the Oregon portion of the Portland-Vancouver Interstate Maintenance Area for Ozone and the Portland Maintenance Area for Carbon Monoxide are contained in OAR 340-242-0430 and 340-242-0440.

(c) In a carbon monoxide maintenance area, a proposed carbon monoxide major source or major modification is exempt from subsections (a) and (b) of this section if the owner or operator can demonstrate that the source or modification will not cause or contribute to an air quality impact equal to or greater than 0.5 mg/m3 (8 hour average) and 2 mg/m3 (1-hour average). The demonstration must comply with the requirements of OAR 340-225-0045.

(d) In a PM10 maintenance area, a proposed PM10 major source or major modification is exempt from subsection (a) of this section if the owner or operator can demonstrate, pursuant to the requirements of OAR 340-225-0045, that the source or modification will not cause or contribute to an air quality impact in excess of:

(A) 120 µg/m3 (24-hour average) or 40 µg/m3 (annual average) in the Grants Pass PM10 maintenance area;

(B) 140 µg/m3 (24-hour average) or 47 µg/m3 (annual average) in the Klamath Falls PM10 maintenance area; or

(C) 140 µg/m3 (24-hour average) or 45 µg/m3 (annual average) in the Lakeview PM10 maintenance area. In addition, a single source impact is limited to an increase of 5 µg/m3 (24-hour average) in the Lakeview PM10 maintenance area.

(e) Proposed major sources and major modifications located in or that impact the Salem Ozone Maintenance Area are exempt from OAR 340-225-0090 and section (2)(a) of this rule for VOC and NOx emissions with respect to ozone formation in the Salem Ozone Maintenance Area.

(3) The owner or operator of a source subject to this rule must provide an air quality analysis in accordance with OAR 340-225-0050(1) and (2), and 340-225-0060.

(4) Additional Requirements for Federal Major Sources: The owner or operator of a federal major source subject to this rule must provide an analysis of the air quality impacts for the proposed source or modification in accordance with OAR 340-225-0050(3) and 340-225-0070. In addition to the provisions of this section, provisions of section 340-224-0070 also apply to federal major sources.

(5) Contingency Plan Requirements. If the contingency plan in an applicable maintenance plan is implemented due to a violation of an ambient air quality standard, this section applies in addition to other requirements of this rule until the Commission adopts a revised maintenance plan and EPA approves it as a SIP revision.

(a) The requirement for BACT in section (1) of this rule is replaced by the requirement for LAER contained in OAR 340-224-0050(1).

(b) An allocation from a growth allowance may not be used to meet the requirement for offsets in section (2) of this rule.

(c) The exemption provided in subsection (2)(c) and (2)(d) of this rule for major sources or major modifications within a carbon monoxide or PM10 maintenance area no longer applies.

(6) Medford-Ashland AQMA: Proposed major sources and major modifications that would emit PM10 within the Medford-Ashland AQMA must meet the LAER emission control technology requirements in OAR 340-224-0050.

(7) Pending Redesignation Requests. This rule does not apply to a proposed major source or major modification for which a complete application to construct was submitted to the Department before the maintenance area was redesignated from nonattainment to attainment by EPA. Such a source is subject to OAR 340-224-0050.

NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-200-0040.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.025
Hist.: DEQ 26-1996, f. & cert. ef. 11-26-96; DEQ 15-1998, f. & cert. ef. 9-23-98; DEQ 1-1999, f. & cert. ef. 1-25-99; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-028-1935; DEQ 6-2001, f. 6-18-01, cert. ef. 7-1-01; DEQ 11-2002, f. & cert. ef. 10-8-02; DEQ 1-2005, f. & cert. ef. 1-4-05; DEQ 9-2005, f. & cert. ef. 9-9-05

DIVISION 225

AIR QUALITY ANALYSIS REQUIREMENTS

340-225-0090

Requirements for Demonstrating a Net Air Quality Benefit

Demonstrations of net air quality benefit for offsets must include the following:

(1) Ozone areas (VOC and NOx emissions). For sources capable of impacting a designated ozone nonattainment or maintenance area;

(a) Offsets for VOC and NOx are required if the source will be located within the designated area or within the Ozone Precursor Distance.

(b) The amount and location of offsets must be determined in accordance with this subsection:

(i) For new or modified sources locating within a designated nonattainment area, the offset ratio is 1.1:1. These offsets must come from within either the same designated nonattainment area as the new or modified source or another ozone nonattainment area (with equal or higher nonattainment classification) that contributes to a violation of the NAAQS in the same designated nonattainment area as the new or modified source.

(ii) For new or modified sources locating within a designated maintenance area, the offset ratio is 1.1:1. These offsets may come from within either the designated area or the ozone precursor distance.

(iii) For new or modified sources locating outside the designated area, but within the ozone precursor distance, the offset ratio is 1:1. These offsets may come from within either the designated area or the ozone precursor distance.

(iv) Offsets from outside the designated area but within the Ozone Precursor Distance must be from sources affecting the designated area in a comparable manner to the proposed emissions increase. Methods for determining offsets are described in the Ozone Precursor Offsets definition (OAR 340-225-0020(11)).

(c) In lieu of obtaining offsets, the owner or operator may obtain an allocation at the rate of 1:1 from a growth allowance, if available, in an applicable maintenance plan.

(d) Sources within or affecting the Medford Ozone Maintenance Area are exempt from the requirement for NOx offsets relating to ozone formation.

(e) Sources within or affecting the Salem Ozone ~~Nonattainment~~ Maintenance Area are exempt from the requirement for VOC and NOx offsets relating to ozone formation.

(2) Non-Ozone areas (PM10, SO2, CO, NOx, and Lead emissions)

(a) For a source locating within a designated nonattainment area, the owner or operator must:

(A) obtain offsets from within the same designated nonattainment area;

(B) provide a minimum of 1:1 offsets for emission increases over the Netting Basis;

(C) provide a net air quality benefit within the designated nonattainment area. "Net Air Quality Benefit" means a reduction in concentration at a majority of the modeled receptors and less than a significant impact level increase at all modeled receptors;

(D) provide offsets sufficient to demonstrate reasonable further progress toward achieving the NAAQS.

(b) For a source locating outside a designated nonattainment area but causing a significant air quality impact on the area, the owner or operator must provide offsets sufficient to reduce the modeled impacts below the significant air quality impact level (OAR 340-200-0020) at all receptors within the designated nonattainment area. These offsets may come from within or outside the designated nonattainment area.

(c) For a source locating inside or causing a significant air quality impact on a designated maintenance area, the owner or operator must either provide offsets sufficient to reduce modeled impacts below the significant air quality impact level (OAR 240-200-0020) at all receptors within the designated maintenance area or obtain an allocation from an available growth allowance as allowed by an applicable maintenance plan. These offsets may come from within or outside the designated maintenance area.

(A) Medford-Ashland AQMA: Proposed new major PM10 sources or major PM10 modifications locating within the AQMA that are required to provide emission offsets under OAR 340-224-0060(2)(a) must provide reductions in PM10 emissions equal to 1.2 times the emissions increase over the netting basis from the new or modified source, and must provide a net air quality benefit within the AQMA. "Net Air Quality Benefit" means a reduction in concentration at a majority of the modeled receptors and less than a significant impact level increase at all modeled receptors.

(B) Medford-Ashland AQMA: Proposed new major PM10 sources or major PM10 modifications located outside the Medford-Ashland AQMA that cause a significant air quality impact on the AQMA must provide reductions in PM10 emissions sufficient to reduce modeled impacts below the significant air quality impact level (OAR 240-200-0020) at all receptors within the AQMA.

(3) The emission reductions used as offsets must be of the same type of pollutant as the emissions from the new source or modification. Sources of PM10 must be offset with particulate in the same size range.

(4) The emission reductions used as offsets must be contemporaneous, that is, the reductions must take effect before the time of startup but not more than two years before the submittal of a complete permit application for the new source or modification. This time limitation may be extended through banking, as provided for in OAR 340 division 268, Emission Reduction Credit Banking. In the case of replacement facilities, the Department may allow simultaneous operation of the old and new facilities during the startup period of the new facility, if net emissions are not increased during that time period. Any emission reductions must be federally enforceable at the time of the issuance of the permit.

(5) Offsets required under this rule must meet the requirements of Emissions Reduction Credits in OAR 340 division 268.

(6) Emission reductions used as offsets must be equivalent in terms of short term, seasonal, and yearly time periods to mitigate the effects of the proposed emissions.

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-200-0040.]

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.025
Hist.: DEQ 25-1981, f. & ef. 9-8-81; DEQ 5-1983, f. & ef. 4-18-83; DEQ 8-1988, f. & cert. ef. 5-19-88 (and corrected 5-31-88); DEQ 22-1989, f. & cert. ef. 9-26-89; DEQ 27-1992, f. & cert. ef. 11-12-92; DEQ 4-1993, f. & cert. ef. 3-10-93; DEQ 12-1993, f. & cert. ef. 9-24-93; Renumbered from 340-020-0260; DEQ 19-1993, f. & cert. ef. 11-4-93; DEQ 4-1995, f. & cert. ef. 2-17-95; DEQ 26-1996, f. & cert. ef. 11-26-96; DEQ14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-028-1970; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-030-0111; DEQ 6-2001, f. 6-18-01, cert. ef. 7-1-01, Renumbered from 340-224-0090 & 340-240-0260; DEQ 11-2002, f. & cert. ef. 10-8-02; DEQ 12-2002(Temp), f. & cert. ef. 10-8-02 thru 4-6-03; Administrative correction 11-10-03; DEQ 1-2004, f.& cert. ef. 4-14-04; DEQ 1-2005, f. & cert. ef. 1-4-05

DEPARTMENT OF ENVIRONMENTAL QUALITY

DIVISION 232

EMISSION STANDARDS FOR VOC POINT SOURCES

340-232-0010

Introduction

(1) This division regulates sources of VOC which contribute to the formation of photochemical oxidant, mainly ozone.

(2) Since ozone standards are not violated in Oregon from October through April (because of insufficient solar energy), natural gas-fired afterburners may be permitted, on a case-by-case basis, to lay idle during the winter months.

(3) Sources regulated by this division are new and existing sources in the Portland and Medford AQMA's and in the Salem ~~SATS~~ SKATS listed in subsections (a) through (n) of this section, including:

(a) Gasoline dispensing facilities, storage tank filling;

(b) Bulk gasoline plants and delivery vessels;

(c) Bulk gasoline terminal loading;

(d) Cutback asphalt;

(e) Petroleum refineries, petroleum refinery leaks;

(f) VOC liquid storage, secondary seals;

(g) Coating including paper coating and miscellaneous painting;

(h) Aerospace component coating;

(i) Degreasers;

(j) Asphaltic and coal tar pitch in roofing;

(k) Flat wood coating;

(l) Rotogravure and Flexographic printing;

(m) Automotive Gasoline.

(4) Emissions units not covered by the source categories listed in section (3) of this rule which emit or have the potential to emit over 100 tons of VOC per year are subject to OAR 340-232-0040(5).

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.]

Stat. Auth.: ORS 468.020 & ORS 468A.025
Stats. Implemented: ORS 468A.025
Hist.: DEQ 21-1978, f. & ef. 12-28-78; DEQ 17-1979, f. & ef. 6-22-79; DEQ 23-1980, f. & ef. 9-26-80; DEQ 3-1986, f. & ef. 2-12-86; DEQ 8-1991, f. & cert. ef. 5-16-91; DEQ 4-1993, f. & cert. ef. 3-10-93; DEQ 20-1998, f. & cert. ef. 10-12-98; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-022-0100; DEQ 15-2001, f. & cert. ef. 12-26-01

340-232-0020

Applicability

(1) Notwithstanding the emission limitations in OAR 340 this division, all new major sources or major modifications at existing sources, located within the areas cited in section (2) of this rule, shall comply with OAR 340 division 224 (New Source Review).

(2) All new and existing sources inside the following areas shall comply with the General Emission Standards for Volatile Organic Compounds:

(a) Portland-Vancouver Air Quality Maintenance Area;

(b) Medford-Ashland Air Quality Maintenance Area;

(c) Salem-Keizer Area Transportation Study (SKATS) Area.

(3) VOC sources located outside the areas cited in section (2) of this rule are exempt from the General Emission standards for Volatile Organic Compounds.

(4) All new and existing sources in the areas identified in section (2) of this rule shall apply Reasonably Available Control Technology (RACT) subject to the categorical RACT requirements set forth in this division. Compliance with the requirements in this division shall be presumed to satisfy the RACT requirement.

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.]

Stat. Auth.: ORS 468.020 & ORS 468A.025
Stats. Implemented: ORS 468A.025
Hist.: DEQ 21-1978, f. & ef. 12-28-78; DEQ 17-1979, f. & ef. 6-22-79; DEQ 23-1980, f. & ef. 9-26-80;

DEQ 3-1986, f. & ef. 2-12-86; DEQ 8-1991, f. & cert. ef. 5-16-91; DEQ 4-1993, f. & cert. ef. 3-10-93; DEQ 13-1995, f. & cert. ef. 5-25-95; DEQ 7-1997(Temp), f. & cert. ef. 4-28-97; DEQ 20-1998, f. & cert. ef. 10-12-98; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-022-0104

DEPARTMENT OF ENVIRONMENTAL QUALITY

DIVISION 242

RULES APPLICABLE TO THE PORTLAND AREA

Employee Commute Options Program

340-242-0010

What is the Employee Commute Options Program?

(1) The Employee Commute Options or "ECO" Program requires larger **employers** to provide commute options to encourage **employees** to reduce **auto trips** to the **work site**.

(2) ECO is one of several strategies included in the Ozone Maintenance Plan for the Portland Air Quality Maintenance Area. The Ozone Maintenance Plan will keep the area in compliance with the federal ozone standard ~~through the year 2006, despite the area experiencing unprecedented growth~~.

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.]

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.363
Hist.: DEQ 17-1996, f. & cert. ef. 8-14-96; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-030-0800

340-242-0020

Who is Subject to ECO?

ECO applies to employers within the Portland Air Quality Maintenance Area (**AQMA**) with more than ~~50~~ 100 employees at a work site. The Portland Air Quality Maintenance Area is defined in Oregon Administrative Rules (OAR) 340-204-0010 and is illustrated in **Figure 1**.

[**NOTE**: The term "employer", and several other terms, are used throughout these rules as defined in Definitions of Terms, OAR 340-242-0050.]

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.]

[ED. NOTE: The Figure(s) referenced in this rule is not printed in the OAR Compilation. Copies are available from the agency.]

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.363

Hist.: DEQ 17-1996, f. & cert. ef. 8-14-96; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-030-0810

340-242-0030

What Does ECO Require?

Employers must provide commute options that have the potential to reduce employee commute auto trips by ten percent within three years of its baseline survey. Employers must continue to provide commute options that have the potential to achieve and maintain the reduced auto trip rate ~~throughout the life of the ozone maintenance plan (until 2006)~~. Options are available for alternative emission reduction measures, credits for past actions, and exemptions.

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.]

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.363
Hist.: DEQ 17-1996, f. & cert. ef. 8-14-96; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-030-0820

340-242-0040

How Does the Department Enforce ECO?

Enforcement procedures and civil penalties in OAR, Chapter 340, Division 12 apply. Under OAR ~~340-012-0050(2)~~340-012-0053(2) and 340-012-0054(2)(g), violations of the **ECO rules** are Class Two violations. Failure to achieve a ten percent trip reduction is not a violation; failure to make a good faith effort toward, or prepare and implement a plan designed to achieve, a ten percent trip reduction is a violation. Civil penalties are determined ~~by the penalty matrix~~ under OAR 340-012-0045 ~~340-012-0042~~. ~~Penalties determined from this matrix can range from $50 to $10,000 for each day of each violation, but typically range from $500 to $2000 for each day of each violation.~~

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.]

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.363
Hist.: DEQ 17-1996, f. & cert. ef. 8-14-96; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-030-0830

340-242-0050

Definitions of Terms Used in These Rules

The definitions in OAR 340-200-0020, 340-204-0010 and this rule apply to OAR 340-242-0010 through 340-242-0290. If the same term is defined in this rule and OAR 340-200-0020 or 340-204-0010, the definition in this rule applies to OAR 340-242-0010 through 340-242-0290.

(1) "AQMA" means the Portland Air Quality Maintenance Area.

(2) "Auto Trip" means a commute trip taken by vehicle to a work site.

(3) "Auto Trip Rate" means the number of commute vehicles arriving at a work site divided by the number of employees that report to the work site.

(4) "Baseline Auto Trip Rate" means the daily average auto trip rate established by the baseline survey.

(5) "Baseline Survey" means the employee survey administered at the beginning of the ECO program, ~~according to the implementation schedule in 340-242-0130, Table 1~~or when a new or expanding employer becomes subject to the ECO rules, or when an employer relocates.

(6) "Car/Vanpool" means a motor vehicle occupied by two or more people traveling together for their commute trip that results in the reduction of a minimum of one auto trip.

(7) "Compressed Work Week" means a schedule in which employees work their regularly-scheduled number of hours in fewer days per week or over a number of weeks (for example, a 40-hour, 8 hours per day, Monday through Friday work week is compressed into a 40-hour, 10 hours a day, Monday through Thursday work week.).

(8) "Department" means the Oregon Department of Environmental Quality.

(9) "ECO Program" or "ECO Rules" means OAR 340-242-0010 through 340-242-0290.

(10) "Employee" means any person on the employer's payroll, full or part-time (part time is 80 or more hours per 28-day period), for at least six consecutive months at the same work site, including business owners, associates, partners, and partners classified as professional corporations.

(11) "Employer" means any person, business, educational institution, non-profit agency or corporation, government department or agency or other entity that employs more than ~~50~~100 employees at a single work site.

(12) "Equivalent Emission Reduction" means a reduction of vehicle emissions, or other sources of volatile organic compounds (VOC) and nitrogen oxides (NO_x) emissions, that results in a reduction of VOC and NO_x emissions equal to the emission reduction resulting from one eliminated auto trip.

(13) "Metro" means the regional government agency~~, Metropolitan Planning Organization~~ that serves the Portland metropolitan area.

(14) "New Employer" means any employer establishing a work site within the Portland AQMA, or any employer within the Portland AQMA that expands employment at a single work site to more than ~~50~~ 100 employees, after the effective date of the ECO rules.

(15) "Non-Scheduled Work Week" means a work week with no regular daily scheduled starting or ending time, no scheduled work days, or employees are on-call. This does not include employees working a traditional "8 to 5" job who may work on a flexible schedule.

(16) "Target Auto Trip Rate" means a rate ten percent less than the baseline auto trip rate.

(17) "Target Compliance Deadline" means the date by which employers must demonstrate progress toward achieving and maintaining their target auto trip rate. The initial target compliance deadline is three years following registration.

(18) "Telecommuting" means the employees perform regular work duties at home, or at a work center closer to home than to work, rather than commuting to work. The employees may telecommute full time, or commute to work on some days and telecommute on others.

(19) "Vehicle" or "Auto" means a highway vehicle powered by a gasoline or diesel internal combustion engine with fewer than sixteen adult passenger seating positions.

(20) "Work site" means a property that is owned or leased by an employer or employers under common control, including a temporary or permanent building, or grouping of buildings that are in actual physical contact or separated only by a private or public roadway or other right-of-way.

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.]

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.363
Hist.: DEQ 17-1996, f. & cert. ef. 8-14-96; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-030-0840

340-242-0060

Should All Employees at a Work Site be Counted?

The count of employees at a work site must include:

(1) Employees from all shifts, Monday through Friday, during a 24-hour period, averaged over a 12-month period;

(2) Employees on the employer's payroll for at least six consecutive months at one work site; and

(3) Part-time employees assigned to a work site 80 or more hours per 28-day-period; but

(4) Excludes volunteers, disabled employees (as defined under the Americans with Disabilities Act), employees working on a **non-scheduled work week**, and employees required to use a personal **vehicle** as a condition of employment.

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.]

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.363
Hist.: DEQ 17-1996, f. & cert. ef. 8-14-96; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-030-0850

340-242-0070

What are the Major Requirements of ECO?

To comply with ECO, employers must:

(1) Conduct a **baseline survey** of employees to establish a **baseline auto trip rate** (or provide documentation of the current auto trip rate that is at least as accurate as a survey would provide);

(2) Calculate a target auto trip rate by reducing the baseline auto trip rate by 10 percent;

(3) Submit a registration form as supplied by the **Department**;

(4) Design and implement a trip reduction strategy that has the potential to achieve the target auto trip rate by the **target compliance deadline** ~~(see Table 1 for the implementation schedule),~~ and the potential to maintain the target auto trip rate ~~through 2006~~;

(5) Either:

(a) Prepare and implement an auto trip reduction plan for each work site and submit the plan to the Department for approval; OR

NOTE: Enforcement will be based upon implementing the approved plan, see OAR 340-242-0110.

(b) Provide written notice to the Department of ~~the intent to achieve the target auto trip rate without an approved plan~~participation in an equivalent commute trip reduction program.

NOTE: Enforcement will be based on good faith effort, see OAR 340-242-0180 and special requirements in OAR 340-242-0110.

(6) Survey employees ~~annually~~every two years, report survey findings to the Department; and

~~**NOTE:** Reporting dates are different for those not submitting a plan, see OAR 340-242-0100.~~

(7) Continue to implement strategies to achieve or maintain the target auto trip rate ~~through 2006~~.

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.]

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.363
Hist.: DEQ 17-1996, f. & cert. ef. 8-14-96; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-030-0860

340-242-0080

What are the Registration Requirements?

(1) Employers must submit a registration form to the Department on forms provided by the Department.

(2) Employers with multiple work sites may submit one application for all work sites.

~~(3) The application must be submitted according to the schedule in **Table 1**.~~

(43) Baseline survey findings must be submitted with the registration form in the format described on the registration form.

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.]

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.363
Hist.: DEQ 17-1996, f. & cert. ef. 8-14-96; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-030-0870

340-242-0090

What are the Requirements for an Employee Survey?

(1) Employers may use the survey form provided by the Department or an alternate instrument. Any alternate survey instrument must be approved by the Department before use and must provide an opportunity for employees to indicate an interest in a **carpool** matching program;

(2) The employer must distribute the survey form to all employees and achieve a minimum response rate of 75 percent; If the employer cannot achieve the minimum response rate for follow-up surveys within a reasonable amount of time, the Department will assign a single occupant vehicle mode to the percentage of employees who did not respond up to the 75% rate;

(3) Employers with more than 400 employees at a work site may survey a statistically valid random sample of employees and must follow the Department's guidelines for random sampling;

(4) Survey forms must be distributed during the week following a typical work week for the employer and not bordering a holiday;

(5) The baseline survey must not be distributed to employees earlier than one year before reporting the results to the Department (older baseline surveys can be used to apply for credit, see OAR 340-242-0250);

(6) Follow-up surveys must not be distributed to employees earlier than 90 days before reporting the results to the Department;

(7) Employers must report survey findings to the Department ~~annually, according to the schedule in **Table 1**~~ every two years, and;

~~(8) Once an employer achieves the target auto trip rate, the employer may survey every two years; and~~

(98) An alternative method may be substituted for the survey. Alternative methods must be at least as accurate as survey findings and must be approved by the Department (such methods might include counting cars in an employee parking lot or conducting work site entrance verbal surveys).

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.]

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.363
Hist.: DEQ 17-1996, f. & cert. ef. 8-14-96; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-030-0880

~~**340-242-0100**~~

~~**Special Requirements for Employers Intending to Comply Without an Approved Plan**~~

~~(1) Employers who choose to achieve the target auto trip rate without an approved plan must survey employees 18 months after the baseline survey was conducted;~~

~~(2) Findings from the 18-month survey must be submitted to the Department according to the schedule in Table 1;~~

~~(3) If an 18-month survey shows that the employer's progress toward the target auto trip rate is less than one-third of the target trip reduction, the employer must submit an auto trip reduction plan to the Department for approval within 60 days of submitting survey findings to the Department; and~~

~~(4) Following the 18-month survey, employers must survey annually according to the schedule in **Table 1**.~~

~~[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.]~~

~~Stat. Auth.: ORS 468.020~~
~~Stats. Implemented: ORS 468A.363~~
~~Hist.: DEQ 17-1996, f. & cert. ef. 8-14-96; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-030-0890~~

340-242-0110

What if an Employer Does Not Meet the Target Auto Trip Rate?

(1) An employer with an approved plan who has fully implemented its plan yet has not achieved its target **auto trip rate** by the target compliance date, or does not maintain its target rate on ~~annual~~ biennial basis, must submit a revised plan within 60 days following the target compliance date in any given year ~~(according to **Table 1**)~~. If an employer has not fully implemented its plan, the employer is subject to an enforcement action by the Department.

(2) An employer ~~selecting not to submit a plan~~ participating in an equivalent commute trip reduction program who does not achieve its target auto trip rate by the target compliance date ~~(see **Table 1**)~~ must demonstrate that a **good faith effort** was made to achieve the target rate. Requirements for documenting good faith effort are described in 340-242-0180. The employer must also submit a trip reduction plan within 60 days following the target compliance date. If an employer cannot demonstrate that a good faith effort was made, the employer is subject to an enforcement action by the Department.

(3) An employer will not be required to submit further plan revisions to its initial plan if, after fully implementing two revisions, the target auto trip rate is not reached. The employer must maintain strategies identified in its plan, or revisions to that plan, that resulted in improvements to the auto trip rate.

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.]

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS. 468A.363
Hist.: DEQ 17-1996, f. & cert. ef. 8-14-96; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-030-0900

340-242-0120

How Will Employers Demonstrate Progress Toward the Target Auto Trip Rate?

Employers must submit employee survey findings, including a calculated auto trip rate, to the Department. The Department will compare the ~~annually~~ reported auto trip rate with the employer's target auto trip rate.

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.]

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.363
Hist.: DEQ 17-1996, f. & cert. ef. 8-14-96; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-030-0910

~~**340-242-0130**~~

~~**What is the Schedule Employers Must Follow to Implement ECO?**~~

~~The schedule employers must follow to implement the ECO program is detailed in **Table 1**. Implementation is staggered and employer grouping is based on work site zip code. The Department will place any work site located in a zip code not listed in this rule in a group with the most closely associated zip code. An employer with multiple work sites in more than one zip code may follow one schedule for all work sites with approval from the Department. [Table not included. See ED. NOTE.]~~

~~[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.]~~

~~[ED. NOTE: The Table referenced in this rule is not printed in the OAR Compilation. Copies are available from the agency.]~~

~~Stat. Auth.: ORS 468.020~~
~~Stats. Implemented: ORS 468A.363~~
~~Hist.: DEQ 17-1996, f. & cert. ef. 8-14-96; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-030-0920~~

340-242-0140

How Should Employers Account for Changes in Work Force Size?

The target auto trip rate remains constant regardless of changes in work force size. Employers experiencing an annual increase or decrease in the number of employees reporting to a work site must simply maintain the target auto trip rate.

NOTE: For example, an employer has 200 employees and 180 autos arriving at the work site. The employer's baseline auto trip rate is 180 autos/200 employees, or .90. The target auto trip rate is .90 minus 10 percent, or .81. The employer's work force increases to 300 employees. The target auto trip rate remains .81. In order to maintain the target auto trip rate, auto trips to the work site cannot exceed (300 X .81), or 243 trips. Similarly, if the employer's work force decreases to 100 employees, the target auto trip rate remains .81, and auto trips to the work site cannot exceed (100 X .81) or 81 trips.

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.]

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.363

Hist.: DEQ 17-1996, f. & cert. ef. 8-14-96; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-030-0930

340-242-0150

How Can an Employer Reduce Auto Commute Trips to a Work Site?

Employee commute option programs include, but are not limited to:

(1) Promoting carpool and vanpool programs;

(2) Offering transit subsidies;

(3) Establishing **telecommuting** opportunities;

(4) Offering **compressed work week** schedules;

(5) Providing an emergency ride home program;

(6) Sponsoring shuttle buses to and from transit terminals and/or during lunch hours for errands;

(7) Improving facilities to promote bicycle use;

(8) Establishing on-site amenities to decrease employees' need for a car at the work site;

(9) Discontinuing parking subsidies and charging all employees for parking.

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.]

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.363
Hist.: DEQ 17-1996, f. & cert. ef. 8-14-96; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-030-0940

340-242-0160

What Should be Included in an Auto Trip Reduction Plan?

An auto trip reduction plan must include:

(1) The results of the baseline survey (or comparable documentation);

(2) Calculation of baseline and target auto trip rates;

(3) Any employee commute option programs currently in use at the work site;

(4) New commute options to be implemented at the work site that have the potential to achieve and maintain the target auto trip rate;

(5) Empirical evidence that the commute option(s) to be offered or supported by the employer have the potential to achieve and maintain the target auto trip rate (employers may reference the Department's report **Alternatives to Single Occupant Vehicle Trips** or provide equivalent documentation);

(6) Any unique aspects of the business or work site influencing the trip reduction strategies selected;

(7) A schedule for implementing each of the selected commute option measures;

(8) Any alternative emission reduction proposals prepared by the employer according to OAR 340-242-0240;

(9) The name, title, telephone number, and business mailing address of the person designated by the employer as the contact for the work site (contact person does not have to be located at the work site); and a signed statement certifying that the documents and information submitted in the plan are true and correct to the best of that person's knowledge.

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.]

[Publications: The publication(s) referred to or ~~incoporated~~incorporated by reference in this rules are available from the office of the agency.]

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.363
Hist.: DEQ 17-1996, f. & cert. ef. 8-14-96; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-030-0950

340-242-0170

When Will the Department Act on a Submitted Auto Trip Reduction Plan?

The Department will approve or notify the employer of deficiencies in a submitted auto trip reduction plan, based on the criteria in OAR 340-242-0160, within 90 days or the plan will be automatically approved. The employer will have 30 days to correct the deficiencies and resubmit the plan to the Department. Plan approvals will be documented by letter from the Department to the employer. Employers must submit any subsequent plan modifications to the Department for review and approval. If the employer objects to any condition or limitation in the Department's letter, the employer may request a contested case hearing before the Commission or its authorized representative. Such a request for hearing must be made in writing to the Director and received by the Department within 20 days of the date of mailing of the letter. Any subsequent hearing will be conducted pursuant to the provisions of ORS Chapter 183 and OAR Chapter 340, Division 11.

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.]

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.363
Hist.: DEQ 17-1996, f. & cert. ef. 8-14-96; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-030-0960

340-242-0180

What is a Good Faith Effort?

Employers who ~~choose not to submit a plan~~ participate in an equivalent commute trip reduction program and then fail to meet their target auto trip rates must demonstrate that a good faith effort was made to meet the target trip reduction. An employer must demonstrate good faith effort by submitting written documentation of the following:

(1) Employer established a baseline auto trip rate and corresponding target auto trip rate and conducted follow-up surveys to determine employee commute patterns and progress toward achieving the target trip reduction;

(2) Employer selected trip reduction strategies that had a reasonable likelihood of success based on documentation in the Department's report **Alternatives to Single Occupant Vehicle Trips** or equivalent documentation (for example, auto trip reduction experience by employers in a comparable region); and

(3) Employer fully implemented all selected strategies, or their equivalent, on a schedule that would have reasonably allowed the employer to achieve the target auto trip rate by the target compliance deadline.

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.]

[Publications: The publication(s) ~~refered~~referred to or incorporated by reference in this rules are available from the office of the agency.]

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.363
Hist.: DEQ 17-1996, f. & cert. ef. 8-14-96; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-030-0970

340-242-0190

How Does the ECO Program Affect New Employers, Expanding Employers and Employers Relocating Within the Portland AQMA?

(1) An expanding employer who increases the number of employees at any single work site within the Portland AQMA to more than ~~50~~100 after the effective date of the ECO rules must comply with the ECO rules. An employer relocating a work site within the Portland AQMA is considered a **new employer** upon relocation and must set a new baseline and target auto trip rate and comply with the ECO rules. Relocating employers may apply for credit for existing trip reductions that carry over to the new work site. Expanding employers and new employers must meet the requirements of this rule within the following number of days after they become affected employers:

(a) Survey employees and submit survey findings and a registration form within 90 days;

(b) Select strategies that have the potential to meet the target trip reduction and submit a trip reduction plan or notice of intent to reduce trips without an approved plan within 180 days; and

(c) Conduct ~~annual~~ follow-up surveys every two years and report findings to the Department within 90 days of surveying.

(2) An employer affected by this rule may choose to demonstrate compliance through 340-242-0260(5) (*use of area average rate*).

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.]

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.363
Hist.: DEQ 17-1996, f. & cert. ef. 8-14-96; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-030-0980

340-242-0200

Can a New or Relocating Employer Comply with ECO Through Restricted Parking Ratios?

An employer locating at a work site within the AQMA after the effective date of the ECO rules will be exempt from the ECO rules for that work site if:

(1) The new work site meets the requirements of the Department's Voluntary Parking Ratio rules (OAR 340-242-0300 through 340-242-0390); OR

(2) If the employer provides free or subsidized parking, including leased parking, above the Department's maximum parking ratio to any employees at the work site (except to employees required to have a vehicle at the work site as a condition of employment), then either:

(a) A transportation allowance is offered to those employees provided free or subsidized parking that exceeds the Department's maximum parking ratio. The transportation allowance must be offered in lieu of the free or subsidized parking in an amount equal to or greater than the amount of the subsidy, but not to exceed the maximum allowed for transit by the Internal Revenue Service for

the Qualified Transportation Fringe Benefits included under Section 132(F), Notice 94-3 of the tax code; OR

(b) All employees at the work site are offered a transit subsidy or its equivalent at least equal to 50 percent of the value of a Tri-Met all-zone transit pass.

(3) An employer must submit this documentation with an exemption application to the Department by the deadline for plan or notice submittal ~~specified in Table 1~~ and certify that they continue to meet these requirements every two years. Employers meeting the requirements of this rule do not need to conduct a baseline survey of employees. However, employers whose applications are denied must then conduct a baseline survey and submit the findings to the Department within 90 days of notice by the Department.

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.]

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.363
Hist.: DEQ 17-1996, f. & cert. ef. 8-14-96; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-030-0990

340-242-0210

Can an Existing Employer Comply with ECO Through Restricted Parking Ratios?

An employer will be considered to have met the target trip reduction and is exempt from the ECO rules if the employer provides documentation of the following. An employer must submit this documentation with an exemption application to the Department by the deadline for plan or notice submittal ~~specified in Table 1~~ and certify that they continue to meet these requirements every two years. Employers meeting the requirements of this rule do not need to conduct a baseline survey of employees. However, employers whose applications are denied must then conduct a baseline survey and submit the findings to the Department within 90 days of notice by the Department.

(1) Work site is located in an area with maximum parking ratio requirements at least as stringent as the Department's maximum parking ratios (see OAR 340-242-0300 through 340-242-0390);

(2) Free or subsidized all-day parking is generally unavailable within a one-half mile radius of the work site; and

(3) If the employer provides free or subsidized parking, including leased parking, above the Department's maximum parking ratio to any employees at the work site (except to employees required to have a vehicle at the work site as a condition of employment), then either:

(a) A transportation allowance is offered to those employees provided free or subsidized parking that exceeds the Department's maximum parking ratio. The transportation allowance must be offered in lieu of the free or subsidized parking in an amount equal to or greater than the amount of the

subsidy, but not to exceed the maximum allowed for transit by the Internal Revenue Service for the Qualified Transportation Fringe Benefits included under Section 132(F), Notice 94-3 of the tax code; OR

(b) All employees at the work site are offered a transit subsidy or its equivalent at least equal to 50 percent of the value of a Tri-Met all-zone transit pass.

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.]

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.363
Hist.: DEQ 17-1996, f. & cert. ef. 8-14-96; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-030-1000

340-242-0220

What if an Employer Has More Than One Work Site Within the Portland AQMA?

(1) An employer with more than one work site in the Portland AQMA may average its target trip reduction among those work sites in the AQMA. An employer must survey all included work sites ~~annually~~ every two years. Survey findings may be reported in aggregate or separately.

(2) One trip reduction plan may be developed for all work sites of an individual employer, but strategies must be selected based on the specific transportation characteristics of each work site.

(3) Work sites with ~~50~~100 or fewer employees may be included in the interest of averaging trip reductions among all work sites. Those work sites must then survey ~~according to the schedule in **Table 1**~~ and findings must be included in the employer's report to the Department.

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.]

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.363
Hist.: DEQ 17-1996, f. & cert. ef. 8-14-96; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-030-1010

340-242-0230

Can Employers Submit a Joint Plan?

Different employers with work sites located near each other and with common transportation needs may develop a joint trip reduction plan for all affected work sites. The plan must address each work site individually and each employer is individually accountable for meeting all ECO requirements. Each

employer must report survey findings for each specific work site, and the ten percent trip reduction target applies to each employer's work sites. Trip reductions may not be averaged among employers.

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.]

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.363
Hist.: DEQ 17-1996, f. & cert. ef. 8-14-96; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-030-1020

340-242-0240

Are There Alternatives to Trip Reduction?

Alternatives to trip reduction include:

(1) Employers may purchase surplus trip reductions from other employers required to comply with ECO to meet part or all of the target trip reduction. Surplus trips must be documented by survey before sale and must be maintained ~~through the year 2006~~. The Department must approve proposed transactions prior to finalizing. The Department will confirm surplus trip transactions by letter to both employers.

(2) Employers may substitute **equivalent emission reductions** to meet their target trip reduction. Equivalent emission reduction proposals must be included in the employer's trip reduction plan or submitted with the notice of intent to comply without an approved plan. In order to receive credit as an equivalent emission reduction, the Department must review and approve proposals before an employer implements the strategy. Employers selecting equivalent emission reduction strategies must meet the following requirements:

(a) Employer sufficiently documented emission calculations so that the Department can quantify and verify the reduction;

(b) Employer calculated equivalent emissions according to guidelines issued by the Department. The Department must approve any alternate or modified calculation methods;

(c) Employer submits, on the same schedule as the ~~annual~~ biennial survey findings, documentation of actual equivalent emissions achieved;

(d) Equivalent emission reductions may not be bought or sold between employers for the purpose of meeting the target trip reduction.

(3) Employers may contribute to an emission reduction fund at an annual rate of $100 per employee at the work site (see OAR 340-242-0060 to determine count of employees). An employer making partial progress toward the target trip reduction may choose to contribute proportionate to the percentage of the target trip reduction yet to be achieved. The emission reduction fund will be

administered through **Metro** for new transit service, local jurisdiction alternative mode projects, and business-based Transportation Management Association (TMA) programs that result in trip reductions. Employers must make annual payments over the compliance period. The amount will be adjusted annually according to the Consumer Price Index.

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.]

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.363
Hist.: DEQ 17-1996, f. & cert. ef. 8-14-96; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-030-1030

340-242-0250

What Alternatives Qualify as Equivalent Emission Reductions?

Equivalent emission reduction alternatives at the work site include, but are not limited to, the following:

(1) Use of alternative fueled vehicles (employer or employee vehicles);

(2) Vehicle scrappage (older high-emitting employee or employer vehicles);

(3) Forklift replacement (lower emitting technology);

(4) Lawn mower replacement (may include lawn mowers employees use at home if home is located within the Portland AQMA);

(5) Motor boat motor replacement (may include motor boats owned by employees who live within the Portland AQMA);

(6) Reductions in air pollution emissions from non-vehicle sources at the work site;

(7) Reductions in non-commute vehicle traffic to the work site or within the work site.

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.]

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.363
Hist.: DEQ 17-1996, f. & cert. ef. 8-14-96; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-030-1040

340-242-0260

Can Employers Get Credit for Existing Trip Reduction Programs?

The Department may grant credits for documented trip reductions that occurred at an employer's work site any time before establishing a baseline auto trip rate. Credits will be granted upon approval by the Department. The Department will approve or deny the employer's request for credit by letter to the employer. If the employer objects to any condition or limitation in that letter, the employer may request a contested case hearing as described in OAR 340-242-0170.

(1) Employers must demonstrate that pre-existing trip reduction programs resulted in actual trip reductions by providing:

(a) A description of the trip reduction programs and how they were implemented;

(b) The period of time that the programs have been in place;

(c) Survey findings or comparable documentation that demonstrates a ten percent reduction in the auto trip rate for the work site; and

(d) Current survey findings or comparable documentation verifying the employer has maintained the reduced auto trip rate.

(2) Applications for credits must be submitted to the Department with the trip reduction plan or notice of intent to reduce trips ~~without an approved plan, according to **Table 1**~~ through participation in an equivalent commute trip reduction program.

(3) Credits will not be discounted and will be granted on a one-for-one basis.

(4) Trips documented for the purpose of receiving credits may not be bought or sold to other employers for the purpose of meeting the target trip reduction.

(5) Alternately, an employer may choose to provide documentation that its single occupant vehicle commute rate, at the time of registration, is equal to or less than two standard deviations below the mean rate for the Metro transportation zone which includes the employer's work site. Commute data for Metro's transportation zones is available from the Department.

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.]

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.363
Hist.: DEQ 17-1996, f. & cert. ef. 8-14-96; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-030-1050

340-242-0270

Are Exemptions Allowed if an Employer is Unable to Reduce Trips or Take Advantage of Alternate Compliance Options?

(1) An employer is fully exempt from OAR 340-242-0010 through 340-242-0290 if the employer submits reasonable documentation for each of the following:

(a) Work site is located in an area for which:

(A) Public transit service during work shift changes is less frequent than thirty minute intervals; or

(B) The public transit service point is further than one-half mile from employee's usual parking area; or

(C) Work shift changes occur between 8:30 p.m. and 5:30 a.m..

(b) Upon completing the employee survey and providing reasonable promotion for a carpool matching program, employees indicating a willingness to car/vanpool cannot be matched within the work site or through Tri-Met's carpool matching database or employee turnover rate is greater than 50 percent per year;

(c) The nature of employees' work requires them to perform their work at the work site or during specific hours and days, eliminating the possibility of telecommuting or compressed work weeks/hours; and

(d) No options exist for the employer to achieve equivalent emission reductions at no net annualized cost to the employer (including both capital and operating costs).

(2) Partial exemptions.

(a) The Department will grant a partial exemption for that portion of an employer's work force for which sections (1)(a) through (c) of this rule apply;

(b) The Department will grant a partial exemption for section (1)(d) of this rule in direct proportion to the remaining work trips to be reduced after quantifying all available equivalent emission reductions.

(3) Employers must submit requests for partial or total exemptions to the Department, on application forms provided by the Department, by the deadline for plan or notice submittal ~~according to **Table 1**~~. The Department will approve or deny the employer's request for exemption by letter to the employer. If the employer objects to any condition or limitation in that letter, the employer may request a contested case hearing as described in OAR 340-242-0170.

(4) Employers must renew requests for exemptions every three years.

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.]

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.363
Hist.: DEQ 17-1996, f. & cert. ef. 8-14-96; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-030-1060

340-242-0280

Participation in the Industrial Emission Management Program

Employers that donate unused Plant Site Emission Limit (PSEL) to the Department's Industrial Emission Management program (see OAR 340-242-0400 through 340-242-0440) are exempt from the ECO rules ~~for the life of the ozone maintenance plan (2006)~~.

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.]

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.363
Hist.: DEQ 17-1996, f. & cert. ef. 8-14-96; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-030-1070

340-242-0290

What Kind of Records Must be Kept and for How Long?

Employers must maintain records at the work site or other central location within the ~~nonattainment~~ Air Quality Maintenance Aarea for at least three years, and must make those records available to the Department upon request. Records must include:

(1) The contents and results of employee surveys or other information gathering efforts;

(2) A full description of all measures and incentives offered to employees and the associated employee responses;

(3) Other information associated with the development, implementation, evaluation, or modification of the trip reduction program.

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.]

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.363
Hist.: DEQ 17-1996, f. & cert. ef. 8-14-96; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-030-1080

Note: DEQ proposes to delete OAR 340-242-0130 and Table 1.

Table 1
340-242-0130
IMPLEMENTATION SCHEDULE

Group	Registration Forms Due	Baseline Surveys Due	Plans - Notices of Intent To Comply w/o a Plan Due	12-Month Surveys Due for Those with a Plan	18-Month Surveys Due for Those without a Plan	Surveys Due for Those with a Plan	Initial Target Compliance Date Surveys Due for all Employers	Annual Target Compliance Date Surveys Due for all Employers
1	11-1-96	11-1-96	2-1-97	11-1-97	5-1-98	11-1-98	11-1-99	Every 11-1thru 2006
2	2-1-97	2-1-97	5-1-97	2-1-97	8-1-98	2-1-99	2-1-00	Every 2-1 thru 2006
3	5-1-97	5-1-97	8-1-97	5-1-98	11-1-98	5-1-99	5-1-00	Every 5-1 thru 2006
4	8-1-97	8-1-97	11-1-97	8-1-98	2-1-98	8-1-99	8-1-00	Every 8-1 thru 2006

Group 1 includes: Northeast zip codes: 97024, 97060, 97203, 97211, 97212, 97213, 97217, 97218, 97220, 97227, 97230, 97232;

Group 2 includes: Southeast zip codes: 97004, 97009, 97015, 97027, 97030, 97045, 97080, 97202, 97206, 97214, 97215, 97216, 97222, 97233, 97236, 97266, 97267;

Group 3 includes: Southwest zip codes: 97005, 97006, 97007, 97008, 97034, 97035, 97036, 97062, 97068, 97070, 97106, 97113, 97119, 97132, 97140, 97219, 97223, 97224;

Group 4 includes: Northwest zip codes: 97116, 97123, 97124, 97133, 97201, 97204, 97205, 97207, 97208, 97209, 97210, 97221, 97225, 97229, 97231, 97258.

DEPARTMENT OF ENVIRONMENTAL QUALITY

DIVISION 242

RULES APPLICABLE TO THE PORTLAND AREA

Industrial Emission Management Program

340-242-0400

Applicability

(1) OAR 340-242-~~0420~~0430 through 340-242-0440 apply to all sources ~~that emit~~ of VOC ~~and~~ or NO_x ~~in within the boundaries of~~ that are required to provide a net air quality benefit under the provisions of OAR 340-225-0090 for the Portland Air Quality Maintenance Area (AQMA). ~~, including the following and to the following additional sources:~~

~~(a) VOC and NO_x sources with a PSEL of 100 tons per year or greater within 25 miles of the Portland AQMA are subject to OAR 340-242-0420; and~~

~~(b) VOC and NO_x sources that are new major sources or major modifications within 30 kilometers of the Portland AQMA are subject to OAR 340-242-0430 and 340-242-0440.~~

(2) OAR 340-242-0430 and 340-242-0440 apply to new major sources and major modifications that emit CO within the Portland Metro Area, including new major sources and major modifications outside the Portland Metro Area that have a significant air quality impact within this area.

[**NOTE:** These rules are included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040]

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.025
Hist.: DEQ 17-1996, f. & cert. ef. 8-14-96; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-030-0700

340-242-0410

Definition of Terms

The definitions in OAR 340-200-0020, 340-204-0010 and this rule apply in OAR 340-242-0400 through 340-242-0440. If the same term is defined in this rule and OAR 340-200-0020 or 340-204-0010, the definition in this rule applies in OAR 340-242-0400 through 340-242-0440.

(1) "PSEL" means the Plant Site Emission Limit of an individual air pollutant specified in an Air Contaminant Discharge Permit or Title V permit issued to a source by the Department, pursuant to OAR 340 division 216 or 218.

(2) "Unused PSEL" means the difference between a source's actual emissions and its permitted level or PSEL in 1990 or 1992, whichever is lower, as determined through the Department's emission inventory data.

(3) "Unused PSEL Donation Source" means any source that voluntarily returnsed to the Department unused PSEL, as part of the Unused PSEL Donation Program in OAR 340-242-0420.

[**NOTE:** These rules are included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040]

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.025
Hist.: DEQ 17-1996, f. & cert. ef. 8-14-96; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-030-0710

340-242-0420

Unused PSEL Donation Program

(1) This program encourages owners or operators of VOC and NO_x sources identified in OAR 340-242-0400(1) to donate unused PSEL to the Department. Under this program, donations can be either permanent or temporary. For a source to participate in this program it must have entered into an agreement with the Department prior to January 1, 2006.

(2) VOC sources donating at least 35 percent of their unused PSEL and NO_x sources donating at least 50 percent of their unused PSEL will receive the following incentives and considerations from the Department for participating in this program:

(a) Exemption from the Employee Commute Options (ECO) Program in OAR 340-242-0010 through 340-242-0290 for the duration of the Portland Ozone Maintenance plan;

(b) Priority permit processing for any required air quality permit;

(c) In accordance with OAR 340-242-0430 and 340-242-0440(1), priority use of up to 50 percent of any remaining growth allowance. This applies only to sources making permanent donations, pursuant to section (3) of this rule; and

(d) Other considerations may be added to the donation agreement on a case-by-case basis, consistent with the Department's rules and statutes.

(3) The Department will adjust the PSEL of sources providing permanent donations to reflect the emissions donated. Permanent donations will result in adjustment to the source's baseline emission

rate and PSEL, consistent with the definition of "major modification" under OAR 340-200-0020 and changes to PSELs required by rule under OAR 340-222-0040.

~~(4) Temporary donations of unused PSEL must be for a minimum of five years for VOC and four years for NO_x. The Department will adjust the PSEL of sources providing temporary donations to reflect the time period and emissions donated. Any source that desires a return of any temporary donation before the end of the donation period must obtain written approval from the Department. Approval will be granted only if the Department determines that excess temporary donations exist. Such approval will disqualify the source from receiving the incentives listed in section (2) of this rule.~~

(54) Sources participating in this program must enter into a donation agreement with the Department that identifies the commitments of both parties. Any such agreement is legally binding and enforceable.

[**NOTE:** These rules are included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040]

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.025
Hist.: DEQ 17-1996, f. & cert. ef. 8-14-96; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-030-0720

340-242-0430

Industrial Growth Allowances

(1) This rule establishes industrial growth allowances for sources identified in OAR 340-242-0400. The amount of each growth allowance ~~that is available~~ is defined in the **State Implementation Plan** and is on file with the Department.

(2) The owner or operator of a proposed new major source or major modification emitting VOCs, NO_x, or CO may obtain a portion of the respective growth allowance pursuant to OAR 340-242-0440.

(3) If no emissions remain in the respective growth allowance, the owner or operator of the proposed major source or major modification shall provide offsets for CO emissions at a 1 to 1 ratio, and for VOC and NO_x emissions at a 1.1 to 1 ratio (i.e., demonstrate a 10% new reduction).

[**NOTE:** These rules are included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040]

[Publications: The publication(s) referred to or incorporated by reference in this rules are available from the agency.]

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.025

Hist.: DEQ 17-1996, f. & cert. ef. 8-14-96; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-030-0730

340-242-0440

Industrial Growth Allowance Allocation

(1) The owner or operator of a proposed new major source or major modification emitting VOCs, NOx, or CO, as identified in OAR 340-242-0400, may obtain a portion of any remaining emissions in the respective growth allowance in accordance with procedures described in the **State Implementation Plan** that is on file with the Department, and based on the following conditions:

(a) Access is on a first-come-first-served basis, based on the submittal date of a complete permit application;

(b) Unused PSEL donation sources that meet the donation criteria specified in OAR 340-242-0420(2) have priority access to their respective growth allowance as a "tie-breaker" over non-donation sources; ~~and~~

(c) Except as provided below, n~~N~~o single source may receive an emissions allocation of more than 1,000 tons of either VOC or NO_x or more than 50% of any remaining growth allowance; and ~~, or up to 10 tons per year, whichever is greater. On a case-by-case basis, the Environmental Quality Commission may approve an emissions allocation of greater than 50% upon consideration of the following~~:

(d) A single source must apply to the Environmental Quality Commission to receive more than 1,000 tons of VOC or NO_x, but in no case more than 50% of the remaining growth allowance. To apply, sources must submit air quality and other information as required by the Department justifying its request and ~~may~~ must include information on significant economic, employment, or other benefits to the Portland area that will result from the proposed new major source or major modification, and the availability of emissions offsets. DEQ will evaluate ozone levels and expected trends to determine whether the proposed facility poses any risk to maintaining compliance with the ozone air quality standard prior to making a recommendation to the EQC regarding the source application.

~~(A) Iinformation submitted by the source to the Department as required by the Department justifying its request for exceeding the 50% emissions allocation, based and may include information on significant economic, employment, or other benefits to the Portland area that will result from the proposed new major source or major modification.;~~

~~(B) Information provided by the Department on other known new major sources or major modifications seeking an emissions allocation from the same growth allowance; and~~

~~(C) Other relevant information submitted by the source or the Department.~~

~~(2) To avoid jeopardizing maintenance of the ozone standard during the interim years of the plan, the Department will allocate only a portion of the VOC and NOx growth allowances each year. The Department will track the use of emissions from the growth allowances and will notify unused PSEL donation sources by mail if either growth allowance is reduced by 50 percent. The amount of the growth allowance that can be allocated each year is identified in Section 4.50 of the State Implementation Plan (SIP), which is on file with the Department.~~

(~~3~~2) The amount of the CO growth allowance that can be allocated is identified in the Portland Area Carbon Monoxide Maintenance Plan, Section 4.58 of Volume 2 of the State Implementation Plan on file with the Department.

[**NOTE:** These rules are included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040]

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.025
Hist.: DEQ 17-1996, f. & cert. ef. 8-14-96; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-030-0740; DEQ 10-2004, f. & cert. ef. 12-15-04

Summary of Public Comment and Agency Response

Title of Rulemaking: Portland-Vancouver and Salem Ozone Maintenance Plan and Supporting Rule Revisions

Prepared by: Marianne Fitzgerald **Date: October 30, 2006**

Comment period

The public comment period opened on June 1, 2006 and closed at 5:00 p.m. on July 14, 2006. DEQ held public hearings on July 11, 2006 at 1:30 pm in Salem and 6:30 pm in Portland. Three people attended the Salem hearing and two people testified. No one attended the Portland hearing. Twelve commenters submitted written comments during this time period.

Organization of comments and responses

Summaries of individual comments and the Department's responses are provided below. Similar comments are grouped together. The persons who provided each comment are referenced by number. A list of commenters and their reference numbers follows the summary of comments and responses.

Summary of Comments and Agency Responses	
Comment 1	Do not relax industrial standards in Salem.
Commenters	1, 4, 5, 6, 8, 13, 14
Response	DEQ received a number of comments from citizens in Salem who had read a local newspaper article indicating that DEQ proposed to relax industrial standards. DEQ has not proposed any relaxation in requirements for existing industrial sources. DEQ has proposed to change the emission control technology requirements for new or expanding major sources. Because of Salem's nonattainment status, new and expanding major industry must currently install the most stringent level of emission control technology, known as "Lowest Achievable Emission Rate" (LAER). LAER is typically required in areas violating or at risk of violating air quality standards and must be installed regardless of cost. Under Salem's proposed maintenance plan, new and expanding major industry would no longer be required to install LAER, but would instead be required to install "Best Available Control Technology" (BACT). BACT is typically used in maintenance and attainment areas that are in compliance with air quality standards. DEQ determines BACT for each new and expanding industrial source by using a process that begins with evaluating LAER technologies. If a new or expanding major source demonstrates that the cost of installing LAER is unusually high compared to the cost of installation of LAER at other similar facilities, the control level required as BACT can be less stringent than LAER. BACT provides an equivalent or very high level of emission control that would not interfere with maintenance of the ozone air quality standard. The Salem area has not seen an exceedance of ozone standards in ten years and is at low risk of future ozone violations. In addition, new major sources represent a very small portion of emissions of volatile organic compounds (VOC) and nitrogen oxides (NO_x) in the Salem area. Therefore,

	DEQ recommends BACT as an appropriate level of emission control for future new and expanding major industry. This is the same level of control that has been required in Portland since 1997 to ensure that new and expanding major industry does not interfere with long-term maintenance of the ozone standard.

Comment 2	DEQ should adopt the maintenance plan and rules as proposed.
Commenters	7, 10, 11
Response	DEQ recommends that the EQC adopt the maintenance plan and rules as proposed, with the revisions discussed in the rule adoption package.

Comment 3	DEQ public notice did not adequately inform the public about changes in emission offset requirements and the growth allowance proposal.
Commenters	2
Response	DEQ disagrees. The public notice package provided ample information about the plan content and proposed rule changes. Specifically, the public notice package explained that the proposal would reestablish the growth allowance that had been included in the 1996 Portland Ozone Maintenance Plan, the size of the proposed growth allowance, and that offsets would be required if the growth allowance were fully consumed.

Comment 4	There should be no growth allowance that would substitute for emission offsets for future increases in emissions.
Commenters	2
Response	The current Portland-Vancouver Ozone Maintenance Plan includes an industrial growth allowance that has been in place since the plan was adopted in 1996 and approved by EPA in 1997. An industrial growth allowance can be one part of an overall air quality management approach for new and expanding major sources that includes requirements for emission control technology and the use of emission offsets if needed to protect air quality. This approach allows DEQ to better forecast and plan for some increment of unanticipated industrial growth, while providing an adequate margin of safety for air quality. It also allows DEQ to track and manage the allocation of industrial emissions to make sure those increases do not jeopardize compliance with ozone standards. DEQ believes the continuation of the current industrial growth allowance approach is reasonable based on an analysis of current and expected future ozone conditions in the Portland-Vancouver area. However, in response to public comment, DEQ is proposing new safeguards that will be more responsive to any unforeseen changes in ozone levels. DEQ's maintenance analysis shows that an industrial growth allowance of 5,000 tons of VOC and 5,000 tons of NO_x can be safely established within the Portland airshed, while still retaining a significant safety margin for compliance with the standards. DEQ proposes to establish this 5,000 ton limit in the maintenance plan as a maximum cap. As a safeguard, DEQ proposes to establish administrative procedures that only authorize the initial

	use of up to 1,000 tons of VOC and 1000 tons of NO_x, and holds the balance in reserve. If at some point in the future 750 tons or more of this initial growth increment is used for either or both pollutants, DEQ will conduct an analysis of ozone levels and expected trends to determine if conditions support the release of another 1,000 ton increment. DEQ will not authorize any further allocation of the growth increment if such action could jeopardize compliance with ozone standards. DEQ will provide an opportunity for the public to comment on the results of the analysis and DEQ's recommendation whether to release the next 1,000 ton increment prior to making its decision. This process would be repeated as needed up to a maximum of the 5,000 ton cap. If the maximum amount of growth allowance in the plan were consumed, new or expanding major industry could not be approved without offsets. This administrative process of incremental allocation will help DEQ manage future industrial emission increases and respond to any unforeseen changes in future conditions, such as significant increases in summertime temperatures or future changes to the federal ozone standard. Under the proposed maintenance plan, if there is a violation of the ozone air quality standard and the contingency plan is triggered, the growth allowance cannot be used to meet emission offset requirements. In addition, if the growth allowance is consumed and cannot be reestablished, emission offsets will be required for new and expanding major sources.

Comment 5	Do not remove employee commute option program from the list of programs affecting land use (Division 18).
Commenters	3
Response	DEQ agrees with the Oregon Department of Land Conservation and Development (DLCD) that the ECO program should remain on the list of programs affecting land use. The proposed maintenance plan no longer lists the ECO program as a transportation control measure (TCM) because TCM's can no longer be enforced under the Clean Air Act due to Portland's federal "attainment" designation under the 8-hour ozone standard. However, local governments continue to rely on ECO to meet their goals for reducing motor vehicle travel as required by DLCD Goal 12 and the Transportation Planning Rule (TPR), and this state program was not mentioned in the Land Use Evaluation Statement. DEQ has revised its rule package and no longer recommends a revision of Division 18, and will continue to recognize ECO as a program affecting land use and transportation planning goals. No additional procedures are needed to comply with the goal because the TPR is implemented by local governments and DLCD.

Comment 6	An industrial growth allowance is appropriate and should be increased or adopted without change.
Commenters	7,11
Response	DEQ recommends that the current industrial growth allowance for the Portland area be continued under the updated maintenance plan, with the additional air quality safeguards as described above in Comment #4.

Comment 7	BACT is a very conservative requirement; LAER is technically and economically inappropriate to meet federal requirements in Salem.
Commenters	7, 10, 11
Response	DEQ agrees. LAER is an extremely stringent standard without regard to cost of pollution control and is appropriate in areas that are not meeting federal health-based air quality standards. Air quality in the Salem area is well within the federal health standard and air quality projections do not warrant a more stringent standard than the Portland area. See response to Comment #1.

Comment 8	Portland and Salem area requirements should be consistent with area's attainment designation rather than retaining maintenance area requirements.
Commenters	7, 11
Response	DEQ disagrees. Maintenance area new source review requirements are appropriate for former nonattainment areas because they apply BACT to sources at lower significant emission rates (SER) than the requirement for attainment areas. The application of BACT at the lower SER is needed to prevent future violations of the ozone air quality standard due to growth.

Comment 9	Commenter supports DEQ proposal to change the number of employers regulated under the Employee Commute Program from 50 or more employees per work site to 100 or more employees per work site.
Commenters	8
Response	DEQ acknowledges the support. This change will reduce the number of affected employers from 1210 to about 585. ECO survey data indicates that the 585 larger employers generate 92% of the trip reduction and make up 86% of the total ECO-affected employees. DEQ does not anticipate a significant loss in the emission reduction benefit or other benefits of the program.

Comment 10	EPA commented that the growth allowance language in the plan should be revised to read "Any such increase to the growth allowance will be subject to public comment and approval by EPA" (not "EPA review").
Commenters	9
Response	DEQ agrees and the plan language has been modified to incorporate these comments. DEQ will request EPA approval of the maximum 5,000 ton cap through their approval of the maintenance plan. DEQ will administratively mange the allocation of the growth allowance as described in Comment #4.

Comment 11	ODEQ must ensure that its new source review program meets current EPA requirements by June 15, 2007.
Commenters	9
Response	DEQ must periodically demonstrate to EPA that its New Source Review Program for new and expanding major industry is consistent with any new federal requirements. DEQ will meet this requirement under separate action in 2007.

Comment 12	Recent actions by the City of Portland to require gasoline to contain 10% ethanol and diesel to contain 5% biodiesel are not addressed in the proposed maintenance plan and additional modeling should be completed in order to better evaluate whether Portland and Salem can maintain compliance.
Commenters	12
Response	DEQ analyzed the potential effect of the City of Portland's biofuels requirement on the ozone maintenance forecast. DEQ relied on Washington Department of Ecology research and estimates that VOC and NO_x emissions from cars, trucks and other types of engines would increase by approximately 7% and 3%, respectively. DEQ applied this potential emission increase to all mobile sources in Multnomah County, and estimates that 2015 ozone levels would increase by less than 1% above the projected maintenance demonstration level of 0.072 ppm. The Portland-Vancouver ozone maintenance demonstration shows that an increase in future ozone levels of less than 1% would not jeopardize ozone compliance for either the Portland-Vancouver or Salem areas.

Reference Number	Name	Organization	Date on comment
1	Marty Gabe	Citizen	6/3
2	Conde Cox	Citizen	6/8
3	Bob Cortright	Dept. of Land Conservation and Development	7/11
4	Sonya Gaub	Citizen	7/10
5	Geneva and Walter Bensman	Citizens	7/12
6	Bill Sterett	Citizen	7/12
7	Marvin Lewallen	Weyerhaeuser Company	7/13
8	Dick Day	Citizen	7/13
9	Gina Bonifacino	EPA Region 10	7/13
10	Mike McLaren	Salem Chamber of Commerce	7/14
11	Kathryn VanNatta	Northwest Pulp and Paper Association	7/14
12	Frank Holmes	Western States Petroleum Association	7/14
13	Ellen Twist	Citizen	Public Hearing Comment 7/11
14	Richard Scott	Citizen	Public Hearing Comment 7/11

State of Oregon
Department of Environmental Quality **Memorandum**

Presiding Officer's Report

Date: July 20, 2006

To: Environmental Quality Commission

From: Rachel Sakata

Subject: Presiding Officer's Report for Rulemaking Hearing
Title of Proposal: Portland-Vancouver and Salem Ozone Maintenance Plan and Supporting Rule Revisions

Hearing Date and Time:	July 11, 2006, 1:30 PM
Hearing Location:	DEQ Regional Office Building, 750 Front Street NE, Suite 120, Salem, OR
Hearing Date and Time:	July 11, 2006, 6:30 PM
Hearing Location:	DEQ Headquarters, Room 3A, 811 SW 6th Ave., Portland, OR

The following is a summary of written and oral comments received at the hearing. The Department will include these comments in the Summary of Comments and Agency Responses for this rulemaking.

Salem Hearing

Before the hearing the rulewriter, Marianne Fitzgerald, gave a brief presentation and answered questions on the rulemaking proposal.

At the start of the hearing, Rachel Sakata asked people to sign registration forms if they wished to present comments and briefly explained the procedures for the hearing. People were also advised that the hearing was being recorded.

The Department convened the rulemaking hearing on the proposal referenced above at 2:30 PM and closed it at 2:40 PM. 3 people attended the hearing; 2 people commented.

Ellen Twist Private citizen

Ms. Twist does not agree with relaxing the standards in Salem.

Richard Scott Private citizen

Mr. Scott testified that he did not agree with changing the rules to allow industry to emit more pounds of pollution in Salem. He also expressed concern over staff projections that projected NOx source category emissions will see decreases over time, but that industry emissions of NOx will remain relatively the same. Because of that, he does not agree with the provision to change the standards to allow room for industrial growth.

Portland Hearing

The Department convened the rulemaking hearing on the proposal referenced above at 6:35 PM. No one attended the Portland hearing. DEQ staff remained available in case any latecomers wished to testify. No one came, so DEQ closed the hearing at 7:00 PM.

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Relationship to Federal Requirements

Portland-Vancouver and Salem Ozone Maintenance Plan and Supporting Rule Revisions

Answers to the following questions identify how the proposed rulemaking relates to federal requirements and potential justification for differing from federal requirements. The questions are required by OAR 340-011-0029(1).

1. Are there federal requirements that are applicable to this situation? If so, exactly what are they?

Yes: The federal Clean Air Act and EPA rules to implement the 8-hour ozone standard.

Under the federal Clean Air Act, Portland and Salem were were designated as "nonattainment" with the 1-hour ozone national ambient air quality standard (NAAQS) following adoption of the 1990 Clean Air Act Amendments. The Oregon Department of Environmental Quality (DEQ) developed a maintenance plan for the Portland area in 1996 that contained emission reduction strategies and demonstrated maintenance of the standard through 2006. That plan was approved by EPA on May 19, 1997 (62 FR 27204).

Portland and Salem were designated as "attainment/unclassifiable" with the 8-hour ozone national ambient air quality standard (NAAQS) on April 30, 2004 (69 FR 23858), and the 1-hour ozone standard was revoked effective June 15, 2005. EPA's rules to implement the 8-hour ozone NAAQS require the development of a maintenance plan to demonstrate that the area will maintain compliance with the 8-hour ozone standard for 10 years following designation (40 CFR 51.900). This maintenance plan addresses that requirement and updates some of the strategies in the existing plan.

2. Are the applicable federal requirements performance based, technology based, or both with the most stringent controlling?

The requirements for this maintenance plan are performance based. The Clean Air Act requires an area that is subject to a maintenance plan to implement strategies that will control pollution emissions sufficiently to meet the air quality standard throughout the maintenance period.

3. Do the applicable federal requirements specifically address the issues that are of concern in Oregon? Was data or information that would reasonably reflect Oregon's concern and situation considered in the federal process that established the federal requirements?

Yes. Two of the Portland-area strategies that were adopted in 1996 and approved by EPA include the Employee Commute Options (ECO) program and the Industrial Emissions Management program. These strategies were developed locally with extensive public involvement in the early 1990s.

4. Will the proposed requirement (rulemaking) improve the ability of the regulated community to comply in a more cost effective way by clarifying confusing or potentially conflicting requirements (within or cross-media), increasing certainty, or preventing or reducing the need for costly retrofit to meet more stringent requirements later?

Yes. Adoption of the maintenance plan fulfills a Clean Air Act requirement and establishes a regulatory framework for maintaining compliance with ozone standards in Portland and Salem. The plan continues to implement existing industrial source requirements, and makes it easier for industrial sources to comply with existing rules.

The proposed revisions to the ECO rules will reduce the number of employers affected by the rules, and reduce the administrative burden of the rules. The proposal also allows the regulated community to comply with ECO requirements through participation in equivalent commute reduction programs.

The proposed revisions to the Industrial Emission Management Program in the Portland area will reestablish the growth allowance available to new or expanding major industrial sources, and make it easier for the sources to use the growth allowance in lieu of offsets. In the Salem area, the proposed rules update new source review requirements for major new and expanding industrial sources to require Best Available Control Technology, which is a somewhat less stringent equipment requirement that is the same as what is required in Portland.

The proposed plan also includes a Contingency Plan for addressing potential violations of the air quality standard in the future. The plan includes early-warning thresholds to prevent violations, and a commitment to adopt appropriate measures if there is a measured violation at any ozone monitoring site in the Portland-Salem area.

5. Is there a timing issue which might justify changing the time frame for implementation of federal requirements?

The Clean Air Act and EPA rules require the State of Oregon to prepare and submit a maintenance plan three years following designation (40CFR 51.900).

6. Will the proposed requirement (rulemaking) assist in establishing and maintaining a reasonable margin for accommodation of uncertainty and future growth?

Yes. See Question #4. The maintenance demonstration is based on anticipated growth in population, households and employment and includes a growth allowance that will accommodate major new and expanding industries while maintaining compliance with the ozone standard.

7. Does the proposed requirement (rulemaking) establish or maintain reasonable equity in the requirements for various sources? (level the playing field)

Yes. By redesignating Salem from a nonattainment area to a maintenance area under state rules, the Salem area new source review requirements will be essentially the same as in the Portland ozone maintenance area.

8. Would others face increased costs if a more stringent rule is not enacted?

Yes. If the area violates the air quality standards in the future, additional emission reduction strategies may be needed to maintain clean air.

9. Does the proposed requirement (rulemaking) include procedural requirements, reporting or monitoring requirements that are different from applicable federal requirements? If so, Why? What is the "compelling reason" for different procedural, reporting or monitoring requirements?

No. The proposed Portland-Salem Ozone Maintenance Plan maintains the procedural, monitoring and reporting requirements of the federal Clean Air Act, EPA guidance and the current Portland Ozone Maintenance Plan.

10. Is demonstrated technology available to comply with the proposed requirement (rulemaking)?

Yes.

11. Will the proposed requirement (rulemaking) contribute to the prevention of pollution or address a potential problem and represent a more cost effective environmental gain?

Yes. This Ozone Maintenance Plan includes strategies, such as the ECO program and public education and outreach, that prevent pollution from motor vehicles by encouraging use of alternative modes of transportation. Because motor vehicles generate a number of pollutants, including air toxics and greenhouse gases, this plan will benefit the air quality in many ways.

DEPARTMENT OF ENVIRONMENTAL QUALITY
Chapter 340
Proposed Rulemaking
STATEMENT OF NEED AND FISCAL AND ECONOMIC IMPACT
This form accompanies a Notice of Proposed Rulemaking

Rule Caption	Portland-Vancouver and Salem Ozone Maintenance Plan and Supporting Rule Revisions
Stat. Authority or other Legal Authority:	ORS Chapter 468, Chapter 468A, 468.020, and 468A.025
Stat. Implemented:	ORS 468A.025, 468A.035, and 468A.363
Need for the Rule(s)	The Oregon Department of Environmental Quality is updating the clean air plan for maintaining compliance with the federal 8-hour ozone ambient air quality standard in the Portland area, and developing a maintenance plan for the Salem area. These maintenance plans are required by the federal Clean Air Act and EPA rules to implement the 8-hour ozone standard. This rulemaking also proposes to update DEQ's rules to reflect the federal ozone ambient air quality standard, designate Salem as an ozone "maintenance" area under state rules, modify Salem's new source review requirements for new and expanding major industry, modify Portland-area rules regarding Employee Commute Options, update rules for the Industrial Emission Management program in Portland, and make housekeeping changes to clarify the spelling of the Salem-Keizer Area Transportation Study air quality area. On April 30, 2004 the U.S. Environmental Protection Agency (EPA) formally designated the State of Oregon in "attainment" with the new federal eight hour ozone national ambient air quality standard. The federal Clean Air Act requires DEQ to develop a maintenance plan demonstrating how the Portland and Salem areas will stay below the new national ambient air quality standard for ozone for at least ten years following this designation. In this rulemaking, DEQ is updating the Oregon portion of the 1996 Portland-Vancouver ozone maintenance plan to ensure continued compliance with ozone standards through at least 2015. DEQ is also developing an ozone maintenance plan for the Salem area. The proposed plans essentially continue all existing emission reduction strategies previously adopted for the Portland and Salem areas, with some modification to industrial emission management rules and the Employee Commute Options (ECO) program in Portland. This rulemaking also removes ECO from the state agency land use coordination program because EPA rules removed the mechanism for enforcing the land use elements of the 1996 plan (transportation control measures). If adopted, the proposed Portland-Vancouver and Salem Ozone Maintenance Plan and supporting rule amendments will be submitted to EPA for approval as part of Oregon's State Clean Air Act Implementation Plan.
Documents Relied Upon for Rulemaking	The Ozone Maintenance Plan reflects the requirements and guidance of several documents, including the federal Clean Air Act and the following: • "Maintenance Plan Guidance Document for Certain 8-hour Ozone Areas Under Section 110(a)(1) of the Clean Air Act" (memo dated May 20, 2005 from Lydia Wegman, EPA). • "Demonstrating Noninterference Under Section 110(l) of the Clean Air Act When Revising a State Implementation Plan" (draft EPA Guidance, 6/8/05) • "1-Hour Ozone Maintenance Plans Containing Basic I/M Programs (memo dated May 12, 2004 from Tom Helms, EPA) • April 30, 2004 Federal Register (69FR 23951), Final Rule to Implement the 8-Hour Ozone NAAQS-Phase 1 • July 8, 2005 Federal Register (70FR 39413), Notice of Final Rulemaking regarding Nonattainment Major New Source Review Implementation under 8-Hour Ozone NAAQS • "Guidance on the Use of Models and Other Analyses in Attainment Demonstrations for the 8-hour Ozone NAAQS" (EPA-454/R-05-002, October 2005) • "Emission Inventory Guidance for Implementation of Ozone and Particulate Matter NAAQS and Regional Haze" (EPA-454/R-05-001, August 2005) • "Procedures for Processing Requests to Redesignate Areas to Attainment" (memo dated September 4, 1992 from John Calcagni, EPA) • "Economic Report to the Metro Council, 2000-2030 Regional Forecast for the Portland-Vancouver, Metropolitan Area" provided by Chief Economist, Dennis Yee with Metro's Data Resource Center (December 2002 final draft). • "Historic and Future Ozone Simulations using the MM5/Smoke/CMAQ System in the Portland Vancouver

	Area," Washington State University, December 2005
Requests for Other Options	ORS 183.335(2)(b)(G) requests public comment on whether other options should be considered for achieving the rule's substantive goals while reducing negative economic impact of the rule on business.
Fiscal and Economic Impact, Statement of Cost Compliance	The proposed Portland-Vancouver and Salem Ozone Maintenance Plan is an update of the Portland Ozone Maintenance Plan adopted in 1996 and approved by EPA on May 19, 1997 (62FR 27204). The 1996 plan included several strategies to reduce emissions of air pollutants and ensure compliance with the 1-hour ozone air quality standard. The Clean Air Act and EPA rules require that DEQ update the plan to demonstrate how the region will maintain air quality below the federal 8-hour ozone standard through 2015. DEQ proposes to retain all emission reduction strategies for the Portland and Salem areas and update growth management requirements for new and expanding industry. This rulemaking also proposes to update DEQ's rules to reflect the federal ozone ambient air quality standard, designate Salem as an ozone "maintenance" area under state rules, modify Salem's new source review requirements for new and expanding major industry, modify Portland-area rules regarding Employee Commute Options, update rules for the Industrial Emission Management program in Portland, and make housekeeping changes to clarify the spelling of the Salem-Keizer Area Transportation Study air quality area.
Overview	The proposed Portland-Vancouver and Salem Ozone Maintenance Plans, Salem area designation, and associated rules will result in few changes to existing programs. The proposed changes should not result in increased costs, and will reduce some costs and remove some barriers to economic development. The proposed plan modifies several existing requirements that will be discussed as three topics in this statement: **Employee Commute Options Rules (ECO):** Proposed changes to the ECO program would reduce the number of employers affected by the rules, reduce the frequency of reporting requirements, require all remaining ECO employers that have not already developed plans to submit an ECO plan or demonstrate they participate in an equivalent program; modify survey requirements to allow an employer to submit follow-up survey results with less than 75% response rate; eliminate the 2006 program sunset date, and require employers that qualify for exemptions to certify every two years that they continue to qualify for the exemption. This change represents a cost savings to businesses no longer covered by the ECO program. **Industrial Emission Management Rules (IEMP) and New Source Review (NSR):** For the Portland area, this rulemaking would re-establish the industrial emissions growth allowance set aside for new or modified major industrial facilities while maintaining compliance with ozone air quality standards, and create a process to update the growth allowance if needed, following public comment and review by EPA. This represents a cost savings for new or modified major sources that are able to utilize an allowance in lieu of obtaining emissions offsets which are likely more expensive. This rulemaking would also modify requirements for new and expanding major industrial facilities in the Salem area. Currently (because of its nonattainment area designation), new or expanding major industrial facilities must install Lowest Achievable Emission Rate (LAER) emission control technology. LAER produces the highest level of control but does not allow cost to be considered. Under the proposal, new and expanding major facilities would be required to install Best Available Control Technology (BACT). BACT also provides a very high level of control, but allows a facility to consider cost effectiveness when evaluating control technology options. **Other Rules**: This rulemaking would update DEQ rules to be consistent with the new federal ambient air quality standard for ozone; designate the Salem area an ozone "maintenance" area under state rules, plus housekeeping changes to clarify the spelling of the Salem-Keizer Area Transportation Study air quality area.
General public	**Employee Commute Options Rules:** The general public in the region indirectly experience a benefit from the Employee Commute Options (ECO) program, through reduced traffic congestion, as employees participate in commute options programs. Employees working for an ECO employer also see benefits such as subsidies or other incentives to reduce vehicle commute trips. There could be a potential cost to employees who work at sites with 50-100 employees from potentially reduced subsidies for alternative modes. **Other Rules:** The general public should not see any negative fiscal or economic impact from this proposal. The existing voluntary and regulatory programs will continue, with some adjustments discussed below.
Small Business (50 or fewer employees – ORS183.310(10))	**Employee Commute Options and Other Rules:** There are no known impacts on small businesses. **Industrial Emission Management Rules (IEMP) and New Source Review (NSR):** Small businesses that are major new or modified industrial sources would experience the same impacts as large businesses, described below.

Large Business	a) Estimated number and types of businesses impacted	The proposed revisions to the Employee Commute Option Rule (ECO) would affect large businesses with more than 50 employees. The proposed revisions to the Industrial Emission Management Rule would affect larger businesses that are considered major industrial sources. **Employee Commute Options Rules:** Currently, approximately 1210 employers that employ more than 50 employees at a worksite are subject to ECO requirements. Larger employers are more likely to comply with ECO and provide meaningful transportation options to their employees. Larger employers represent most of the employees in the region. Survey data indicates that employers with more than 100 employees generate 92% of the total trip reduction, and make up 86% of the total ECO-affected employees. This rulemaking would eliminate employers with between 50 and 100 employees at a worksite from the ECO program, and apply limited DEQ resources to larger employers (more than 100 employees at a worksite) that provide majority of trips reduced from the ECO program. Changing the number of employees from "more than 50" to "more than 100" employees will reduce the number of affected employers from 1210 to about 585. This will reduce the administrative burden of the ECO program, and allow DEQ to focus its resources more effectively. Because larger employers make up the majority of the emission reduction benefit from ECO, DEQ does not expect a significant loss in the emission reduction benefit from ECO. DEQ will encourage smaller employers to continue to implement the program voluntarily and continue the many benefits gained from reduced employee commute trips. This change represents a financial benefit to employers with between 50 and 100 employees who will no longer be covered by the ECO program. DEQ also proposes to require employers who qualify for exemptions to certify that they continue to qualify every two years (about 120 employers). These changes would impose little administrative burden on these employers, unless they discover they are no longer exempt and need to comply with ECO. The rule proposal also eliminates references to the end of the ozone maintenance plan in 2006 within the rules. When the rules were originally written, the Portland Ozone Maintenance Plan was designed to demonstrate maintenance through 2006. This Portland Ozone Maintenance Plan does not sunset; the plan is designed to maintain clean air for at least 10 years and will remain in place until it is modified. This proposal assumes affected employers will continue to implement existing commute trip reduction programs and maintain the target auto trip rate. **Industrial Emissions Management and New Source Review Rules:** In Portland, the proposal continues the growth management requirements for new and expanding major industrial facilities and re-establishes the industrial growth allowance. Updating the growth allowance is beneficial for future economic development and represents a significant cost savings to new larger businesses that might otherwise be required to purchase costly emission credits as offsets. Currently, in Salem, new or modified major industrial sources are required to install equipment that reduces emissions to the highest extent possible without regard to cost, known as Lowest Achievable Emission Rate (LAER). The proposed rules will allow new or modified major sources to use the best available emission control equipment and consider cost/benefit (dollars per ton of emissions controlled) when selecting the equipment, known as Best Available Control Technology (BACT). This can result in significant cost savings to major new or modified sources that are affected by the rules. For example, LAER might be a requirement to install a thermal oxidizer that controls 95% of the regulated emissions at a cost of $12,000/ton of pollutant destroyed. BACT might be a carbon absorption unit that controls 90% of the regulated emissions with a cost of $5000/ton of pollutant destroyed. **Other Rules:** No fiscal impact is anticipated.
	b) Additional reporting requirements	**Employee Commute Options Rules:** DEQ proposes to modify the rules to reduce the administrative burden on employers that remain subject to ECO. DEQ proposes to: • Change the survey requirement from annual to biennial (every two years);

		• Maintain the target 75% survey response requirement, but allow an alternative option if employers are not able to achieve the target response rate on follow-up surveys within a reasonable amount of time.
		DEQ estimates that these changes will save businesses about 4 or more hours/year, depending on the size and type of business and how quickly they can achieve the response rate. DEQ proposes to require all employers subject to ECO that have chosen to comply without a plan to prepare a trip reduction plan or demonstrate that they participate in an equivalent commute reduction program. • This change affects about 315 employers with more than 100 employees. DEQ estimates that about 50 of those 315 employers are exempt from the program, and another 165 already participate in an alternative commute trip program, so this may only affect about 100 employers. • Approximately 100 employers would need to develop a plan or demonstrate that they are exempt or participate in an equivalent program. DEQ estimates that it may take an employer about 8 hours to develop a plan or demonstrate exemption or equivalency, depending on the size, type and location of the business.
	c) Additional equipment and administration requirements	None.
	d) Describe how businesses were involved in development of this rulemaking	DEQ has consulted with several key ECO stakeholders in developing this proposal and is seeking comment from all ECO affected employers and other stakeholders through this rulemaking process.
Local Government	**Employee Commute Options Rules:** Federal, state and local agencies are also subject to the ECO rule, and the changes described under "large businesses" above would also affect these agencies. DEQ, Metro, TriMet and other transit agencies, local governments and Transportation Management Association programs benefit from the survey data in evaluating effectiveness of commute trip reduction programs. These proposed rule changes will result in less data for these agencies to use (i.e. fewer employers, less frequent surveying). However, experience has shown that the survey data does not change much from one year to the next, so surveying every other year should not affect the overall quality of the data collected, especially since the ECO program will be focused on larger employers that reduce the most trips. DEQ expects that the quality of the data will improve with more focused technical assistance. Surveying every two years also allows employers and DEQ more time to evaluate and act on the data collected. One of the benefits of ECO to local government as well as businesses is to reduce the need for employee parking. Even though some areas (e.g. town centers) with large numbers of employees with less than 100 employees may experience a need for increased parking, DEQ, local government and Transportation Management Areas will encourage smaller businesses with 100 or fewer employees to continue to participate in commute trip reduction programs. **Other Rules:** No fiscal impact is anticipated.	
State Agencies	**Employee Commute Options Rules:** Federal, state and local agencies are also subject to the ECO rule, and the changes described under "large businesses" above would also affect these agencies. **Other Rules:** No fiscal impact is anticipated.	
DEQ	**Employee Commute Options Rules:** No additional staff resources are needed to carry out this rulemaking. The proposed changes to the Employee Commute Options Rules will make it easier for DEQ to administer the program using existing resources with virtually the same environmental benefit. DEQ will need to notify all ECO-affected employers of the rule change, develop two new forms and provide technical assistance to implement the proposed changes.	

	Other Rules: No fiscal impact is anticipated.
Other Agencies	**Employee Commute Options Rules:** Federal, state and local agencies are also subject to the ECO rule, and the changes described under "large businesses" above would also affect these agencies. **Other Rules:** No fiscal impact is anticipated.
Assumptions	DEQ, the Washington Dept. of Ecology, the Southwest Clean Air Agency, EPA and Washington State University conducted an analysis of historic and future ozone levels in the Portland and Salem areas using the MM5/Smoke/CMAQ Modeling System. Emission inventories were prepared according to national emission inventory guidance and EPA's Consolidated Emissions Reporting Rule. Future year growth projections for population and household forecasts were based on the "Economic Report to the Metro Council, 2000-2030 Regional Forecast for the Portland-Vancouver, Metropolitan Area".
Housing Costs	DEQ has determined that this proposed rulemaking will have no effect on the cost of development of a 6,000 square foot parcel and the construction of a 1,200 square foot detached single family dwelling on that parcel.
Administrative Rule Advisory Committee	DEQ did not use a formal advisory committee to assist in developing this proposal. The Portland plan essentially continues the existing emission reduction and growth management strategies previously adopted for the Portland area. DEQ did not propose major rule changes, and did not identify any significant issues associated with these rules. DEQ discussed the proposed changes to the ECO rules and overall ozone maintenance plan with the three transportation committees of Metro, the Metropolitan Planning Organization for the Portland Metro area (a group representing local government). DEQ discussed elements of the proposed Salem-Keizer maintenance plan with the Metropolitan Planning Organization for the Salem-Keizer area. DEQ also notified interested citizens and the media of two informational meetings that were held in Portland on April 21 and May 4, 2006. DEQ followed-up this notice with phone calls and emails to key stakeholders. These meetings were lightly attended, and stakeholders did raise any issues that indicated a need for an advisory committee.

original signed by MF	Marianne E. Fitzgerald	5/12/06
Prepared by	Printed name	Date
original signed by AP	Andree Pollock	5/15/06
Approved by DEQ Budget Office	Printed name	Date

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Land Use Evaluation Statement

Portland-Vancouver and Salem Ozone Maintenance Plan and Supporting Rule Revisions

The Oregon Department of Environmental Quality (DEQ) is updating the clean air plan for maintaining compliance with the federal 8-hour ozone ambient air quality standard in the Portland area, and developing a maintenance plan for the Salem area, as required by the federal Clean Air Act. This rulemaking also proposes to update DEQ rules to reflect the new federal ozone ambient air quality standard, designate Salem as an ozone "maintenance" area under state rules, modify Salem's new source review requirements for new and expanding major industry, modify rules applicable to the Portland area regarding the Employee Commute Options (ECO) and update the Portland Industrial Emission Management program.

1. Explain the purpose of the proposed rules.

DEQ is updating the clean air plan for maintaining compliance with the federal 8-hour ozone ambient air quality standard in the Portland area, and developing a maintenance plan for the Salem area, as required by the federal Clean Air Act. Portland and Salem have met the National Ambient Air Quality Standards for ozone, and the plans are needed to ensure that the areas continue to meet the 8-hour ozone standard for the next ten years. The plans continue all existing emission reduction and growth management strategies for Portland and Salem, with modifications to the industrial growth management rules and the ECO program in Portland, New Source Review rules for the Salem area; and other rules that do not affect land use. If adopted, DEQ will submit the maintenance plan and rule amendments to EPA for approval as part Oregon's State Clean Air Act Implementation Plan as required by the federal Clean Air Act.

2. Do the proposed rules affect existing rules, programs or activities that are considered land use programs in the DEQ State Agency Coordination (SAC) Program?

Yes X No___

a. If yes, identify existing program/rule/activity:

DEQ implements the New Source Review program through an existing air quality permitting program and rules. Major new sources with significant emission rate of 40 tons per year of volatile organic compounds or nitrogen oxides must apply for a permit. Permit applicants must obtain a land use compatibility statement from the appropriate local jurisdiction before DEQ may issue a permit.

DEQ implements the ECO program through enforcement of OAR 340-242-0010 through 0290. These rules, and Metro's 2040 Growth Concept, were included in the 1996 Portland Ozone Maintenance Plan as non-funding based Transportation Control Measures (TCM) that reduce transportation emissions through land-use requirements and regulatory programs. The 1996 land

use evaluation statement for the Ozone Maintenance Plan noted that Metro and local governments are primarily responsible for implementing the TCMs, and they would be implemented through the transportation conformity process. EPA's rules to implement the 8-hour ozone standard (40 CFR 51.905)(e)(3)) states that conformity determinations are no longer required for areas in attainment with the 8-hour ozone standard. Therefore, EPA rules removed the mechanism for enforcing the land use emission reduction strategies within the Portland Ozone Maintenance Plan. DEQ proposes to remove the transportation control measures from the Portland Ozone Maintenance Plan. The ECO rules will remain in the plan.

b. If yes, do the existing statewide goal compliance and local plan compatibility procedures adequately cover the proposed rules?

Yes X No___ (if no, explain):
The New Source Review program is subject to land use compliance and compatibility procedures.

c. If no, apply the following criteria to the proposed rules.

N/A

3. If the proposed rules have been determined a land use program under 2. above, but are not subject to existing land use compliance and compatibility procedures, explain the new procedures the Department will use to ensure compliance and compatibility.

The Employee Commute Options Program is proposed to be removed from the state agency land use coordination program because EPA rules removed the mechanism for enforcing the land use elements of the 1996 plan (transportation control measures).

Portland-Vancouver and Salem Ozone Maintenance Plan and Supporting Rule Revisions

Environmental Quality Commission
2/22/07

Oregon Department of Environmental Quality
www.deq.state.or.us

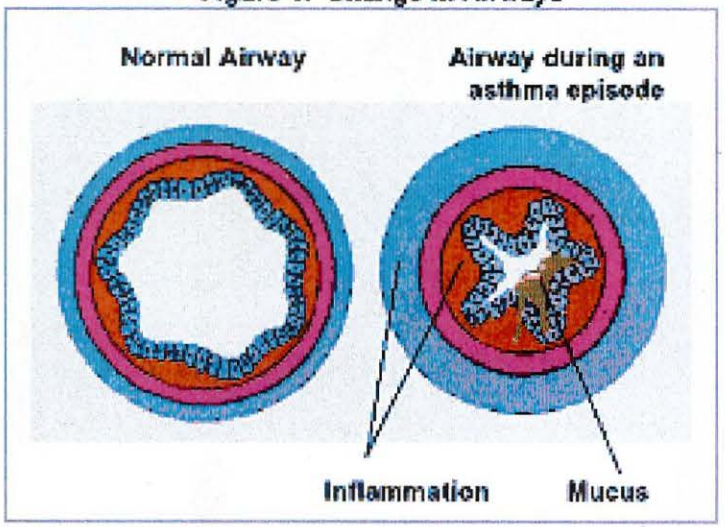
DEQ Recommendation

- Portland-Vancouver Interstate Air Quality Maintenance Area 8-hour Ozone Maintenance Plan
- Salem-Keizer Area 8-hour Ozone Maintenance Plan
- Several Rule Revisions, including:
  - Employee Commute Options Program
  - Industrial Emissions Management

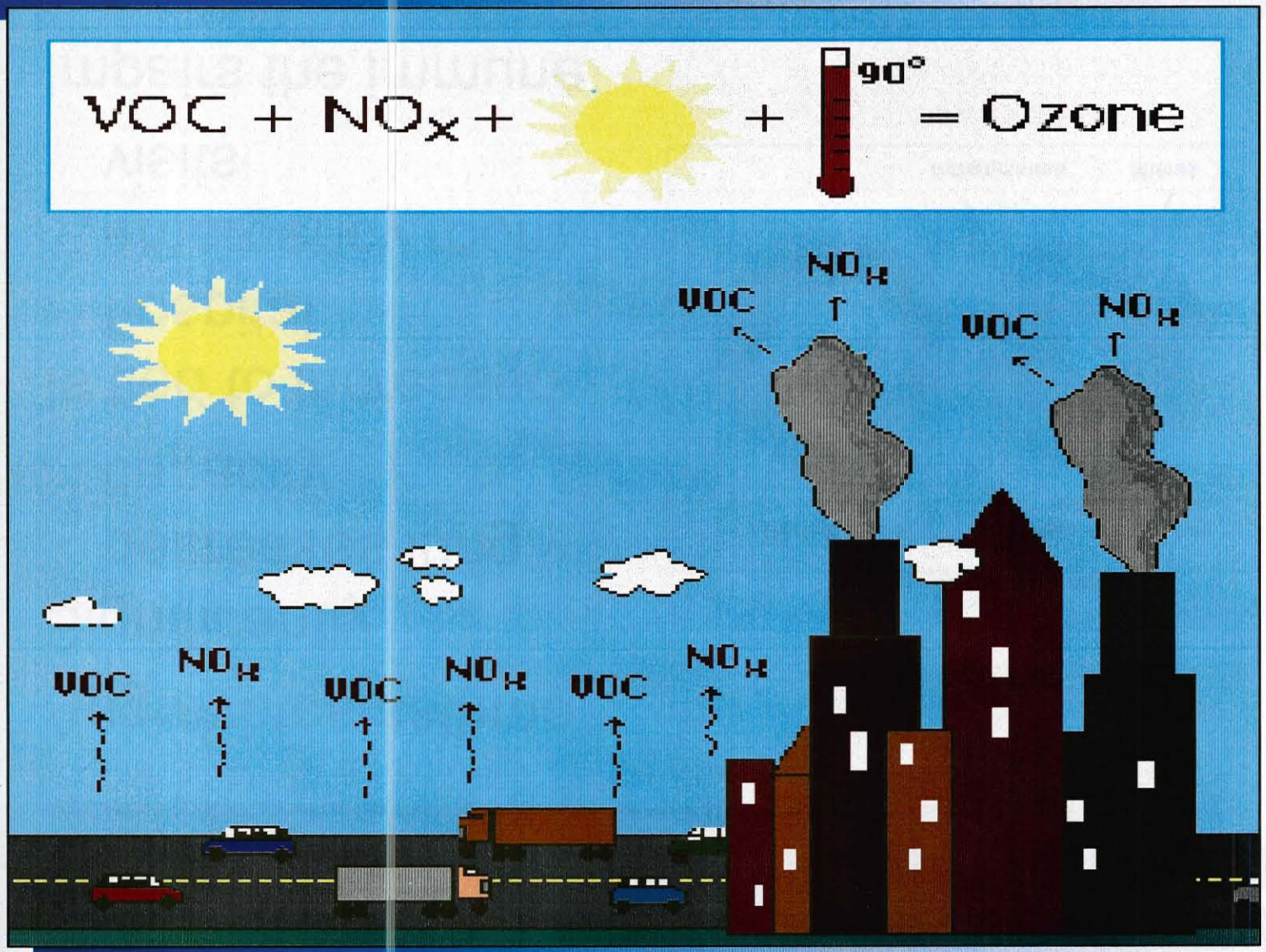
Health Effects of Ozone Air Pollution

- Aggravates asthma
- Significantly decreases lung capacity
- Is tied to increased hospital emergency room visits
- Impairs the immune system

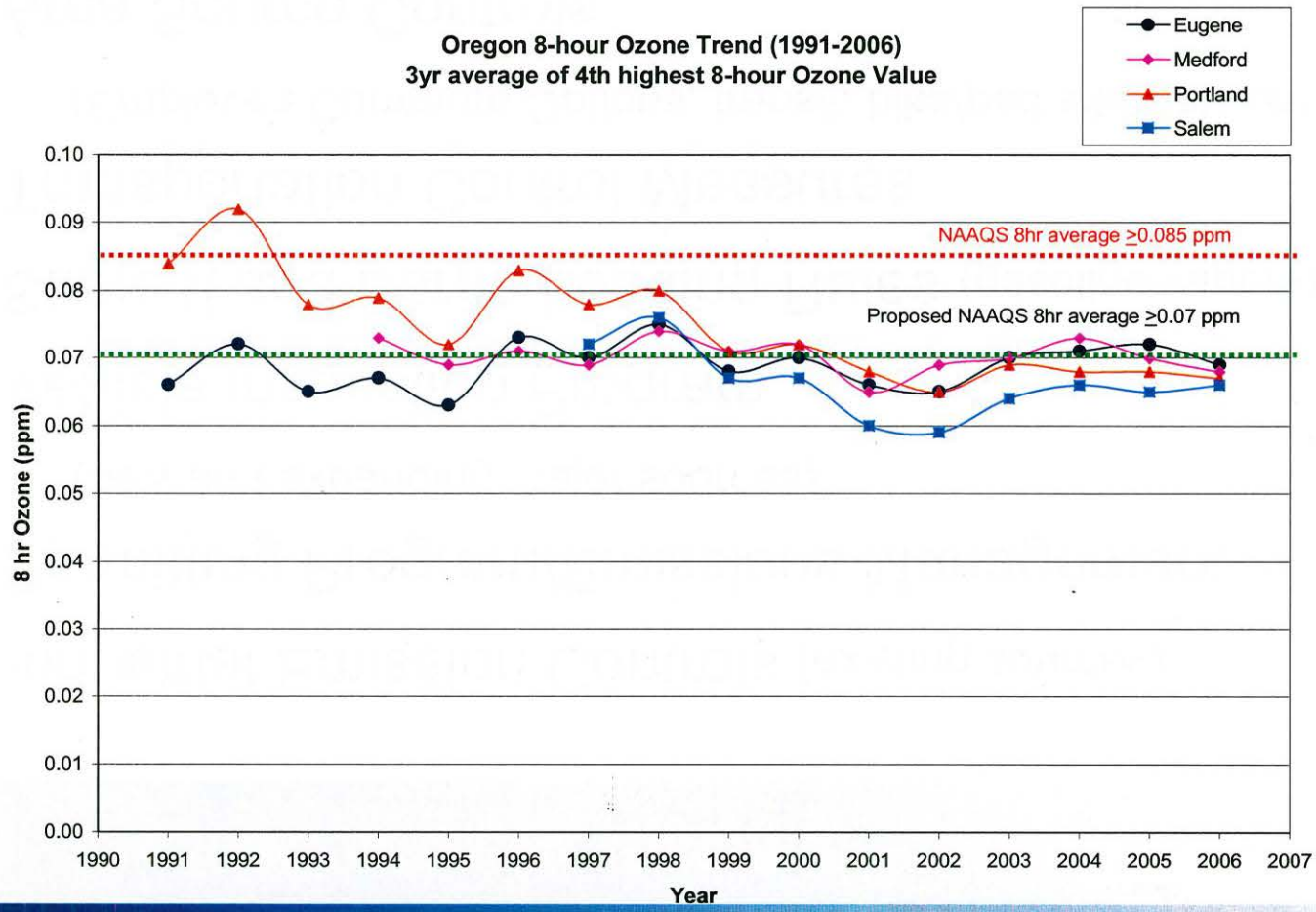
Figure 1. Change in Airways



Ozone Formation (Smog)



Ozone Air Quality



Current Maintenance Strategies Portland

Industrial Emission Controls (existing sources)

Permitting Program/Emissions Management

(new and expanding major sources)

Vehicle Inspection Program

Stage II and Barge Loading Rules (gasoline vapors)

Transportation Control Measures

(Employee Commute Options, transit, bike/ped alternatives)

Area Source Controls

(spray paint, autobody refinishing shops)

Public Education and Outreach (air pollution advisories)

Current Maintenance Strategies Salem

Industrial Emission Controls (existing sources)

Permitting Program/Emissions Management

(new and expanding major sources)

Controls on Portland-area Sources

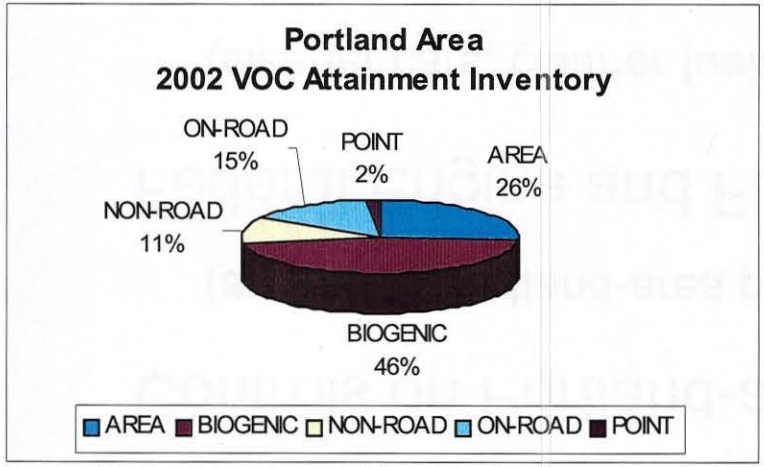
(approved Portland-area plan)

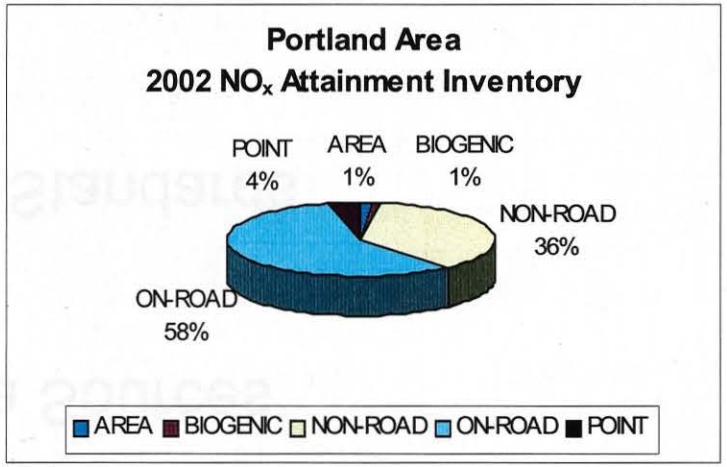
Federal Engine and Fuel Standards

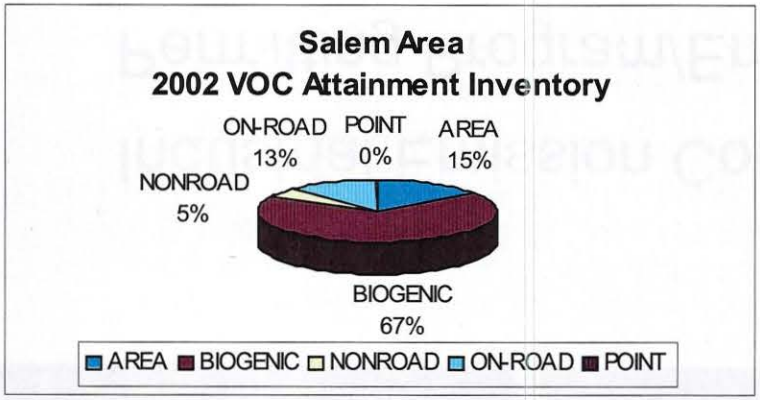
(cleaner cars, cleaner fuels)

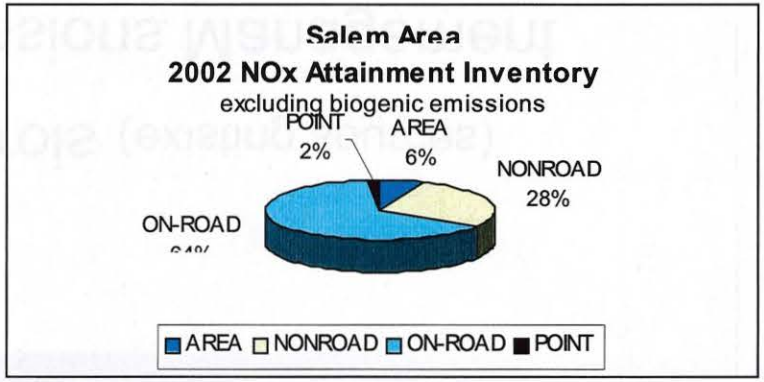
Public Education and Outreach (air pollution advisories)

Portland and Salem Emissions

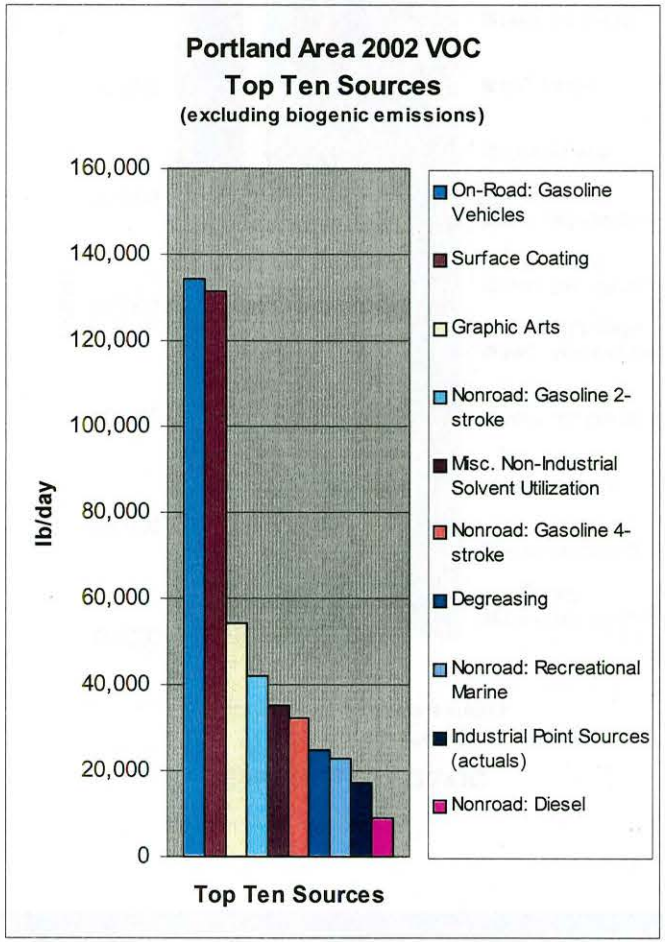


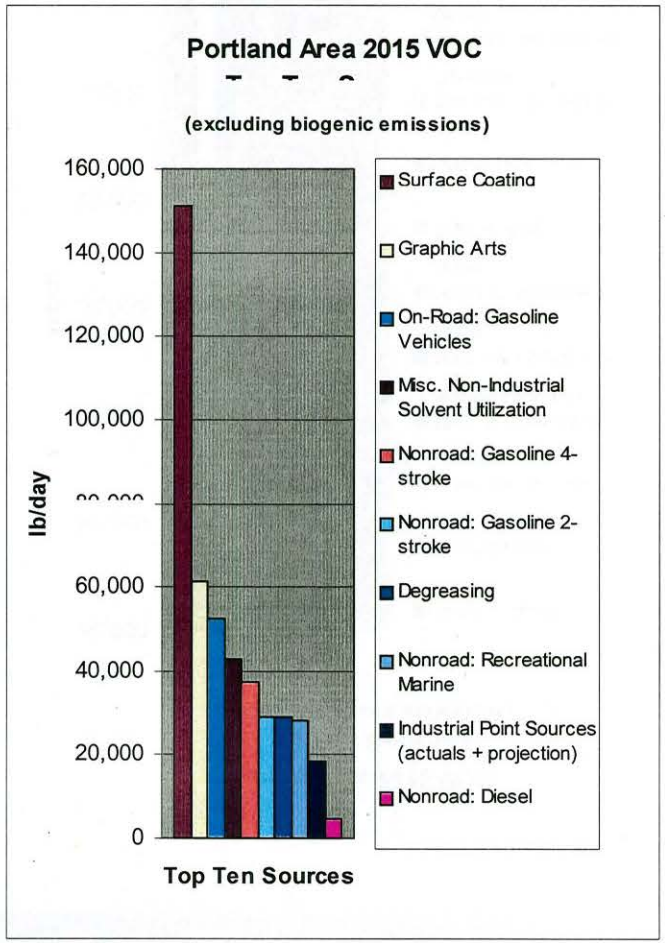




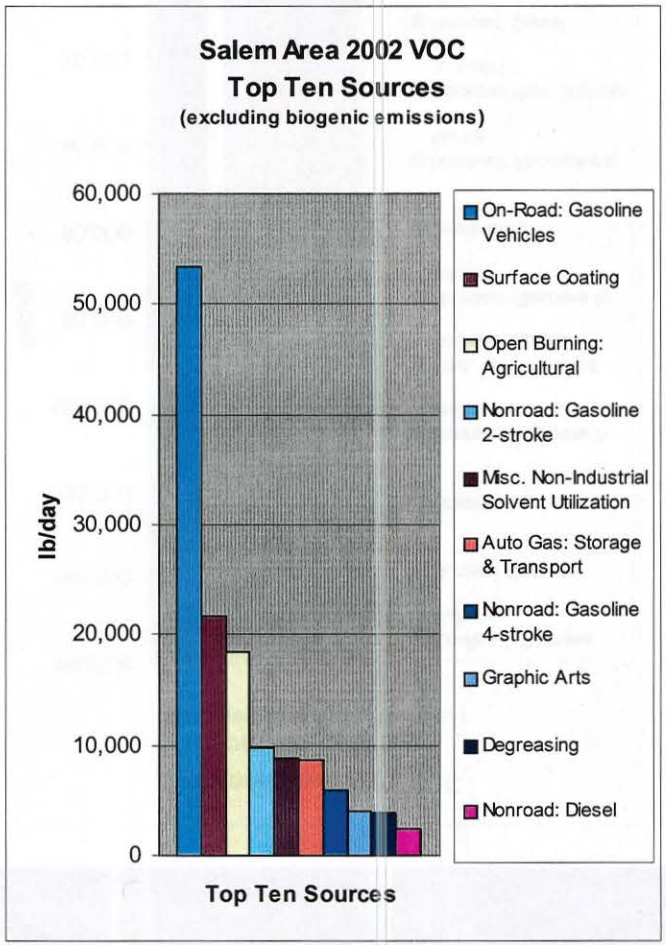


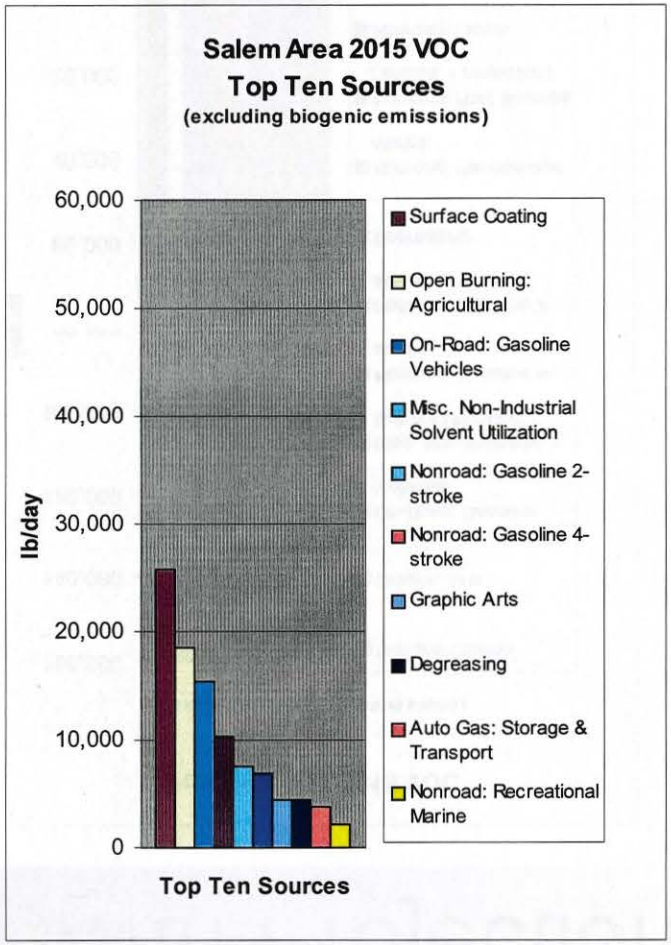
Portland VOC Growth Projection





Salem VOC Growth Projection





Public Outreach

- Informational meetings, Spring 2006
  - local governments, transportation management associations, others
- DEQ invited public comment on the plan from June 1 through July 14, 2006
- Few comments received: 3 people attended the public hearings; 11 people emailed letters with comments

Comments Received

- New Source Review
  - Control Technology Requirements for New Sources (Salem)
  - Growth Allowance (Portland)
- City of Portland ethanol/biofuels mandate

Next Steps

- DEQ recommends adoption of the plan and rules
- Following EQC action, DEQ will submit the plan and revised rules to EPA for approval as part of Oregon's State Clean Air Act Implementation Plan

Emerging Issues

- Recent court action regarding EPA's 8-hour ozone implementation rule
- 8-hour ozone standard may be revised (in the range of 0.06-0.08 ppm)

February 7, 2007

TO: Oregon Department of Environmental Quality

FROM: Carroll D. Johnston
1747 Sonya Drive SE
Salem, OR 97317-8913
Telephone: 503-364-1394 (home); 503-373-0838 (office

SUBJECT: Proposed Air Quality Permit for Covanta's Waste-to-Energy Facility

Following is a summary of my oral testimony. Much of it is in the form of questions because I really do need help understanding why the Oregon Department of Environmental Quality has not taken what I would perceive to be a more proactive approach to safeguard our citizens from the toxic emissions produced by the Waste-to-Energy Facility (WTEF).

1. What specific evidence, scientific facts, or health studies lead DEQ staff to believe that the current level of mercury emissions are OK in the most highly populated valley in the State – much less the 400 pounds allowed by the proposed permit? The Willamette Valley watershed already has rivers in which the fish are too contaminated with mercury to be safe to eat.

2. Why doesn't DEQ advocate for regulation changes that will require monitoring and limits for all types of toxic emissions from the WTEF and not just the select few that appear on a Federal list? Is there evidence that the unregulated toxins do not contribute to the cumulative effects of the WTEF emissions? Similarly for individual toxins that are on the Federal list but fall below some specified level for monitoring (de minimis). Is there reason to believe that none of them combine in their effects on our bodies (so that two or more "de minimis" toxins combine to reach harmful levels)?

3. Why doesn't DEQ take into account all sources of toxins and the combined effects of the numerous toxins that our bodies must contend with daily when setting permit limits for toxic pollutants from a given source? It does not seem logical to assume that each toxin in our air, water, or food is somehow going wait in line to take its turn to attack our health. In real life they affect us in unison. Shouldn't they, therefore, also be regulated as if they are affecting us in unison?

4. Wouldn't it be helpful if various State and local agencies worked more in cooperation with each other to assess and regulate environmental toxins? For example, I have heard from DEQ that it is not your responsibility to assess the health effects of toxic emissions from the incinerator. However, when an Environmental Health Specialist from the Oregon Department of Human Services was asked about incinerator emissions and their effects, they referred us to DEQ. It would seem that Marion County officials might also have some responsibility regarding the effects of incinerator emissions. Is there a way that such agencies could coordinate with each other? Could they together directly

address the issue rather than seek to stake out their own separate territories in a way that appears to leave no one taking responsibility for the health and environmental effects of the WTEF's emissions? For example, perhaps DEQ could initiate a request to the Oregon Health Division to conduct an epidemiological study of toxin accumulation in the bodies of people living downwind from the WTEF. Perhaps the Oregon Department of Fish and Wildlife could acquire samples of fish in downwind lakes and ponds to assess how much methyl mercury has accumulated in them. Perhaps County health officials could look at various health statistics to see whether birth defects, cancer, or other health problems are greater downwind from the WTEF than they are in comparable areas elsewhere. I'm sure there are many more possibilities for such cooperation when the relevant professionals think outside the box to address the issue.

5. Why can't DEQ advocate to the Legislature for health considerations to be the underlying criteria for setting toxic pollution limits rather than basing those limits on best available control technology? Since one can reasonably assume that toxic pollution limits established by DEQ exist primarily as a means of protecting the health of the public, it would seem reasonable that the health of the public should be a primary consideration for defining them.

12/22/06 message (final version) from PSR to DEQ:

Oregon Physicians for Social Responsibility requests a public hearing before DEQ renews a permit for the Covanta incinerator at Brooks, OR.

Last year an estimated 47 pounds of mercury were emitted from the incinerator's smokestack. Even very small amounts of mercury can do significant damage. One gram of mercury per year (1/28th of an ounce) is enough to contaminate all the fish in a lake with surface area of 20 acres so that the fish are unsafe to eat. (1) There is so much mercury already contaminating our environment that pregnant and nursing mothers and children are advised to severely limit their fish consumption. (2) (3)

According to the EPA, up to 15% of women of childbearing age are exposed to mercury levels high enough to put their newborns at risk of irreversible neurological and developmental damage. Fetal exposure to mercury can cause mental retardation, learning disabilities, attention deficit, gait disturbances and impairments of language and memory. (4)

The Covanta incinerator imports medical waste from Oregon and Washington and burns about 650 tons of medical waste a year. Medical waste is high in mercury. Most hospitals have phased out mercury thermometers, but many hospitals continue to dispose of mercury laden waste from laboratory chemicals, gastrointestinal tubes, pharmaceutical supplies, and equipment switches.

Medical waste also contains 14% plastics, whereas municipal waste contains half that, or 7% plastics. More importantly, medical waste contains a much higher percentage of polyvinyl chloride, since PVC is used in IV bags, IV tubing, blood bags, collection and specimen bags, anesthesia masks, examination gloves, catheters, feeding tubes, dialysis tubing, sharp containers, bed pans, inflatable splints, and many other uses right down to patient I.D. bracelets.

The heavy metals, cadmium and lead, are common PVC additives, and like mercury, are neurotoxic, especially to fetuses, infants and young children. A recent study suggests that PVC is also a major source of chloronaphthalenes (CNs) and phenanthrenes or/and anthracenes (CP/CAs) formation and release from solid waste incineration. (5)

PVC is 59% chlorine by weight. (6) When PVC is burned in the presence of paper and other organic material, dioxin is produced. How much? According to Russ Johnston, manager of the Covanta facility, 560 mg of dioxin are generated by the Brooks burner unit 1 each year. (7) How much of this dioxin is released into the air? An average of .67 ng/dscm @ 7% O2 (nanogram/dry standard cubic meter of

air at 7% oxygen) is released from each of the two burners (data from 1998-2004).

If that amount seems small, the EPA has concluded there appears to be no safe level of exposure to dioxin. (8)

Dioxins are among the most toxic chemicals on earth. Dioxins are Class 1 human carcinogens and according to the EPA, the average American's cancer risk is increased 1000-fold because of dioxin stored in our bodies. Dioxins also cause multiple reproductive and developmental abnormalities. (9) They have been linked to disrupted sexual development, birth defects and damage to the immune system.

Dioxins are extraordinarily persistent in the environment, resisting physical, chemical and biological degradation for decades and longer. Because they are oil soluble, they bioaccumulate in fatty tissue and are found in highest concentrations in dairy products, eggs, meat and fish. Humans are particularly contaminated because of eating at the apex of the food chain. The highest concentrations of dioxins are in human breast milk, and nursing infants take in 10-20 times as much dioxin daily as does the average adult. (10) Worse yet, a nursing mother rids herself of half her body burden of dioxin during six months of breast feeding.

While a health analysis of the incinerator's impact on Marion County residents has not been done, other communities with incinerators have experienced negative health impacts. To cite just several examples: Residents living <1 km from municipal waste incinerators in England were found to have higher rates of stomach, colon, liver and lung cancer than those living further away. (11) Another study in England showed greater rates of stillbirths, spina bifida and heart defects in babies born to mothers that lived near incinerators. (12) In Columbus, OH, children who had lived near an incinerator for at least two years were found to have significantly higher cadmium levels in their hair and increased learning and behavioral problems. (13) Several studies in Japan and Korea have shown that incinerator workers and nearby residents had much higher levels of dioxin in their blood than citizens who worked or lived elsewhere. (14)

At least a few, and possibly many, bioaccumulative toxins that are known to be produced by waste incineration (e.g., polychlorinated naphthalenes and polychlorinated biphenyls) are not measured even *once* per year.

The new permit appears to make a distinction between rules for emissions during normal operation versus the rules for emissions during the times of upset, startup, or shutdown. Since these latter times are when emissions of many of the toxins are most likely to increase, it seems appropriate that separate emission measurements should be taken at those times. Only by testing at multiple times with different emission outputs will DEQ and the public get a more accurate picture of the levels of toxins in Oregon's air. Without more accurate figures, it

will be difficult to correlate the incinerator's emissions with their effects, if and when the health and environmental effects are actually assessed.

The parts of the permit that speak of combining the heavy metals (lead, cadmium, and mercury) into one entity (MWC metals) is confusing to members of the public who are trying to understand what gets measured and how it is reported. In one place mercury emissions are reported in isolation, and in another place they are lumped together with lead and cadmium. It is also confusing when intricate mathematical calculations have to be made to transform metric measurements into English measurements or vice versa in order to calculate actual amounts of toxins that are being emitted. It would be very helpful if the permits and the emissions reports were more user friendly in the way issues are presented and more consistent with regard to units of measurement used.

The Covanta incinerator does not exist in isolation from other pollutants in our environment, which may come from as near as dioxins from diesel trucks on Interstate 5, or as far as mercury blowing in from China. DEQ needs to take into account the accumulative effect of toxic releases.

For the health of our communities, and especially our children, Oregon Physicians for Social Responsibility would urge DEQ to hold public hearings before renewing the Covanta incinerator permit. Further, we would urge DEQ to limit toxic emissions from the Covanta facility based on measurements of their actual health and environmental effects, rather than based on "best available control technology."

Thank you for your consideration.

Andy Harris, MD, on behalf of the board of directors of Oregon Physicians for Social Responsibility

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GUEST OPINION

Incinerator is a gradual, unnatural disaster

CARROLL D. JOHNSTON

January 13, 2007

Can a world become too warm because the carbon dioxide level in the atmosphere was allowed to rise gradually?

Can a community experience increasing rates of learning disabilities among its children, rising cancer rates and other serious health problems without taking effective action against likely causes?

The answer to both questions appears to be "yes." Sometimes disasters catch us unaware.

Once again the air quality permit for our local waste incinerator in Brooks (with the green-sounding official name of "Waste-to-Energy Facility") is being renewed.

The Oregon Department of Environmental Quality sent out the notice when most of us had our minds focused on more pleasant holiday events.

DEQ told those of us who asked that an estimated 47 pounds of mercury, plus a host of other toxins, were emitted from the incinerator's smokestack last year.

Less than an ounce of mercury can make the fish in a 25-acre lake toxic enough to cause serious neurological damage, especially to fetuses. DEQ's proposed permit will allow more than 200 pounds of mercury emissions per year.

Other incinerator emissions, such as dioxins, are many thousands of times more toxic than mercury. Again, the permit will allow many times more than current emissions.

Many of these are persistent bioaccumulative toxins. This means they:

1. Continue to exist for a long time and,

2. Make their way up the food chain into our body fat. There they also linger for years doing their damage. They are even passed on to nursing babies through their mother's milk.

What makes my concerns even more troubling is the fact that other communities are economically dealing with their waste without spreading toxins or massive amounts of carbon dioxide. I learned about these online from a very descriptive document called "Waste Incineration: A Dying Technology" (www.no-burn.org). It can be done!

With our current approach we can't even be certain how much of these toxins have come from the incinerator since it began operating in 1986. Samples are taken only once per year and extrapolated to the rest of the year. The corporation operating the incinerator chooses the time and the contractor for the testing.

DEQ told us that permit limits on these toxins are based on factors such as "best available control technology" rather than any measurement of actual health or environmental effects.

In fact, to my knowledge, no health studies whatsoever have ever been conducted by any government agency to determine the effects of the incinerator's toxic emissions.

Numerous bioaccumulative toxins that are known to be produced by waste incineration, such as polychlorinated naphthalenes and polychlorinated biphenyls, are not measured even once per year. They are just ignored.

Also consider that toxins from other sources, such as pesticides, vehicles, factories and even other countries, enter our bodies along with the incinerator toxins to produce cumulative effects. When will our bodies' defenses reach a breaking point?

I'm hoping our citizens, including county and state officials, will continue to educate ourselves on this issue. Together we can implement alternatives to reverse a slowly evolving disaster.

Carroll D. Johnston of Salem is an environmental activist and a survivor of Agent Orange. He is a current member and former board member of Oregon Physicians for Social Responsibility and can be reached at johnston123@att.net.

* The above version of this article was amended from the original by adjusting the mercury amounts to correct a calculation error.

PUBLIC COMMENTS TO THE ENVIRONMENTAL QUALITY COMMISSION

by Carroll Johnston

February 22, 2007

I have a number of related concerns and will attempt to present them as briefly as possible to stay within the five minute limit for public comments.

1. Public health and environmental damage should have much greater weight when the Department of Environmental quality sets permit limits on toxic emissions. The current limits for toxins such as mercury or dioxins from the incinerator in Brooks rely on best available control technology and do not appear to take into account actual amounts getting into our food and water nor the actual health effects. Much more attention should be paid to actual measurement of toxins in the air, water, and food when deciding what amount of a given toxic emission is to be permitted from a particular source.

DEQ staff have told us that measuring health and environmental effects is not their responsibility. It would be helpful if there was much greater cooperation between DEQ and other agencies, such as State and local public health agencies, to identify health trends downwind from toxic pollution sources such as the Covanta waste incinerator. The most vulnerable members of the public, such as babies who are still forming neurological structures, should especially be considered when assessing health effects.

Many of the toxic pollutants are bioaccumulative so the actual harmful effects can build up over a period of years even though emissions within a specific year might seem to be at acceptable levels. Toxins can also have cumulative effects across types and sources so that atmospheric mercury from Chinese coal-powered electricity plants, benzene from Oregon gasoline, and pesticides from local farms need to all be part of the equation when deciding how much mercury and dioxins to allow from the Covanta waste incinerator, for example. Toxins don't wait to attack us one at a time so they should be regulated collectively.

Some toxins that are emitted by waste incinerators, such as polychlorinated biphenyls (PCB), are not included in the permit limits at all. Even though levels might be relatively low, they can still be a part of the cumulative effect on health and need to be considered during the permitting process.

2. It would be very helpful if the EQC would initiate a policy that requires the Oregon Department of Environmental Quality to include in all permits a **plain-English statement in common English measurement units** (pounds, ounces, etc.) that specifies the **actual upper limit of each pollutant that the permit will allow within a specified period of time**, such as "per year". These should be understandable by an average high school graduate. The PSEL table does not do this adequately since there are other annual measures included in the permit.

In this plain-English statement the use of scientific notation should be avoided for the benefit of those who do not understand it. Just plain decimals would work best even if a lot of zeroes are required.

The **actual amounts of emissions** and **the permit limits** for the preceding year (or multiple years) should also be presented for comparison to the new limits. The same plain-English presentation should be used for these figures.

As an example of why this policy is needed, I want to point out that it is literally impossible to calculate the annual number of pounds of mercury allowed by the new Covanta incinerator air quality permit using only the information contained in the permit. In addition to requiring knowledge about mathematical calculations and conversion factors to and from the metric system, it also omits required information about the amount of exhaust gases that escape through the incinerator smokestack and the specific number of days that the incinerator is expected to be shut down for maintenance each year. Without this information a person cannot calculate the pounds of mercury permitted nor the pounds of actual mercury emissions based on the annual test for mercury. Current reporting methods obfuscate this information for the average citizen.

3. As I was again studying the proposed Covanta incinerator air quality permit this morning, I came to the conclusion that the amount of mercury emissions allowed is virtually limitless. The permit has no Plant Site Emission Limit for mercury at all, and the only other real limit is that at least 85% of the mercury be removed between the control device inlet and outlet (since this could be the "least restrictive" when compared to the alternative of 0.080 mg/dscm limit as specified in Item 20 on page 8 of the draft permit). That leaves 15% of an unspecified amount that can be emitted from the smokestack without violating the permit. That kind of regulation in my opinion accommodates the facility operators and does not protect the health of our citizens.

4. Many of us in the Willamette Valley are frankly concerned that when Marion County's contract with Covanta expires in 2014 the waste incinerator will be converted into an even more lucrative enterprise by becoming a regional or national medical waste incinerator. Because the PVC plastic and heavy metals in medical waste create so much dioxins, heavy metal emissions, and other toxic pollution, we oppose this and would like to see regulatory policies that would help prevent this eventuality.

5. Finally, I want to refer you to a specific document that I am giving to you today. It is entitled "Waste Incineration: A Dying Technology". I hope you will find time to at least scan the pages relating to the many undesirable outcomes from waste incineration. I especially want you to read the section about alternatives to waste incineration (page 39 and following). The recommended alternatives do not rely on landfills, which can pollute groundwater and produce methane gas. I would like to see the EQC's future rules and policies direct our communities toward the "zero waste" principles and practices that are described in those pages. In general, those principles direct us toward waste reduction, recycling, holding manufacturers responsible for the life cycle of their products (e.g., reclaiming and recycling TV sets, cars, etc.), and outright banning toxin-producing products that cannot be disposed of safely.

Waste Incineration:

A Dying Technology

GAIA

Global Anti-Incinerator Alliance
Global Alliance for Incinerator Alternatives

Waste Incineration:
A Dying Technology

by Neil Tangri,
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"In this century of progress, with our knowledge of chemistry, and with the most complete machinery at our disposal, **it seems to me like a lapse into barbarism to destroy this most valuable material simply for the purpose of getting rid of it**, while at the same time we are eager to obtain these very same materials for our fields by purchase from other sources."

Chemist Bruno Terne, 1893

Thanks to the over 375 GAIA members and countless communities around the world fighting to end incineration and wasting, and to make Zero Waste a reality.

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Jorge Emmanuel, PhD, for the chart on Medical Waste Incinerators in the United States,

GAIA Co-coordinator Von Hernandez for the piece on the Philippines Incinerator Ban,

Ralph Ryder of Communities Against Toxics for the piece on Incinerator Ash Re-use: the Example of Byker, Newcastle, UK, and

Dr. Ted Schettler of the Science and Environmental Health Network for the piece on Health Effects of Dioxins.

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Executive Summary

Incinerators are an unsustainable and obsolete method for dealing with waste. As global opposition to incineration continues to grow, innovative philosophies and practices for sustainable management of discards are being developed and adopted around the world.

Section 1: The Problems of Incineration

Section 1 deals with the problems of waste incineration: pollutant releases, both to air and other media; economic costs and employment costs; energy loss; unsustainability; and incompatibility with other waste management systems. It also deals with problems specific to Southern countries.

Dioxins are the most notorious pollutant associated with incinerators. They cause a wide range of health problems, including cancer, immune system damage, reproductive and developmental problems. Dioxins biomagnify, meaning that they are passed up the food chain from prey to predator, concentrating in meat and dairy products, and, ultimately, in humans. Dioxins are of particular concern because they are ubiquitous in the environment (and in humans) at levels that have been shown to cause health problems, implying that entire populations are now suffering their ill effects. Worldwide, incinerators are the primary source of dioxins.

Incinerators are also a major source of mercury pollution. Mercury is a powerful neurotoxin, impairing motor, sensory and cognitive functions, and mercury contamination is widespread. Incinerators are also an significant source of other heavy metal pollutants such as lead, cadmium, arsenic, and chromium.

Other pollutants of concern from incinerators include other (non-dioxin) halogenated hydrocarbons; acid gases that are precursors of acid rain; particulates, which impair lung function; and greenhouse gases. However, characterization of incinerator pollutant releases is still incomplete, and many unidentified compounds are present in air emissions and ashes.

Incinerator operators often claim that air emissions are "under control," but evidence indicates that this is not the case. First, for many pollutants, such as dioxins, any additional emissions are unacceptable. Second, emissions monitoring is uneven and deeply flawed, so even current emission levels are not truly known. Third, the data that do exist indicate that incinerators are incapable of meeting even the current regulatory standards.

When air pollution control equipment does function, it removes pollutants from the air and concentrates them in the fly ash, creating a hazardous waste stream that needs further treatment. Thus, the problem of pollutant releases is not solved; the pollutants are simply moved from one medium (air) to another (solids or water). Incinerator ash is highly hazardous but is often poorly regulated. Even landfill disposal is not safe, as landfills leak; but in some places the ash is left exposed to the elements or even spread in residential or food-producing areas.

Incinerators are often deliberately sited in low-income neighborhoods with minority populations, on the theory that politically weak sectors of the population will be less able to resist them. This is a violation of the basic tenets of environmental justice.

Modern incinerators are by far the most expensive approach to waste management; construction costs alone can be hundreds of millions of U.S. dollars. The costs of building and operating an incinerator are inevitably borne by the public. Incinerator companies have devised various complicated financing schemes to lock governments into long-term payments, which have often proved disastrous for local governments. In the United States, many towns have been driven into debt by their incinerators.

Incinerators produce far fewer jobs per ton of waste than alternative technologies and practices, such as recycling. Incinerators also usually displace existing informal recycling networks, causing additional hardship to the poorest of the poor.

Incinerators are often billed as energy producers, since they can generate electricity. However, a detailed life-cycle analysis reveals that incinerators waste more energy than they produce. This is because the products that are incinerated must be replaced with new products. Extracting and processing virgin materials, and making them into new products takes much more energy — and causes more environmental damage — than would reuse, or manufacturing from recycled materials.

Most of the history of waste incineration has been in Northern countries; Southern contexts are likely to be even more problematic for this technology. The lack of monitoring capability means that incinerators are likely to be even more polluting than they are in the North. Administrative problems, such as uncertain budgets and corruption, can interfere with necessary maintenance. Different physical conditions, such as weather and waste characteristics, can render operations difficult or even impossible.

Finally, it must be understood that incinerators are incompatible with other forms of waste management. Incinerators compete for the same budgets and discarded materials with other forms of waste management, and undermine the source separation ethic that drives proper waste handling

Section 2: Alternatives to Incineration

Section 2 deals with the alternatives to incineration. Landfills are not a viable alternative, as they are unsustainable and environmentally problematic. Rather, alternatives must attack the entire notion of waste disposal by recycling all discards back into the human economy or nature itself, thus relieving pressure on natural resources. In order to do so, three assumptions of waste management must be replaced with three new principles. Instead of assuming that society will produce ever-increasing quantities of waste, waste minimization must be given top priority. Discards must be segregated, so that each fraction can be optimally composted or recycled, instead of the current system of mixed-waste disposal. And industries must redesign their products for ease of end-of-life recycling. These principles hold across various waste streams.

The mixed nature of the municipal waste stream destroys much of its value.

Organics contaminate the recyclables and toxics destroy the usefulness of both. Additionally, an increasing portion of the waste stream is made up of synthetics and products which are not designed for easy recycling; these need to be redesigned to be compatible with recycling systems or phased out of use.

Municipal waste programs must conform to local conditions to be successful, and no two will look exactly alike. In particular, programs in the South should not be patterened exactly after programs in the North, as there are different physical, economic, legal and cultural conditions. The informal sector (wastepickers or scavengers) are a significant component of the existing waste system, and the improvement of their employment conditions must be a central component of any municipal waste system in the South. One such successful example is that of the *zabbaleen* of Cairo, who have self-organized a waste collection and recycling system which diverts 85 percent of collected waste and employs 40,000 people.

In general, North or South, systems for handling organic waste are the most important components of a municipal waste system. Organics should be composted, vermicomposted or fed to animals to return their nutrients to the soil. This also ensures an uncontaminated stream of recyclables, which is key to the economics of an alternative waste stream. Recycling creates more jobs per ton of discards than any other activity, and generates a stream of materials that can feed industry.

The greatest barrier to recycling, however, is that most products are not designed to be recycled at the end of their useful lives. This is because manufacturers currently have little economic incentive to do so. Extended Producer Responsibility is a policy approach that requires producers to take back their products and packaging. This gives them the necessary incentive to redesign their products for end-of-life recycling, and without hazardous materials. However, EPR may not always be enforceable or practical, in which case bans of hazardous or problematic materials and products may be appropriate.

Using product bans and EPR to force industrial redesign on the one hand, and waste stream disaggregation, composting and recycling on the other, alternative systems can divert the majority of municipal discards away from landfill or incineration. Many communities have reached 50 percent and higher diversion rates, and several have set their sights on Zero Waste.

Health care is the source of a significant amount of wastes, some of which can be quite expensive to manage. But not all health care waste is potentially infectious or hazardous. The vast majority of the waste produced in health care facilities is identical to municipal waste. A rigorous source separation system is essential to keep the small percentage of waste that is potentially infectious or chemically hazardous segregated from the general waste stream.

Potentially infectious wastes do need treatment and disposal, and several non-incineration technologies are available to disinfect the waste. These technologies are generally cheaper, less technically complicated, and less polluting than incinerators.

A wide range of chemically hazardous wastes, including pharmaceuticals, are produced in small quantities in health care facilities. These are not amenable to incineration. Some, such as mercury, should be eliminated through changes in purchasing; others can be recycled; the rest should be carefully collected and returned

to the manufacturer. Case studies show how these principles work in widely varying environments, such as a small maternity clinic in India and a major urban hospital in the United States.

Industrial process wastes tend not to be as mixed as municipal or healthcare wastes, but many of them are chemically hazardous. Clean Production is an approach to industrial redesign that seeks to eliminate hazardous byproducts, reduce overall pollution, and create products and subsequent wastes that are safe within ecological cycles. The principles of Clean Production are:

- the Precautionary Principle, which calls for precaution in the face of scientific uncertainty
- the Preventive Principle, which holds that it is better to prevent harm than remediate it
- the Democratic Principle, under which all those affected by a decision have the right to participate in decision-making
- and the Holistic Principle, which calls for an integrated life-cycle approach to environmental decision-making.

A variety of tools are being employed to implement Clean Production, from policy measures like right-to-know and tax reforms, to UN assistance to firms engaged in Clean Production.

Clean Production cannot answer the problem of existing stockpiles of hazardous wastes, which need some form of treatment besides incineration. A number of programs are developing technologies to address this problem. The standards that have evolved for such technologies are:

- high destruction efficiencies
- containment of all byproducts
- identification of all byproducts
- and no uncontrolled releases.

Several emerging technologies fit these criteria, and have been selected in Japan, Canada and Australia for PCB destruction, and in the United States for chemical weapons destruction. The U.S. chemical weapons program is a success largely because of strong public participation, which pushed an unwilling government to investigate and eventually select safer, non-incineration technologies.

Section 3: Putting Out the Flames

Section 3 discusses the growing rejection of incineration across the globe. Public opposition has killed many proposed and existing incinerators, and is being incorporated into local, national and even international law. Popular resistance to incinerators is global: hundreds of public interest organizations in dozens of countries are engaged in the fight against incineration and in favor of alternatives.

In the United States, business interests and a perceived landfill crisis drove an incinerator building boom in the 1980s. But the boom spawned a massive grassroots movement that defeated more than 300 municipal waste incinerator proposals. The activists fought for higher emission standards and removal of subsidies, which virtually shut down the industry by the end of the 1990's.

In Japan, the most incinerator-intensive country on Earth, resistance to incineration is nearly universal, with hundreds of anti-dioxin groups operating nationwide. Public pressure has resulted in over 500 incinerators being shut in recent years, but Japanese corporations and government are still heavily invested in the incinerator industry.

In Europe, resistance has taken the form of implementing alternatives. Some areas have cut waste generation dramatically even as populations have climbed. As a result, there is little market for new incinerators in Europe.

In Mozambique, citizens organized across class and color lines to form the country's first indigenous environmental organization. Widely hailed as the return of civil society after the civil war, the organization succeeding in stopping a proposal to incinerate pesticides in a cement kiln in a residential neighborhood.

Elsewhere, activists have had to resort to protests and direct action to stop incineration. Increasingly, however, public opposition is being manifested in the law. Jurisdictions in 15 countries have passed partial bans on incineration, and one country, the Philippines, has banned all incineration.

International law is also starting to bear upon incineration. Three principles of international law – precaution, prevention and limiting transboundary effects – conflict with incineration.

Precaution is cited in the OSPAR, LRTAP, Bamako and Stockholm Conventions and the Rio Declaration, among other documents. Because incineration is effectively an uncontrolled process, with unknown byproducts, and because many of those byproducts are already affecting human health, precaution argues that incineration should be avoided.

Prevention and minimization are widely referenced in international law, most specifically in the Bamako Convention, which explicitly defines incineration as incompatible with prevention and Clean Production practices.

Limiting transboundary effects is a common principle of international law; yet incinerator byproducts, because they transport globally, clearly contradict this principle.

The London, OSPAR and Bamako Conventions also place bans upon incineration at sea and in domestic waters.

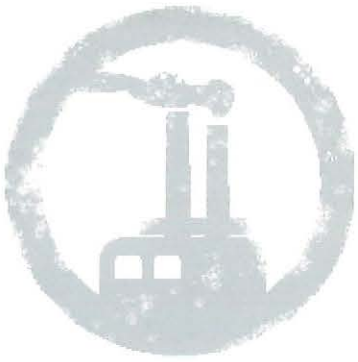
The Stockholm Convention, although it does not ban incineration, places severe restrictions on its use. Four of the 12 chemicals subject to the Convention are byproducts of incineration, and the Convention calls for their continuing minimization and elimination. Significantly, the Stockholm Convention talks about total releases, not only air emissions, and clearly calls for countries to prevent the formation – not just release – of these chemicals. Since formation of those four chemicals is virtually inevitable in incineration, this provision sends a clear signal that incineration's end is drawing nigh.

Introduction

Dealing with waste is a challenge common to all human societies. Nature makes no waste: in healthy ecosystems, one species' waste becomes food for the next, in an endless cycle. Modern societies interrupt this cycle in three ways. First, technology has created a wide range of substances that do not exist in nature. Human discards are thus increasingly comprised of plastics, metals, and natural materials laced with hazardous substances (for example, bleached and inked paper), which, in many cases, are difficult or impossible for natural ecosystems to break down. Second, industrial societies use and dispose of much more material per person than their predecessors, and than their counterparts in the less industrialized world. Third, rapid population growth increases the number of people and the total amount of waste generated. As a result, the global ecosystem is overwhelmed, both quantitatively and qualitatively, with what we discard.

Ultimately, human societies rely on the natural environment for all their material needs, including food, clothing, shelter, breathable air, drinkable water, and raw materials for manufacturing and construction. At the same time, all human discards go to the environment. When humans were few and of limited technological capability, we could afford to ignore the relationship between these two processes. Now that we dominate the global ecosystem, that is no longer the case. At the same time that we are confronted with rapid destruction and growing scarcity of natural resources — deforestation, declining fisheries, contaminated groundwater, and so on — we are producing ever-larger quantities of waste that is more hazardous than ever. And our waste disposal practices are increasingly imperiling our resource base.

The conventional wisdom of the waste management industry is that there are only two things to do with waste: burn it or bury it. As the volume, toxicity and persistence of waste have increased, the systems built to deal with it — incinerators and landfills — have become ever more complicated. Modern sanitary landfills may look a little like traditional open dumps, but they are much more complex and expensive, with such features as triple liners, leachate collection systems, multiple, self-contained cells, daily cover, and a permanent cap upon closure. Similarly, modern incinerators are extremely complicated systems, and are among the most expensive of public works. In the end, spending vast sums on landfills and incinerators has created more problems than it has solved.



Luckily, there are better alternatives than landfills and incinerators, even the so-called state of the art burners. As shown by the complementary paradigms of Clean Production and Zero Waste, waste is tangible evidence of economic inefficiency and lost resources. These approaches, at the front and back ends of the materials cycle, work in tandem to replace wasteful, linear systems of production and disposal with cyclical manufacturing processes and product reuse and recycling. Products are redesigned with an eye to elimination of substances that pose disposal hazards or impede recycling. Such an approach reduces the quantity and toxicity of both manufacturing inputs and consumer wastes. By combining a Clean Production approach with Zero Waste systems, communities can eliminate (or "reduce"), re-use, or recycle the vast majority of their municipal waste.[1] These two approaches work in tandem to transform the

municipal waste system.

In health care facilities, strict source separation programs can isolate the small portion of medical wastes that requires biological or chemical treatment, for which better and cheaper technologies than incineration are available. This allows the rest of the medical waste stream to be managed along with other, similar household and commercial wastes.

For historical or stockpiled wastes, such as obsolete pesticides, banned products and other existing waste, several non-burn technologies have been pioneered around the world, and more are in the process of development. To close the loop, Extended Producer Responsibility – a policy which forces manufacturers to take responsibility for their products at the end of their useful lives – is an effective means to get manufacturers to redesign their products for easy reuse and recycling.

With the growing prominence of reuse, recycling, and composting, the recognition that many materials traditionally considered waste are in fact raw materials for other processes has brought about a change in terminology. Materials traditionally termed "wastes" – and presumed to be worthless – are now often called "discards," recognizing that, while no longer useful to their original purchasers, they may still be valuable. This shift in terminology and philosophy underpins the move from waste disposal toward materials recovery. To make this shift, however, the emphasis must be on input reduction and product redesign. Simply increasing the recycling of ever burgeoning packaging and badly designed products will not get to the core issue of sustainable materials use and reduced consumption of virgin materials.

This report defines the term "incinerator" broadly. By our definition, an incinerator is any machine or device built or used for the purpose of burning waste. Incinerator proponents often argue that "incineration" is a special form of waste burning, distinguished by high temperature and tight control of combustion conditions. They do so in an attempt to distinguish the current decade's "safe and modern" incinerators from the obviously unsafe ones that were considered modern a decade or two ago. Such claims were common for previous generations of incinerators, but the reality has not changed: high temperatures are not unique to incinerators, and incinerators often operate under much looser control than their builders and operators would like the public to believe. Our discussion of incineration will cover municipal, medical and hazardous waste burners, as well as cement kilns that burn hazardous waste, pyrolysis and gasification devices, and related technologies. Some of the problems to be discussed pertain to open burning of waste.

Section 1:
THE PROBLEMS OF INCINERATION

Plume from UK incinerator causes breathing difficulties and other health problems. © Ralph Ryder/CATs

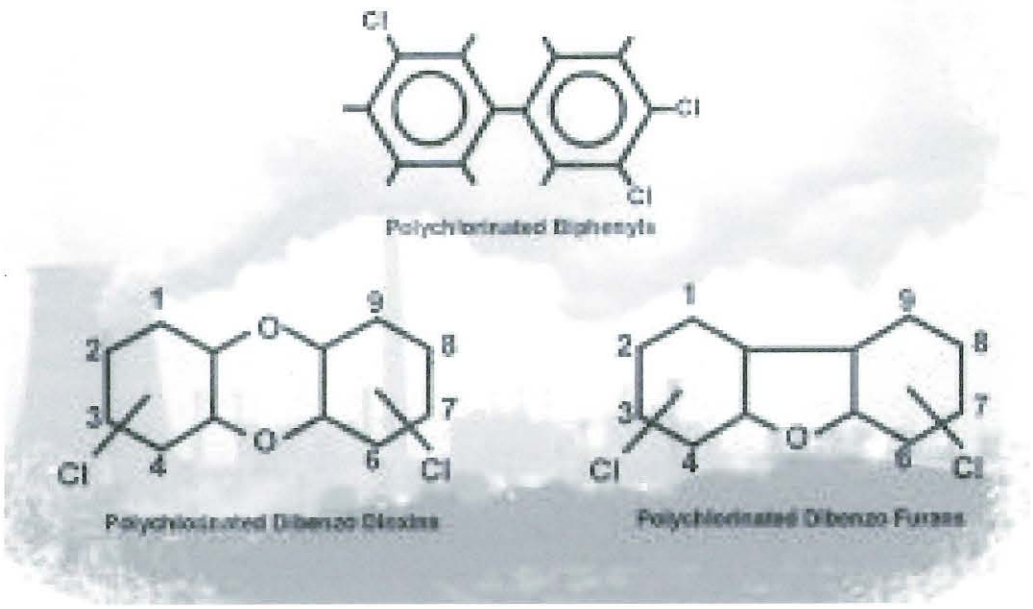
There are many problems with incineration. This section will first address pollution issues, and then discuss questions of economics, sustainability, and the particular difficulties of incineration as a technological import to Southern countries.[2]

POLLUTANT RELEASES

Pollution is the most recognized and best-studied problem of incineration. Despite intensive scrutiny over many years, however, much remains unknown about releases of pollutants from incinerators. Waste burners produce hundreds of distinct hazardous byproducts, and only a handful of them have been studied thoroughly. Hundreds more may remain unidentified.

Air emissions are most commonly discussed, but incinerators also produce liquid and solid wastes. The bulk of air pollutants come from the smokestack, but "fugitive emissions" also slip out of other parts of the incinerator, and are notoriously difficult to track and eliminate. Liquid releases include scrubber water (from the air pollution control equipment); and releases to land include fly and bottom ash as well as filter cake.

Here we discuss only a few of the most significant pollutants from incinerators. A more complete survey of the scientific literature can be found in the 2001 Greenpeace publication, ***Incineration and Human Health*** *(Please see the Resources section at the end of this report for information on this and other resources).*



Dioxins

"Dioxins" is the common name for a class of pollutants with similar chemical structure and health effects. These include polychlorinated dibenzo dioxins and polychlorinated dibenzo furans. Co-planar polychlorinated biphenyls (PCBs), which have a similar structure and can cause similar toxic effects, are sometimes included in the definition of dioxins. Dioxins are particularly worrisome pollutants because they can cause or aggravate a wide variety of extremely serious health effects, are toxic at very low levels of exposure, and are ubiquitous in the environment.

Dioxins became famous as the culprit in such public health disasters as Love Canal, Seveso, Times Beach, and Agent Orange, in which populations were exposed to large quantities of dioxins. These exposures resulted from improper waste disposal (Love Canal and Times Beach), industrial malfunction (Seveso), and the spraying of a herbicide (Agent Orange) contaminated with dioxins. More recently, in 1999, the introduction of approximately one gram of dioxins and 50 kilograms of PCBs into animal food supplies in Belgium triggered widespread food recalls that caused some US$3 billion in damage to the Belgian economy.[3]

There is an extensive international scientific literature on dioxins' health effects. This research is best summarized in two documents: the U.S. Environmental Protection Agency's (USEPA) "Draft Summary of the Dioxin Reassessment," and "America's Choice: Children's Health or Corporate Profit: The American People's Dioxin Report" by the U.S.-based Center for Health, Environment and Justice. The science summarized in these reports indicates a wide variety of health effects in humans and animals, including cancer, IQ deficits, disrupted sexual development, birth defects, immune system damage, behavioral disorders (such as hyperactivity), diabetes and altered sex ratios. One form of dioxin (2,3,7,8-TCDD) is a known carcinogen and endocrine disruptor, meaning that it interferes with the human body's hormonal system.

Health Effects of Dioxins

© Paul Goettlich/Mindfully.org

The health effects of dioxins have been extensively studied in animals, and to a lesser extent in humans. Binding of a dioxin molecule to a cellular receptor seems to be necessary for expression of biochemical and toxic effects, though some investigators question whether this is how dioxins interfere with the immune system. The dioxin-receptor combination is further processed and transported to the nucleus of a cell where it binds to DNA, interfering with the normal expression of genes. Observed effects include stimulation of enzyme production and alteration of production and metabolism of various hormones, growth factors, and other naturally occurring chemicals.

Of the 75 different congeners (forms) of dioxins and 135 congeners of furans, one – known as 2,3,7,8-TCDD – has received the most scrutiny. However, all congeners are thought to act primarily through the same mechanism: binding to the Ah receptor. Varying degrees of affinity for the Ah receptor thus result in varying degrees of toxicity (reflected in the Toxic Equivalency Factor). As such, it is generally agreed that health effects from the different congeners are similar in nature, varying mostly by degree. The following findings, although derived primarily from studies of 2,3,7,8-TCDD, are generally thought to be valid for all congeners of dioxins and furans.

Dioxin causes cancer in laboratory animals, and several studies of humans show an increased incidence of various forms of cancer. It is also toxic to the immune system, and it interferes with normal reproduction and development. Primate studies show an association between dioxin exposure and endometriosis.[4] Dioxin interferes with thyroid hormone levels in infants.[5] These effects may occur at extremely low exposure levels. Large accidental or occupational exposures cause a skin rash (chloracne), weight loss, fatigue, decreased libido, altered glucose metabolism, and neurological damage.[6] In animal studies, susceptibility to the various forms of toxicity varies considerably among species. Species variability is less marked, however, among fetuses and infants, with some health effects detectable after extremely low exposures even in species whose adults are relatively resistant. There is also evidence of considerable variability of susceptibility among individuals.

Cancer

Dioxin repeatedly causes cancer in virtually all studies in experimental animals at doses well below those which are otherwise toxic.[7] Carcinogenesis is a multi-stage process. Though dioxin does not appear to initiate the events leading to cancer, it behaves as a potent cancer promoter - i.e., once the initial events have occurred, dioxin triggers others necessary for a malignant tumor to appear. It modifies hormones involved in cell growth and differentiation.

This undoubtedly explains how dioxin exposure causes an increased incidence of many different types of tumors. Experimental animals exposed to very low doses of dioxin under varying circumstances may develop cancers of different organs, including the liver, adrenal gland, thyroid, skin, lung, nose, and palate.[8]

© Greenpeace Argentina

Studies of cancer in humans exposed to dioxin have produced mixed results. Some show increased incidence of soft-tissue sarcoma,[9] non-Hodgkin's lymphoma,[10] and nasal cancer.[11] A particularly comprehensive study of workers from 12 different industrial facilities showed increased mortality from soft-tissue sarcomas and all cancers among those exposed to dioxin.[12] Others have not found similar increases.[13] Dioxin is classified as a known human carcinogen by the International Agency for Research on Cancer (IARC) and the United States Environmental Protection Agency (EPA).

Immune system toxicity

Effects on antibody response and other forms of immune-system expression have been extensively studied and documented. Effects on the immune system of the developing organism appear to be among the most sensitive endpoints studied. Extraordinarily low single doses in pregnant animals cause lifelong changes in the immune system of offspring. In experimental animal studies, dioxin exposures of far less than one microgram/kg cause a decreased immune response and increased susceptibility to viral, bacterial, and parasitic infections.[14] Prenatal exposure to dioxin at low levels causes increased growth of transplanted tumor cells in offspring.[15] This may well represent immune-system toxicity since the immune system plays an important role in cancer surveillance and suppression.

A number of studies in humans exposed to dioxin have shown effects on various measurements of the immune system in blood tests. The importance of these changes is not clear. More research is needed to determine if these changes are correlated with increased susceptibility to infection or more severe disease.

Reproductive and developmental toxicity

Animal studies show that dioxin exposure is associated with decreased fertility and litter size and inability to carry pregnancies to term.[16] Offspring have lowered testosterone levels, decreased sperm counts, birth defects, and learning disabilities.[17] Many of these effects are seen at very low exposure levels, demonstrating the exquisite sensitivity of the developing fetus to

dioxin. In one rat study, a single low maternal dose of dioxin (0.16 micrograms/kg) on day 15 of pregnancy reduced male testosterone levels, delayed descent of the testicles, made the genital area more female-like, and reduced sperm production and prostate weight in male offspring.[18] It also demasculinized their behavior in months that follow. These results have been replicated in many different laboratories.

Human studies have shown lowered testosterone levels in exposed workers and birth defects in offspring of Vietnam veterans exposed to Agent Orange, an herbicide containing dioxin.[19]

In the U.S., a breast-feeding infant is exposed to approximately 50-60 picograms dioxin (TEQ)/kg/day, a level considerably higher than average adult exposure levels of approximately 3 pg/kg/day. Nursing infant exposures are at levels that cause abnormalities in animal studies. All studies of dioxin toxicity indicate that early development is the stage of life most susceptible to many of its health effects. However, since many of the adverse effects of fetal or infant dioxin exposure may be apparent only much later in life, human epidemiological studies of the results of those exposures have yet to be conducted, since early exposures are impossible to estimate with accuracy.

Most hazardous pollutants are assumed to be of concern only to limited populations exposed to them at high levels. Although there are some populations with high exposure to dioxins, such as Vietnam War veterans or victims of industrial accidents, dioxins have also become a global health threat, because background levels of dioxin exposure in many human populations are high enough to trigger health effects.[20] This means that dioxins have become so widespread that they are now affecting the health of entire populations. For example, by USEPA's most recent estimates, the general population's risks for cancer based on dioxin exposure could be as high as the range of 1 in 100 to 1 in 1,000.[21] In part, this is because dioxins can trigger health effects at extremely low concentrations. Indeed, there is no known level below which dioxins are known to be harmless.[22] Dioxin exposures are typically measured in picograms (one picogram is one trillionth of a gram) per day. At this level of concentration, even detection is difficult.

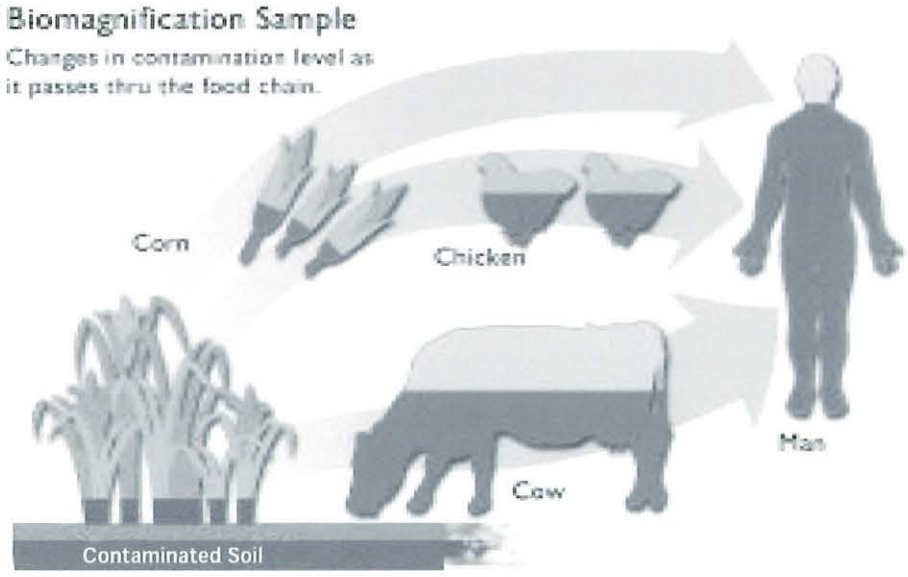
Given the extreme toxicity of low doses of dioxins, concern is mounting about the general population's exposure. In 1998, the World Health Organization (WHO) lowered its recommended Tolerable Daily Intake from 10 picograms TEQ[23] per kilogram bodyweight per day (pg/kg/day) to a "range" of 1 to 4 pg/kg/day.[24] WHO also strongly recommends setting targets in the lower part of the range. This has caused considerable consternation for governments whose populations are already exposed at higher than the recommended levels.

Seeking to reassure the public, the French government's agency for food safety (AFSSA) recently released a study showing that the French population ingested approximately 1.3 pg/kg/day, a level within WHO's "acceptable" range, but exceeding the WHO goal. As this figure is an average, of course, it also indicates that significant sections of the population are likely to be above the 4 pg/kg/day limit. The study also had far more serious problems, as revealed by the French non-governmental organization (NGO), Centre National d'Information Indépendante sur les Déchets (CNIID). It neglected to count dioxin-like PCBs; it ignored all exposure in the first two years of life, when nursing infants are exposed at a higher rate (relative to body weight) than at any other time; it neglected to account for inhalation; and it used outdated norms for calculating dioxin toxicity. Correcting for those errors raised the average French exposure to 4.9 pg/kg/day and the exposure for the 5 percent most exposed (three million people) to 9.45 pg/kg/day – well in excess of any "safe" exposure level.[25] By way of contrast, USEPA's proposed "virtually safe dose" is 0.0064 pg/kg/day.[26]

Dioxins have become virtually impossible to avoid. Everyone on earth is now thought to carry dioxins in his or her body. Long-distance transport of dioxins clearly is possible, since they are found in natural systems virtually everywhere on the globe, including areas far from sources of industrial emissions. Approximately 90 to 95 percent of human exposure to dioxins is from food, particularly meat and dairy products.[28] Dioxins preferentially accumulate in fats and oils, which occur predominantly in living organisms, and are highly persistent because they break down very little in human and animal tissue and in the environment. The half-life of dioxins in the human body is estimated to be 7 years.[29]

Governments have long been aware of the magnitude of dioxin exposure from incineration. As far back as 1985, Olle Aslander, the Dioxin Research Coordinator of the Swedish Environmental Protection Board, said, **"Our [dioxin] analysis of human milk and fish from the Baltic indicated we are in trouble, in very great trouble. In fact...we found babies were consuming [dioxins at] 50-200 times over the daily limit we accept. And in other European countries, we are convinced the levels are higher. Nobody knows how to burn garbage without producing dioxin...the technical development work at incinerator plants has hitherto mostly been of the trial and error type."**

Not much has changed since Mr. Aslander's statement.[27]



Since organisms cannot readily break them down, dioxins move up the food chain, passing from prey to predator. Each level of the food chain thus tends to carry a higher concentration of dioxins in its body, a process known as biomagnification. Humans, at the top of the food chain, receive some of the highest doses of dioxins of any species. As we ingest additional dioxins with every meal but have very little capacity to break them down, the amount present in the body tends to increase over an individual's lifetime. However, infants are most at risk from chronic exposure, both because of their high ratio of food intake to body weight and because much of their diet is mother's milk, which is high in fats and therefore dioxins.

"Dioxins have never killed anyone."

The nature of environmental pollutants makes it difficult to establish a single pollutant as the cause of death for any given individual. Industry representatives often try to use this fact to obscure the true danger of environmental pollutants and imply that they are harmless. The argument that "dioxins have never killed anyone," however, is misleading, used only to confuse the public.

There are a number of reasons why it is nearly impossible to tie an individual's death or disease to exposure to a single chemical. For one thing, humans, unlike laboratory rats, are not exposed to one chemical at a time; at any given time, thousands of synthetic chemicals can be found in any human body. This makes it difficult to establish that any one of those chemicals is the culprit. Second, interactions between the various chemicals are rarely studied; and it is in any case impossible to comprehensively document the interactions between all combinations of the thousands of chemicals to which humans are exposed. Dioxins, like many other synthetic chemicals, are ubiquitous. This means that there is no unexposed human population on earth, which makes it impossible to contrast an exposed population with a "healthy," unexposed population. Industry will often refer to increased exposure, using "background levels" as a baseline, implying that the average level of exposure is safe. In fact, it is now known that background levels of dioxin exposure are grounds for concern. Environmental exposure also occurs over long periods of time – years, or even decades. This also adds to the difficulty of establishing a direct cause-and-effect relationship in humans.

All of these factors are, of course, cause for ***more*** concern, not less. While it may never be possible to establish dioxins (or any other environmental pollutant) as the sole cause of death, except in a few, rare, acute exposure cases, it is clear that dioxins are causing the premature deaths of thousands of people. Using statistical models, the French environment ministry estimates that dioxins kill between 1800 and 5200 people per year in France alone.[30] This has also been recognized in the courts. For example, in 1991, a St. Louis jury awarded $1.5 million to the family of a truck driver who died in 1984 from cancer allegedly tied to exposure to dioxin-laced waste oil used as a dust-control measure at a truck stop in Missouri.[31]

Although human exposure to dioxins comes largely through food, the original source of virtually all dioxins is industrial processes. In the United States, over 70 percent of all dioxin releases to air come from combustion sources.[32] The share of such releases from incinerators was even higher before the recent sharp decline in medical waste incineration. Approximately 88 percent of U.S. medical waste incinerators have closed since the late 1980s.[33] In USEPA's first inventory of dioxin air emissions in 1994, medical and municipal waste incinerators were the first and second largest sources respectively, collectively contributing 84 percent to the total. In Japan, incinerators are estimated to cause 93 percent of dioxin air emissions; in Switzerland, 85 percent; in Great Britain, 79 percent; and in Denmark, 70 percent.[34] Authors of the European Dioxin Inventory note, "Despite considerable effort having been spent during the last years to decrease the emissions from municipal waste incinerators, this source type still dominates the input of [dioxins] into the atmosphere."[35]

However, air emissions of dioxins are not as large as releases to other media, and many governments, by focusing primarily on air emissions, may be missing an even greater potential

"[C]ombustion is the **only** source of sufficient size and ubiquity to account for the PCDD and PCDF in human adipose tissue."[38]

source of dioxins in the environment. European Union (EU) data indicate that most dioxin from incinerators is released to land, rather than to the air.[36] One study found that only 1.7 percent of an incinerator's dioxin releases went out the stack, with the vast majority released in ash and slag.[37]

Other Halogenated Organic Compounds

In addition to dioxins, incinerators are sources of other halogenated organic compounds.[39] These include polychlorinated biphenyls (PCBs), chlorinated benzenes, polychlorinated naphthalenes (PCN), halogenated phenols, brominated and mixed halogenated dioxins, iodinated dioxins, polychlorinated dibenzothiophenes and many aza-heterocyclic compounds.[40] In general, these substances have been much less studied than dioxins, and less is known about their releases and their health effects. Some of these substances, namely hexachlorobenzene (HCB) and PCBs, are listed as Persistent Organic Pollutants (POPs) under the Stockholm Convention; many are known or suspected carcinogens, and several are thought to have dioxin-like toxicity.

"POPs have been linked to numerous adverse effects in humans and animals. **Those include cancer, central nervous system damage, reproductive disorders and immune system disruptions.** They are, in fact, lethal."

— USEPA Administrator Christie Whitman, 2001.[41]

Mercury

Like dioxins, mercury is a persistent, bioaccumulative toxin that can be transported far from where it is emitted into the environment. Since it is an element, mercury cannot be broken down. It is a potent neurotoxin, which means it attacks the body's central nervous system, resulting in disturbances in sensation (tingling and numbness), impaired vision, speech, and motor control, spasms, loss of memory, and even death. Mercury also attacks the heart, kidney and lungs. It is particularly hazardous to developing fetuses, infants and young children, with effects including delayed development of motor functions (walking, talking and speaking), mental retardation, seizure disorders, cerebral palsy, blindness and deafness. Mercury transfers from women to fetuses across the placenta and to infants through breastfeeding, resulting in exposure at critical stages of development.[42]

Incinerators, and medical waste incinerators in particular, are major sources of mercury pollution. In the United States, approximately 39 percent of airborne mercury emissions are from waste incinerators; the global average is approximately 29 percent.[43] Once released into the environment, mercury is readily transformed into methylmercury, which easily enters the food chain and bioaccumulates.

Mercury contamination is widespread. In the United States, the Centers for Disease Control estimate that 375,000 children — about one-tenth of all births — are born each year with an elevated risk of neurological impacts because of low-level mercury exposures during the pregnancy.[44]

"The emissions from incinerator processes are extremely toxic. Some of the emissions are **carcinogenic**. We know, scientifically, that there is no safe threshold below which we can allow such emissions. We must use every reasonable instrument to eliminate altogether."

— U.K. Environment Minister Michael Meacher to a House of Lords Inquiry, 1999.[45]

Other Toxic Metals

Incinerators typically release a wide variety of other toxic metals, including lead, cadmium, arsenic, chromium, beryllium, nickel and others.[46] Health effects of these metals include:

- **Lead:** -nervous system disorders, lung and kidney problems, and decreased mental abilities in children exposed in utero and early in life
- **Cadmium:** -kidney disease, lung disorders; high exposures severely damage the lungs and can cause death
- **Arsenic:** -arsenic damages many tissues including nerves, stomach, intestines and skin, causes decreased production of red and white blood cells and abnormal heart rhythm
- **Chromium:** -damages nose, lungs and stomach
- **Beryllium:** -chronic lung problems

Incinerators are significant sources of these forms of air pollutants. Worldwide, incinerators are the source of 21 percent of air emissions of manganese and lead, 19 percent of antimony, 15 percent of tin, and 11 percent of selenium.[47]

Worldwide Atmospheric Emissions of Trace Metals from Waste Incineration[48]

Metal	Atmospheric emissions from waste incineration	
	1000 tons /year	Percent of total emissions
Antimony	0.67	19.0
Arsenic	0.31	3.0
Cadmium	0.75	9.0
Chromium	0.84	2.0
Copper	1.58	4.0
Lead	2.37	20.7
Manganese	8.26	21.0
Mercury	1.16	32.0
Nickel	0.35	0.6
Selenium	0.11	11.0
Tin	0.81	15.0
Vanadium	1.15	1.0
Zinc	5.90	4.0

Greenhouse Gases

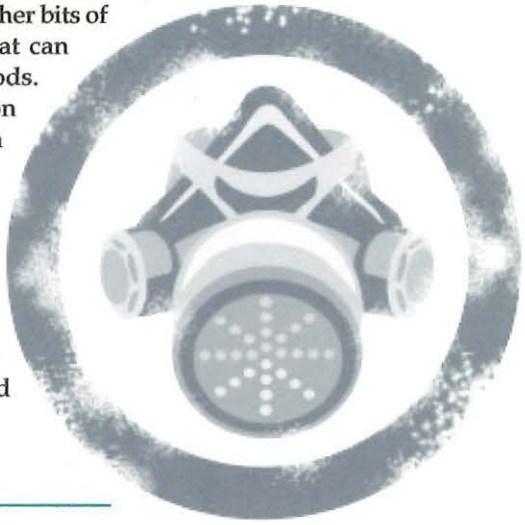
Incinerator proponents sometimes mistakenly claim that waste burning reduces emissions of greenhouse gases. Their argument is based on the assumption that organic wastes, if not incinerated, will decompose anaerobically in a landfill, producing large quantities of methane (a potent greenhouse gas) that will vent to the atmosphere. However, USEPA concluded in a 1998 study that incineration and landfilling of mixed municipal solid waste yield similar levels of net greenhouse gas emissions.[49]

Furthermore, other approaches to solid waste problems can offer significantly lower

greenhouse gas emissions than either incineration or landfilling. Incinerators are a significant source of carbon dioxide (CO_2), producing approximately one ton of CO_2 for each ton of municipal waste incinerated.[50] Through combining waste prevention and reuse of discards with high levels of recycling and composting, communities can substantially reduce waste-management-related emissions of both CO_2 and methane. By eliminating the need to extract more raw materials and manufacture new products to replace those being thrown away, such an approach saves more energy than can be recovered through incineration, reducing net greenhouse gas emissions.[51]

Particulates

Combustion processes such as incineration produce large quantities of ultra-fine particulates – dust, soot and other bits of material less than 2.5 micrometers in diameter– that can remain suspended in the atmosphere for long periods. These particulates can slip through most air pollution control equipment – typical capture rates are between 5 and 30 percent – and are of particular health concern because of their ability to evade the natural filters of the human nasal passages and lodge deep in the lungs. Particulates from incinerators carry heavy metals, dioxins and related compounds on their surfaces.[52] Fine particulates have been linked to asthma, decreased lung function, other respiratory ailments, disruption of heart function, and increased mortality rates.[53]



Other Pollutants

A partial listing of known incinerator releases can be found in appendix A. Many of these pollutants have been associated with significant environmental and human health effects. A few deserve special mention. Acid gases, such as hydrogen chloride (HCl), hydrogen fluoride (HF), hydrogen bromide (HBr), and sulfur oxides (SO_x), can damage incinerators, primarily by corroding air pollution control equipment. They also can cause or exacerbate a wide range of human health problems – especially respiratory disorders – and are acid rain precursors. Nitrogen oxides (NO_x), which are important contributors to photochemical smog as well as acid rain, are difficult to remove from stack gases, as they are chemically neutral. Polycyclic aromatic hydrocarbons (PAH) and volatile organic compounds (VOC) are large classes of chemicals with a wide range of health effects. Incinerator emissions have also been shown to be mutagenic, meaning that they alter human DNA.[54]

Finally, there is the great unknown. Many of the substances released from incinerator stacks or in ash are still unknown, let alone properly studied for human health effects. Even in test burns, when an incinerator is operating under ideal conditions, many unidentified compounds are released.[55] Indeed, one study found that "the amounts of unknown organohalogen compounds formed by waste incineration are higher by orders of magnitude than PCDD/DFs and PCNs."[56] These may help to explain epidemiological studies in France and Britain that have established a strong relationship between various forms of cancer and proximity to an incinerator, but have not yet established mechanisms for these health effects.[57]

PROBLEMS OF CONTROLLING AIR EMISSIONS

Builders and engineers of incinerators often respond to questions about pollution by asserting that "air emissions are under control" in the newest generation of "state of the art" waste burners. Underlying their claims are three unsupportable assumptions. First is the assumption that there are acceptable emissions levels for all the pollutants released by incinerators; second, that incinerator air emissions are now being accurately measured; and third, that emissions, even as currently measured, are within the limits currently defined as "acceptable."

> "It is...generally accepted that emissions standards are based on what can be measured and what is technologically achievable, **rather than what is safe**...This point was accepted by the Environment Agency."
>
> -U.K. Department of Environment Transport and Regional Affairs Committee, 2001[58]

As discussed above, dioxins are extremely toxic, persistent, ubiquitous pollutants. Current levels of human exposure – and levels measured in human tissue – are at or near those believed to trigger health effects. The general population's exposure to dioxins is already too high. And as the Stockholm Convention's first clause says, dioxins and other POPs "are transported, through air, water and migratory species, across international boundaries and deposited far from their place of release..." making it impossible to situate a point source such as an incinerator to avoid impacts on humans. It is therefore logical that no additional dioxin releases are acceptable. It is certainly true that some nations' current standards are in excess of WHO target levels.

Knowing the true air emissions of an incinerator requires continuous monitoring. However, the most dangerous pollutants are rarely monitored on a continuous basis. The technology for real-time, continuous monitoring of mercury emissions exists but is rarely employed. For dioxins and other halogenated compounds, such technology does not even exist. A quasi-continuous monitoring system (known as AMESA), which does not allow real-time feedback, does exist for dioxin, but is only being used in a few countries.

Instead of continuous monitoring, incinerators are typically subject to one or two dioxin stack tests per year, each test consisting of a single six-hour sample. This sample is then assumed to be representative of year-round emissions. In fact, studies show that such a stack test can drastically underestimate emissions of dioxin, recording as little as 2 percent of the actual total.[59] One reason for this is that dioxin production is not continuous; the majority of dioxins are usually produced in short-term emissions peaks during start-up or shutdown, or under "upset" conditions (conditions in which the incinerator is operating outside specified parameters).[60] Tests are rarely if ever conducted under those circumstances, so testing often misses the majority of dioxins produced.[61]

Tests are often conducted under optimum, or even test burn, conditions because the operating engineers are aware of when tests are to be administered. In these instances, they may take special measures to ensure minimum dioxin production for the duration of the test.[62] Incinerator operators have even been caught reserving "clean" waste that will minimize dioxin production specifically for such tests *(see box)*. Although this may be appropriate for determining the absolute minimum dioxin production under ideal conditions, it is clearly not an indicator of overall performance.[63]

Defeating the Stack Test[64]

© Vasily Mazaev/Foundation for the Realization of Ideas

Incinerator operators often base their claims of safe operation upon stack gas emissions tests that show dioxin emissions below some regulatory level. There are a number of flaws with this argument: to begin with, the assumption that any level of dioxin emissions is safe does not take into account issues of multiple sources, long-distance transport, bioaccumulation, biomagnification and the extremely high background levels of dioxins. But an even more fundamental flaw is in how dioxins are measured. The standard method for measuring dioxins in an incinerator stack is to insert a probe for a period of time from two to six hours. This probe is then removed, the sample is sent to a lab, which analyzes the quantity of dioxins present, calculates the total volume of gases sampled, adjusts for oxygen levels, and returns the result weeks later. The time lag between sampling and test results defeats one of the primary purposes of measuring emissions: to tell the operators when something is awry so that they can take action to identify and fix the problem.

Dioxin emissions are not constant. Most incinerators see "spikes" of dioxin emissions during warm-up, when the furnace is just starting; during shutdowns; and during "upset conditions." An upset condition can be anything from a batch of wet trash that causes furnace temperatures to dip to an out-of-control fire or explosion. Dioxin tests are almost never performed during these circumstances, so periods of high dioxin production are excluded from the test. When the dioxin test does happen to coincide with an upset condition that produces dioxins in excess of the legal norm, some authorities (including the US EPA) have allowed incinerator operators to scratch out that result and try again.

In the U.S., dioxin tests are typically performed once or twice a year, at most, and require substantial advance preparation, because of the physical requirements to place a probe in the stack. Incinerator operators can plan their operations so that the best possible – rather than the typical – emissions levels are recorded. As the Columbus Free Press reported, one such incident occurred in March 1994, in Columbus, Ohio, where the incinerator operator (having exceeded EPA dioxin guidelines by 600 times on a previous test) took special measures to ensure a better result. The operator's logbook recorded deliberate attempts to stockpile special, "clean" trash to ensure a good burn, and to fluff and dry this trash to avoid problems from dampness. The EPA had decided to test only one of the six "lines" (furnaces) of the incinerator, which was then retrofitted with a natural gas burner; and the test was scheduled to avoid peak dioxin production times ("soot blowing"). The Columbus Free Press reported that one EPA official wrote that these actions "might constitute a criminal conspiracy to violate federal environment laws" but the EPA chose to accept the results instead.

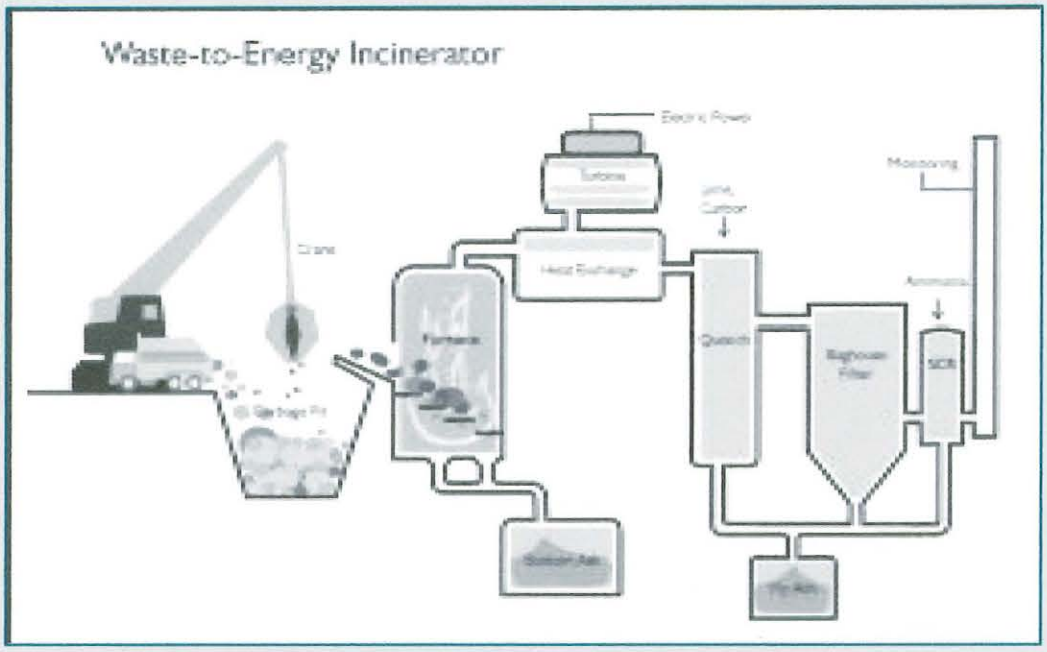
To actually control incinerator emissions requires not just continuous, but real-time monitoring. In other words, the operating engineers must know the emissions levels as they leave the stack, not receive a report two weeks later, if they are to take action to correct any problems. This is not technically possible for dioxins, and is rarely implemented for mercury.

"In monitoring for compliance or other purposes, data generated during the intervals in which a facility is in startup, shutdown, and upset conditions should be included in the hourly emission data recorded and published. **It is during those times that the highest emissions may occur, and omitting them systematically from monitoring data records does not allow for a full characterization of the actual emissions from an incineration facility.**"
— US National Research Council[65]

Even the monitoring systems that are available indicate that incinerator performance in practice is very different from theoretically achievable levels. For example, the Netherlands' most modern municipal waste incinerator reported that its flue gas cleaning system was out of order during 10 percent of its operating time.[66] In the U.K., Greenpeace collected data on the 10 operating municipal waste incinerators that indicated that each one had regularly exceeded its permitted air emissions; one incinerator reported 95 such breaches in a single year. Of the 553 breaches reported among the 10 incinerators, only one resulted in a fine.[67] Given that these are self-reported breaches, and engineers do not have access to continuous monitoring of many pollutants, they probably underestimate the true extent of the problem.

There are also some inherent conflicts in incinerator design that reduce the effectiveness of emissions control technology. It is commonly argued that very high furnace temperatures – above 1000 degrees Celsius – will break down dioxins. This is true, but many studies have established that the majority of dioxins released from incinerators are not formed in the furnace, but rather in exhaust gases, as they cool after leaving the furnace.[68] This makes exhaust gas temperature a key factor in controlling emissions. Maximum dioxin formation occurs between 300 and 600 degrees,[69] although dioxin formation has been observed both above and below this range.[70] To minimize dioxin production, it is necessary to minimize the time exhaust gases stay in that temperature range (the residency time). Some incinerators are fitted with a quench system to rapidly reduce the temperature of exhaust gases as they leave the combustion chamber. In waste-to-energy incinerators, however, the exhaust is run through heat exchangers before quenching. This enables the incinerator to generate electricity, but at the cost of increased residency time in the critical temperature range, and greater dioxin formation.

© Greenpeace Argentina



Incinerator Schematic

This schematic indicates the major components of a "modern" waste-to-energy incinerator. Individual facilities vary considerably in their equipment.

- **Garbage Pit**: Trucks dump household wastes into the garbage pit, which is large enough to hold several days' worth of waste. A crane then scoops up the waste and places it in a hopper, which feeds it into the furnace.

- **Furnace**: There are several different grate designs, which are supposed to facilitate oxygenation and complete burnout of the waste. The ash and non-burnable components that fall out of the furnace are called bottom ash.

- **Heat Exchanger**: Hot exhaust gases from the furnace exit through the heat exchanger or boiler, where their heat is drawn off to power a turbine. This is what generates electricity. Unfortunately, this step also tends to run the risk of increased dioxin formation.

- **Quench**: A spray drier, or scrubber, is used to rapidly bring the exhaust gas temperatures below 200°C. Activated carbon and lime are often mixed with the water that is sprayed into the exhaust gases. The carbon adsorbs both dioxins and mercury, which would otherwise pass through the filtration system unchecked. The lime reacts with the acid gases to neutralize them.

- **Baghouse Filter**: This functions like a giant vacuum cleaner, forcing the exhaust gases through fabric filters to trap the particles, including the added carbon and lime.

- **Selective Catalytic Reduction** (SCR): Ammonia or urea is injected to reduce the formation of nitrogen oxides.

- Dust particles and ash that are captured by the pollution control equipment are collected separately and referred to as fly ash.

At the same time, high furnace temperatures required for dioxin destruction increase the volatilization of mercury, and increase the formation of nitric oxide (NO). Nitric oxide, because it is chemically neutral, is quite difficult and expensive to remove from incinerator exhaust. The standard approach is to inject ammonia or urea, but this method is only about 60 percent effective. Ammonia injection, in turn, seems to increase emissions of fine particulates, which are the most dangerous to human health.[71] Once in the environment, NO is converted to nitrogen dioxide (NO_2), a major cause of photochemical smog. Lower furnace temperatures would reduce the amount of NO produced, but increase dioxin formation.

One of the principal means of reducing dioxin and mercury emissions to the air is combining activated carbon injection with fabric filters. Dioxin particles are too small to be stopped by ordinary filters and mercury is generally in gaseous form. So carbon particles are injected into the exhaust gases (often in the quench system); the carbon provides a surface upon which mercury can condense and dioxin particles can form as the exhaust gases cool. The carbon particles themselves are sufficiently large to be trapped by the fabric filters. This is effective in reducing the air emissions; but carbon particles prove to be so effective at inducing dioxin formation that total dioxin formation is increased by up to 30 percent in the presence of carbon injection.[72] Carbon injection decreases air emissions, but cause the fly ash (the trapped carbon particles) to contain much more dioxins than would have otherwise escaped up the stack.

ASH AND OTHER RESIDUES

Incineration is often mistakenly referred to as a waste disposal technology, when in fact it is a waste treatment technology. This is because incineration, like other treatment technologies, produces residues that themselves require treatment and/or disposal, most often in a landfill. Ash – or, in the case of pyrolysis, slag – is the residue from incineration produced in the greatest quantity.[73] Both ash and slag are defined as hazardous wastes under international law.[74] Other significant residues include scrubber water and filter cake (the solids from scrubber water treatment), both of which are usually heavily contaminated with toxics.

There are two basic types of incinerator ash: bottom ash and fly ash. Bottom ash, also known as clinker, is the residue from the furnace itself, while fly ash is the fine particles trapped by the air pollution control equipment. Bottom ash makes up about 90 percent of the total ash produced and has been shown to contain significant concentrations of heavy metals, organohalogens, and other chemical pollutants.[75] However, the fly ash, although much smaller in volume, is generally far more hazardous. If there is no air pollution control equipment, or it is not functioning, many of the hazardous byproducts will be released into the air instead of being trapped in the fly ash. This reveals a central conundrum of incineration: the cleaner the air emissions, the more hazardous the ash.

Bottom ash from furnaces and fly ash that fell from the electrostatic precipitators at the Harrisburg incinerator in Pennsylvania.

One fundamental flaw in many countries' regulatory systems is the failure to consider all

the releases from incinerators. Air pollution control is largely a zero-sum game: what is removed from the air emissions must be trapped in the ash. This is particularly clear in the case of heavy metals, which cannot be created or destroyed in an incinerator. The quantity going in must be the same as the quantity going out. Yet heavy metals in particulate form or in fine particles of ash are more dangerous than those same metals in the incoming trash. Freed from the materials in which they were previously bound up, reduced to elemental form or to simpler compounds, they become more mobile and more biologically available. This makes them more likely to enter ground and surface water supplies, to enter the food chain, and to affect humans. Similarly, dioxin releases in ash can be much greater than dioxin releases to air, if the air pollution control equipment is working properly.

In many incinerators, the handling of this ash raises grave concerns. Workers are often exposed to it, sometimes with little or no protective gear. Temporary storage can consist of an open pit, which exposes the particles to the elements, allows dispersal via wind and rain, and defeats the purpose of having collected the ash in the first place. The final disposal site, a landfill, may not be any better. The pollutants of highest concern, such as dioxins and heavy metals, will not break down over time. And, as all landfills eventually leak (according to USEPA),[76] they slowly release the toxins back into the environment. Remarkably, ash or slag is sometimes used as fill for construction or roadbeds. Such practices completely ignore the hazardous nature

Open basin for incinerator ash in Taiwan.
© Taiwan Watch Institute

of the material and its potential for releasing pollutants into the environment during construction, demolition, and ordinary wear and tear. It makes little sense to spend so much money and effort to capture pollutants from incinerator exhaust, only to thoughtlessly release them again into the environment.

One way of reducing ash toxicity is vitrification. The ash is collected within the incinerator in a closed system, to avoid worker exposure, and sent directly to a melting furnace, where the ash is fired into small, glass-like pebbles. By enclosing heavy metals in a hard, physical matrix, vitrification significantly reduces their biological availability and the rate at which they can re-enter the environment. The furnace is hot enough that dioxins should be destroyed, although dioxin formation as exhaust gases cool may still be an issue. The most significant drawback of vitrification is its expense: one study indicates that it increases disposal costs by US$20 to $30 per ton of waste.[77] Another drawback is the large amount of energy required. Vitrification of ash from municipal waste combustion consumes more energy than is generated by burning the trash in the first place.[78] For these reasons, ash vitrification is rarely employed.

Incinerator Ash Re-use: the Example of Byker, Newcastle, UK

Incinerator ash, particularly fly ash, is highly hazardous and must be treated with care, like any other hazardous waste. In an attempt to minimize the dangers of incineration, however, incinerator manufacturers and operators routinely downplay the hazardous nature of the ash. Some even go so far as to bill it as an "inert" material that can be reused for construction or road-building. As a result, incinerator ash is routinely mismanaged, and severe risks to public health often result. Many countries have no proper regulation of incinerator ash at all. Even in Northern countries, regulations often go unenforced, leaving the job of protecting public health to ordinary citizens.

In Newcastle, England, for example, ash from the Byker municipal waste incinerator was regularly spread on pathways, local allotments, parks, and school playing fields. Concerned about the safety of this practice, local resident Val Barton called Communities Against Toxics (CATs), an independent, community based, environmental organization formed in 1990. The information she received led her to arrange for tests to be conducted on some of the ash. For doing so, the Newcastle City Council accusing her of being "alarmist and scaremongering." The test results revealed dangerously high levels of dioxins, arsenic, mercury and lead, and an astonishing level of ignorance within the council, Newcastle Health Authority, the companies operating the incinerator, the UK's Environment Agency, and the British government.

Byker incinerator in Newcastle, UK (above). © Ralph Ryder/CATs

Parents Against Incineration (PAIN) holding their protest in Swansea, UK (below). © Greenpeace

As a consequence of the initial, "resident sponsored" tests, Newcastle University sought the help of German scientists from the Hamburg-based Ergo Laboratories. Their scientists took samples from 23 allotments across Newcastle. As the extent of the contamination became more apparent, key figures from the company, the Area Health Authority, and the Environment Agency began leaving their positions.

These tests revealed dioxin concentrations as high as 9500 nanogram I-TEQ/kg, compared to "target values" of under 5 nanogram I-TEQ/kg. In fact, these dioxin concentrations are some of the highest ever recorded and made public. Heavy metal contamination was similarly

stratospheric, including mercury at 2,406 percent, cadmium at 785 percent and lead at 136 percent above background levels.[79]

Eventually, the national Environment Agency was compelled to act, but local citizens consider the government's role tantamount to a coverup. They point out that, although the council maintains that only 2,000 tonnes of ash had been spread over 44 sites during the last six years (between 10 and 150 tons per site), investigations by CATs and local residents have revealed at least 25 other sites that received ash. Recent figures released by the council show much more ash being removed from sites than the council admits was dumped. Consignment notes also show some farms and a riding school as having received ash, which was initially denied by council officials.

Similarly, the recent final report on the contamination excluded all mention of PCBs, claiming that "they would have been destroyed in the incinerator" — despite the fact that PCBs are also produced under incineration. Children under 10 years of age were similarly omitted, and studies by the Environment Agency found levels of 1,100 nanogram/kg at a site where the Ergo lab found 2,200 nanogram/kg.

"The Blucher allotment, which has levels of 9,500 nanogram/kg, has been visited 5 times by EA officials," says Ralph Ryder of CATs. "They claim there are no poultry on the site, but anyone can still see at least 150 chickens running around the place. Residents are still eating the eggs from these birds and I guess killing the odd chicken for Sunday dinner."

EXPENSE

Incinerators tend to come in two varieties: the cheap and the prohibitively expensive. Expensive incinerators are those with the latest air pollution control equipment, regular and frequent emissions monitoring, specialized ash treatment and disposal methods, regular maintenance and a trained operating crew. Even under these conditions, environmental problems are inevitable, as described above. Cheap incinerators are those without some or any of the above-mentioned safeguards. The environmental impact of such devices can only be imagined, as they are in fact not monitored.

© Photo courtesy of Neil Tangri

© Greenpeace

The most technologically advanced incinerators, although still extremely problematic from an environmental standpoint, are astronomically expensive. A recently built 2000-ton-per-day municipal waste incinerator in the Netherlands cost approximately US$500 million.[80] Two recent incinerators in Japan cost US$658 million and US$808 million.[81] Greenpeace Japan recently estimated that Japan spends US$5 to 7 billion per year to build incinerators, with most of the money spent to replace older burners slated for retirement.[82] Since air pollution control equipment makes up a large share of the cost of any incinerator, there are significant economies of scale, and smaller incinerators may not be proportionately cheaper unless sacrifices are made in terms of environmental protection.

Operating expenses for incinerators are also extremely high. To increase efficiency (and limit dioxins emissions), incinerators need to operate 24 hours per day. This requires a crew of trained engineers working around the clock. Equipment costs are also high, and parts must often be purchased from abroad, in hard currency. If ash vitrification is undertaken, it requires an additional fuel source, adding extra operating expenses. Emissions monitoring adds additional costs, with dioxins the most difficult and expensive pollutant to measure. With each standard dioxins emission test costing approximately US$1000, a rigorous testing program — as conducted in Germany and Belgium — will run at least US$26,000 per stack per year.[83] This alone would be a prohibitive cost in most countries; yet without continuous dioxins monitoring, no incinerator can be assured of operating within any limits.

Financing Incinerators

Incineration is by far the most expensive method of waste treatment. The World Bank estimates the cost of incineration to be "an order of magnitude greater than" landfilling.[84] Clearly, financing such an expensive endeavour presents unusual difficulties. Generally, there are three revenue streams for financing incinerators: power sales, tipping fees, and direct government subsidies. Large incinerators (generally for municipal waste) often generate electricity and/or steam power, which can be sold. However, waste is an extremely inefficient fuel, and incinerators cannot compete on the open market with other generators of electricity. For this to be a viable form of financing, incinerator operators require guaranteed prices for electricity well above market rates. The tipping fee is the money paid by a waste generator or waste transporter to the landfill or incinerator. It usually is quoted by the ton of waste delivered. In principle, high tipping fees can be useful incentives to get waste generators to reduce the quantity of waste they produce. But since incinerators are more expensive than landfills, their tipping fees are correspondingly higher (in the U.S., typical incinerator tipping fees are twice what landfills charge).[85] Thus waste generators, given a choice, will simply use available landfills.

Incinerator companies seek to avoid this practice with "put-or-pay" contracts. These are long-term (often 10-30 year) contracts between a waste generator (often a municipality) and the incinerator operator, whereby the generator pledges to deliver a given minimum quantity of waste and pay a given tipping fee for the duration of the contract. Not only do these contracts serve as obstacles to waste minimization or recycling, they have proven devastating to local economies. States and municipal governments sought to meet their obligations under "put-or-pay" contracts by passing laws that required private waste haulers to take their waste to local incinerators. When the U.S. Supreme Court ruled such "flow control" measures unconstitutional in 1994, many municipal governments found themselves responsible for the lost revenue. This

is the third form of finance: direct government payment to the companies, either in the form of subsidies or bailouts. No matter which form of financing is employed, the public ends up bearing the cost. Indeed, the World Bank recommends taxing residents of Southern countries 3-4 percent of their household budgets in order to build municipal waste incinerators.[86]

If a municipality, hospital, or enterprise decides to invest in an incinerator, it will be one of the most costly investments that institution undertakes. Many cities have found themselves

> "We can either send garbage to the incinerator or we can send dollar bills! That's what it amounts to."
>
> — County Commissioner Richard Schwartz, Lake County, Florida, USA[87]

strapped with substantial long-term debt when revenue from tipping fees fell short of projections (see box). Some jurisdictions, including the country of Sweden, have resorted to importing waste to keep their burners running.[88] Obviously, such expensive projects make even less sense in the context of Southern countries, where public funds are scarcer.

Trapped by Debt: Four Examples from the U.S.[89]

- **New Hampshire:**

A dispute between a regional municipal waste incinerator in Claremont, New Hampshire, and the communities it served resulted in 29 nearby towns filing for bankruptcy in September of 1993. At issue was US$1.1 million in back payments owed to the incinerator operators by the towns. The towns were locked into a 20-year "put-or-pay" contract that demanded far higher levels of waste than the towns actually produced. As a result, the local municipalities found themselves paying exorbitant fees to burn waste that they did not produce. Unable to change the contract or switch to other waste management methods, the 29 towns filed for bankruptcy; but the filing was denied by a bankruptcy court, and they eventually had to impose extra taxes on residents in order to pay the incinerator bill.[90]

- **New Jersey:**

In the 1980s, many counties in New Jersey went into debt when they issued bonds to finance modern incinerators and other trash facilities. The counties were assured of a steady stream of garbage, and they thought they would also have guaranteed revenues, thanks to New Jersey's "flow control" law. That law banned garbage haulers from taking their garbage to cheaper out-of- state sites, and required them to deposit their trash at county-designated sites at a fee sufficient to cover debt payments. However, this arrangement collapsed in 1997 when the U.S. Supreme Court let stand a lower court ruling that struck down the state's flow control law.[91] This action allowed New Jersey towns to shop around for cheaper landfill sites in neighboring Pennsylvania. By 2000, 18 New Jersey counties struggled with more than US$1 billion in solid waste debt and no means to generate revenues to repay it. The state has been forced to dip into its general fund to assist some of the counties that have had trouble meeting their debt payments.[92]

- **Lake County, Florida:**

Lake County, Florida is suing to extricate itself from an incinerator contract with incinerator giant Covanta (formerly Ogden-Martin), which critics have panned as a boondoggle. When the county signed the contract in 1988, a landfill shortage was looming, and the county was looking to find a place for local trash. Lake County agreed to issue bonds to finance the incinerator

plant, pay for plant upgrades, pay Covanta to operate the plant, and guaranteed to keep it running with a steady stream of garbage every year. The county also agreed to pay Covanta about US$1 million each year, an amount equal to what the company has to pay in property taxes. Since then, the US Supreme Court ruling striking down local laws dictating where haulers can take garbage has worked against the incinerator. Less trash has been delivered to the incinerator than was anticipated. That left Lake County taxpayers grappling to pay for the incinerator. County records reveal that when the incinerator bonds are paid off in 2014, overall costs to local taxpayers for the $70 million incinerator are expected to reach more than $200 million after expenses, loan interest and other costs are factored in. Even then, the county will not own the plant. Ownership will pass to Covanta. Lake County residents now pay a garbage disposal fee of $95 per ton, the highest in the state. The outlook for Lake County and several other municipalities in which Covanta operates incinerator plants is uncertain, as Covanta declared bankruptcy in April 2002.[93]

- **Hudson Falls, New York:**

Residents of Washington and Warren counties in New York State have tried for years to get rid of a taxpayer-subsidized trash incinerator in Hudson Falls that has ignited political scandal and has been a financial disaster for county taxpayers. The contract, signed in the mid-1980s, commits taxpayers to pay the debt service on the US$87 million plant, along with its operating costs, and a management fee to Foster Wheeler, the operator of the plant. Ownership of the plant goes to Foster Wheeler when the debt is paid off. However, promoters overestimated the amount of garbage that the local communities could feed the incinerator. The incinerator's capacity was ten times what the small, mostly rural communities could supply. In order to comply with the "put or pay" clause in the contract with Foster Wheeler, the counties were forced to heavily subsidize bringing waste from outlying areas, while local residents paid the highest fees in the state. When residents filed suit to get out of this bad deal, they were sued by their own government leaders, on the grounds that the residents' suit negatively affected the bond rating for the incinerator. The government officials settled the case and paid US$255,000 to the residents. Attempts to sell the incinerator and renegotiate the debt have been unsuccessful, leaving taxpayers stuck with paying for an incinerator that has lost millions – US$3 million in 1998 alone.[94]

> "In hindsight, **the public sector got most of the risks and the private sector most of the rewards in building waste to energy facilities.**"
>
> — Wall Street Journal.[95]

In spite of incineration's problems, some governments and International Finance Institutions promote incineration as development projects, or as part of larger development projects. Incinerators make even less sense as a development scheme than as a waste management technology. An expensive incinerator will require the services of at least one, and more likely several, multinational engineering firms. The funds used, therefore, will not remain in the developing country or generate the ripple effects that are to be expected of any investment in a local economy. Instead, the expenditures will primarily benefit multinational firms based in Europe, the United States, Australia and Japan.

There is some evidence of corruption in incinerator construction and promotion. For example, in Japan, the Fair Trade Commission (FTC) found that five major incinerator companies (Mitsubishi Heavy Industries, NKK, Hitachi Zosen, Takuma and Kawasaki Heavy Industries)

– which between them comprise 70 percent of the large-scale incinerator market – had been colluding, in violation of antitrust laws. The FTC recommended that these companies be excluded from government contracts because of their violations.[96]

In the Philippines, corruption in waste projects is seen as endemic, with officials allegedly receiving up to 40 percent of the value of waste contracts as kickbacks. Since the amount of the contract is basedupon the quantity of waste to be burned, this undermines waste prevention and recycling efforts.[97] And in Germany, corruption involving a single incinerator in Cologne is alleged to have diverted more than US$10 million to individuals and a political party.[98] As with all corruption issues, hard evidence in most cases is difficult to come by, yet the opportunities for collusion between non-transparent governments and firms standing to make a large profit are obvious.

EMPLOYMENT

Incineration, by its nature, is a capital-intensive, rather than labor-intensive, approach to the waste problem. Municipal waste incinerators require an investment of several hundred million dollars (US) and yet generate only a few dozen jobs, primarily for engineers who are in much demand elsewhere. Experience has demonstrated the folly of this approach in Northern countries; in the Southern nations, where capital is harder to come by and labor cheaper, the situation is even more extreme. In contrast, the alternatives, particularly in the case of health care waste and municipal waste, are less capital-intensive and generate more jobs. In the United States, it has been shown that a comprehensive composting, reuse and recycling program generates ten times as many jobs per ton of municipal waste as do incinerators.[99] In countries with cheaper labor, this ratio should be even greater.

Job Creation: Reuse & Recycling Versus Disposal in the United States[100]

Type of Operation	Jobs Per 10,000 Tons per Year
Product Reuse	
Computer Reuse	296
Textile Reclamation	85
Misc. Durables Reuse	62
Wooden Pallet Repair	28
Recycling-Based Manufacturers	25
Paper Mills	18
Glass Product Manufacturers	26
Plastic Product Manufacturers	93
Conventional MRFs[101]	10
Composting	4
Incineration	1
Landfilling	1

Incinerators can also displace people from employment. In many Southern countries, entire populations make a living as resource recoverers,[102] pulling useful and salable items from household and commercial waste. Called scavengers, ragpickers, waste pickers, *catadores* or *pepenadores* in different societies, they are often found sifting through garbage dumps. Others collect discarded items house-to-house. Despite being held in low esteem in most societies, they

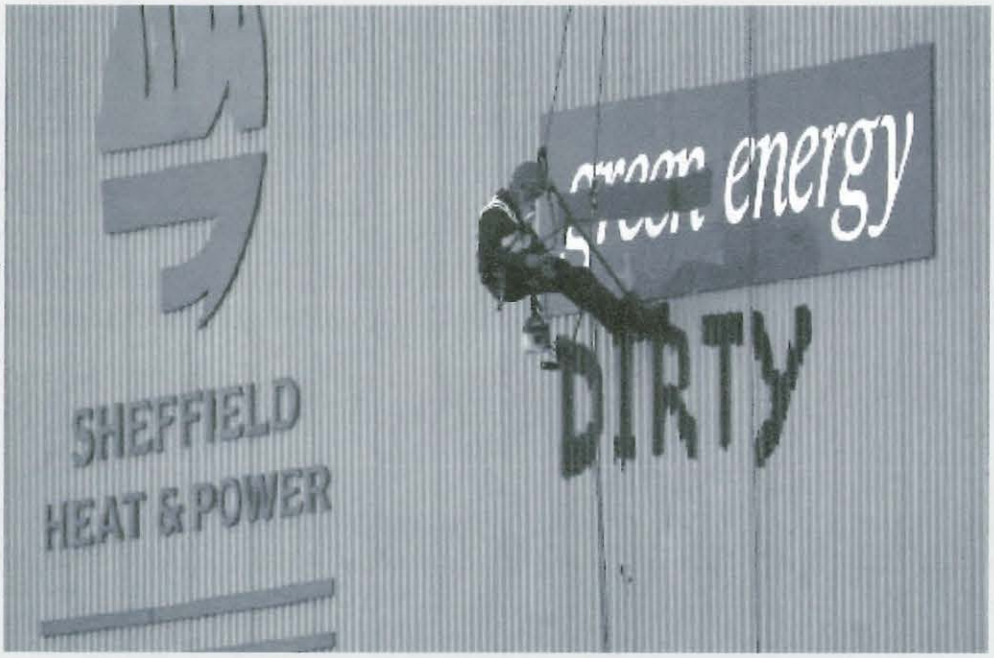
perform an important service by returning valuable commodities to the economy and reducing the need for landfilling. Although many individuals are driven to such work out of desperation, sometimes it can provide decent employment when occupational health and safety concerns have been addressed (see the box on the *Zabbaleen* of Cairo in section 2).

It is important to note, however, that in developing countries, sending waste to incinerators can deprive some of the most disadvantaged citizens of their livelihood. Indeed, some waste pickers may turn to sorting through ash landfills for salable materials, such as metals, that survive incineration,[103] a task even less lucrative and much more dangerous, because of the high toxicity of the ash. When resource recoverers are displaced, society also loses the benefit of their knowledge and skills. It would be far cheaper – and preserve more jobs – to invest in resource recoverers, helping them improving working conditions and recover a greater proportion of the discards stream.

ENERGY LOSS

Some incinerators, particularly large ones, are married to a boiler and turbine in order to capture a portion of the heat generated as electricity. These are then billed as "waste-to-energy" or "energy recovery" facilities. Proponents argue that these facilities take an unusable waste and convert it to a resource by burning it. However, "waste-to-energy" facilities waste more energy than they capture (see box).[104]

To understand this, it is necessary to recognize that any object that may end up as waste represents more energy than the heat released when it is burned. Any basic life-cycle assessment[105] will show that the calorific value of most items is a small fraction of their "embodied energy," the energy used to extract and process raw materials, turn them into products, and transport those products to market. The embodied energy is all lost when an item is burned in an incinerator.



"Waste-to-energy" incinerators waste more energy than they capture. © Greenpeace

Recycling of the object, on the other hand, avoids the energy costs of additional raw material extraction, as well as some of the transportation and processing energy. Reuse, by eliminating manufacturing, saves the most energy.

Since incinerators have limited thermal efficiency, only a portion of the fuel value of the material burned can be recovered. In a standard waste-to-energy incinerator, at most 35 percent of the calorific value of the waste is recovered as electric power.[106] Where incinerators are linked into a municipal steam distribution system to heat buildings, an additional 40 percent of the calorific value can be recovered. However, such systems require very large capital investments that few countries make, and are, of course, of little use in warm climates.

Recycling Versus Incineration: An Energy Conservation Analysis[107]

Energy Conserved in Recycled Content Manufacturing Compared with Energy from Waste Incineration

Waste Stream Materials	Energy Conserved by Substituting Secondary for Virgin Materials (MJ/Mg)	Energy Generated from MSW Incineration (MJ/Mg)
Paper		
Newspaper	22,398	8,444
Corrugated Cardboard	22,887	7,388
Office (Ledger & Computer Printout)	35,242	8,233
Other Recyclable Paper	21,213	7,600
Plastic		
PET	85,888	210,004
HDPE	74,316	21,004
Other Containers	62,918	16,782
Film/Packaging	75,479	14,566
Other Rigid	68,878	16,782
Glass		
Containers	3,212	106
Other	582	106
Metal		
Aluminum Beverage Containers	256,830	739
Other Aluminum	281,231	317
Other Non-Ferrous	116,288	317
Tin and Bi-Metal Cans	22,097	739
Other Ferrous	17,857	317
Organics		
Food Waste	4,215	2,744
Yard Waste	3,556	3,166
Wood Waste	6,422	7,072
Rubber		
Tires	32,531	14,777
Other Rubber	25,672	11,505
Textile		
Cotton	42,101	7,283
Synthetic	58,292	7,283
Others	10,962	10,713

In many cases, incineration also concentrates ownership and control of energy generation into the hands of a single firm. Whereas waste is owned by the society as a whole, the electricity generated by the incinerator is owned by the operator, and sold back to society. In this manner, the larger society is forced to invest increased energy in production to replace those materials destroyed in the incinerator, *and* pay the incinerator operator for the privilege of getting back a small fraction of the energy in their own waste.

SUSTAINABILITY

From the broader perspective of sustainability, incinerators are a losing proposition. The biosphere is a closed system. As humans increasingly dominate the globe and use most of the earth's resources, we must plan our systems to operate in an environment of material scarcity. Ultimately, this will require a closed-loop economy, in which the output of any industry is either safely assimilated by the environment or becomes the input for another industry. Only this approach will be able to tackle the twin problems of resource scarcity and waste disposal.

> **"The latest scheme masquerading as a rational and responsible alternative to landfills is a nationwide — and worldwide — move to drastically increase the use of incineration...**The principal consequence of incineration is thus the transporting of the community's garbage — in gaseous form, through the air — to neighboring communities, across state lines, and indeed, to the atmosphere of the entire globe, where it will linger for many years to come. In effect, we have discovered yet another group of powerless people upon whom we can dump the consequences of our own waste: those who live in the future and cannot hold us accountable. It is still basically a Yard-a-Pult approach. ['The Yard-a-Pult, invented for a "commercial" on the U.S. television comedy show Saturday Night Live, invites disposal of waste by catapulting it over the back fence into the yards of nearby neighbors.']"
>
> —then U.S. Senator Al Gore, 1992.[108]

Incinerators are fundamentally incompatible with a closed-loop economy. They are essentially destroyers of discarded products and materials, and concentrators of toxicity. Incinerators exacerbate waste disposal problems because they do not eliminate waste. Instead, they produce large quantities of hazardous ash, which must then be disposed. By reducing the volume but increasing the toxicity of waste, incineration merely replaces one waste stream with another. Incinerator ash, as mentioned above, has no useful purpose, and is therefore a complete loss to the system.

Equally serious is the resource problem engendered by incineration: when materials are destroyed in an incinerator, rather than being recovered, virgin materials are required for new production. Incinerators thus increase pressure on the natural resource base.

Incineration also removes incentives for waste minimization, and sometimes even creates incentives to generate more waste. Waste minimization is an essential part of any sustainable production process. Easy waste disposal makes it easy to waste resources and create pollution. This is particularly clear in the case of hazardous waste incinerators, which enable firms to

haphazardly waste resources and then destroy the evidence. Some of the the most dramatic successes in waste and toxics reduction have been brought about by reducing avenues for easy disposal of hazardous wastes.

> **"Waste is the visible face of inefficiency.** Landfills bury the evidence and incinerators burn it."
> — Dr. Paul Connett

Municipal waste incineration depends on a waste stream with high calorific value; that is, one rich in plastics and wood products (including paper). This sort of waste stream is the hallmark of the unsustainable lifestyle being championed by multinational corporations; and incinerators are being considered for Southern countries in precisely those pockets, such as tourist facilities, where this lifestyle has made significant inroads. The Northern lifestyle and its attendant consumer habits are neither economically achievable nor environmentally sustainable for the majority of the inhabitants of the planet. By facilitating the destruction of plastic and paper waste, incinerators encourage the push to produce disposable luxury goods for a small percentage of the population at the expense of basic necessities for the majority.

> "If everyone lived like the average American, **we would need 5.3 planets to support us,**"
> --Michel Gelobter, Executive Director of Redefining Progress.[109]

Incinerators and Environmental Justice

Incinerators are a problem wherever they may be located, but those who live closest to the burner are usually the ones who suffer the most. They suffer from the air emissions; from "fugitive" ashes and emissions; from the increased truck traffic to and from the incinerator; from decreased property values; and they run the greatest risks in the event of a fire or fly ash spill. Not surprisingly, politically weak communities are the ones who usually pay this price. As with other environmentally noxious facilities, incinerators are disproportionately sited in communities that are poor and belong to racial or ethnic minorities. In 1997, 15 percent of the United States' non-white population lived within 2 miles of a permitted medical waste incinerator, while only 9 percent of the white population did.[110]

It is no mere coincidence, nor the "invisible hand" of the marketplace, that places incinerators in minority and low-income neighborhoods. The pattern of discriminatory facility siting was originally documented in a 1987 report, Toxic Wastes and Race in the United States.[111] In that same year, a consultants' report prepared for the state of California came to public attention. That report (written in 1984), "Political Difficulties Facing Waste-to-Energy Conversion Plant Siting,"[112] was a how-to guide for state officials looking for politically vulnerable communities in which to place incinerators. "All socioeconomic groupings tend to resent the nearby siting of major (waste disposal) facilities, but the middle and upper socioeconomic strata possess better resources to effectuate their opposition," the report says. "Middle and higher socioeconomic strata neighborhoods should not fall at least within (five miles) of the proposed site." The report recommended that incinerators be sited in communities that were rural, conservative, above middle age, Catholic, and poorly educated. The US$183,000 report indicated that such populations would be least likely to effectively resist an incinerator.[113]

The movement that sprang up to combat the practice of deliberately targeting politically weak communities coined the phrase "environmental justice" to describe the convergence of social justice and environmental movements. In 1991, the First National People of Color Environmental Leadership Summit in the United States articulated 17 principles of environmental justice, which call for (among other things) an end to production of toxics; full public participation in decision-making; and the right of individuals to be free of environmental harm.[11]

> **"If you were to put an incinerator on Park Avenue, you would drive away the revenue base that supports this city.** The fact of the matter is that where you tend to site things — unfortunately — it tends to be in areas that are also in proximity to people who are just starting their ways up the economic ladder."
> — New York City Mayor Michael Bloomberg, 2002.[115]

ADDITIONAL PROBLEMS IN SOUTHERN NATIONS

Most incinerators to date have been built in the global North. Incineration is an extremely expensive technology requiring large capital investments and generating few jobs, so it is reasonable to think of it as a technology more naturally suited for the industrialized North than the South. This history, however, creates an unrealistic track record when evaluating the suitability of incinerators for Southern settings. The critique above has been based upon incineration's performance record in the most technologically advanced countries of our time, as have most other such critiques. It would be difficult, if not impossible, to run an incinerator in a Southern country in the same manner as is typical in, say, Switzerland; and if it were possible, it would be prohibitively expensive.[116] There are many problems particular to transferring icineration technology to Southern countries. Discussed below are a few such known issues; as with all such engineering adventurism, the unanticipated problems are the most forbidding.

Lack of monitoring. Few Southern nations have the ability to regularly monitor stack emissions or incinerator ash toxicity, yet a regular testing regimen is essential to the operation and oversight of any such plant. Indeed, the cuts that have been achieved in air emissions in Northern countries are largely the result of continuous feedback from regular emissions testing. Without that testing, it can only be presumed that Southern incinerators will function at far more polluting levels than their Northern cousins. Even in Northern countries, it is routine for incinerator operators to evade emissions monitoring (see box). The weaker regulatory apparatus of Southern countries would only worsen this situation.

> **"Incineration has had very limited use for municipal solid waste and has not had much success in the cities of Asian developing countries** where it has been installed, because most of these cities have encountered many problems with imported incinerators, either due to design problems or high operating and maintenance costs."
> — Asian Development Bank

■ **Lack of technical ability to test releases.** The lack of monitoring ability is not only due to a lack of legislation, regulations, sufficient government apparatus and the like; also, many countries do not have the technical capacity to conduct tests for dioxins and other important pollutants, and must send such assays abroad for testing. Such testing creates delays in receiving results, and the expense is often prohibitive.

■ **Lack of secure landfills for ash.** In most countries, the highly hazardous incinerator ash will be dumped in, at best, an unlined pit, where it runs the risk of contaminating groundwater. It is also usually impossible to control access to the ash landfill, so people and animals may enter it to look for metals or other salable materials in the ash. This of course represents a major danger to human health.

■ **Corruption.** Corruption bedevils many major Southern infrastructure projects, but incinerators are particularly troublesome in this regard, as their regular operation depends heavily on capable and independent government monitoring. Corruption is sure to undermine this function.

■ **Shortages of trained personnel.** Incinerators in Europe, Japan and North America function with a full complement of highly trained engineers. Few Southern countries are able to muster the necessary numbers of engineers, nor are their skills best utilized in monitoring the burning of trash.

Scavengers sifting through incinerator ash for metals in Phuket, Thailand.
© Greenpeace

■ **Budget uncertainties affect maintenance.** One of the keys to a properly run incinerator is regular maintenance and replacement of equipment, which requires significant expenditures. Given the budgetary chaos experienced in many Southern countries, it can be assumed that such maintenance will be less frequent and rigorous than in the North. Other disruptions, such as interruptions in the regular delivery of waste or electricity, are also more frequent, and will have significant impacts on the functioning of an incinerator.

■ **Differing physical conditions.** Southern countries can have significantly different physical conditions and waste streams, which can affect incinerator operations. In one case, a Danish incinerator built in New Delhi is completely unable to function because the engineers miscalculated the calorific value (energy content) of the waste.[117] Indian waste contains more inert material (ash, grit) and fewer combustibles (paper, plastic) than European waste. A high calorific value is needed for the waste to sustain combustion; otherwise the flame goes out or merely smolders. Most Southern countries' discards have low calorific value. Other circumstances, including monsoon weather that will moisten garbage, can also be a significant factor.

■ **Lack of robustness of technology.** In general, for a technology to function well in a Southern environment, with an undependable infrastructure and the vagaries of Southern conditions, it must be robust. Incineration, on the other hand, functions well only in extremely limited ranges of several parameters, such as furnace temperature, waste input rate, exhaust gas temperatures, calorific value of waste, and so on.

LACK OF COMPATIBILITY WITH ALTERNATIVES

Finally, it must be noted that incinerators are not compatible with other, more sustainable, forms of discards management. Although it is often claimed that incineration complements recycling programs, experience has shown that this is not the case.[118] Incinerators are so expensive that they often absorb all capital available for waste management. After building an incinerator, governments are often resistant to spend money on recycling and composting programs that can reduce the quantity of material available to be incinerated, thus partially idling the large capital investment in the incinerator.

Many municipalities issue bonds to finance incinerators. In order to meet interest payments on those bonds, an incinerator must generate revenue, which comes from tipping fees, which are directly proportional to the amount of waste burned. This creates a direct incentive for cities to avoid alternative waste management methods that would reduce the quantity of garbage incinerated. In other cases, private companies finance incinerator construction, receiving for doing so "put or pay" contracts with the municipalities whose waste they will burn. Such contracts stipulate that the contractor will receive a minimum monthly payment for burning trash whether or not the city sends sufficient waste to the incinerator. Under such contracts, there is a strong disincentive to reduce waste through recycling, composting or waste prevention.

> **"Once they are built we are talking about creating waste streams for the next 25 years to keep the incinerators going."**
> — Ludwig Kraemer, Head of the European Union Waste Management Directorate, 2000.[119]

Incinerators discourage alternative approaches in subtler ways as well. The mere existence of an incinerator provides an easy and thoughtless disposal mechanism for waste, removing incentives for prevention, re-use and recycling, which are the keys to a sustainable waste management strategy. In medical facilities, the knowledge that all waste is going to be incinerated reduces the perceived need to properly separate waste, even though such waste separation is important for worker safety as well as environmental reasons. Similarly, industries that are offered the "easy" option of incinerating their process wastes have little incentive to minimize its volume or toxicity.

Section 1 Recommended Readings:

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Center for Health, Environment and Justice, *America's Choice: Children's Health or Corporate Profit; The American People's Dioxin Report*, Falls Church, Virginia, November 1999.

Connett, P., *Municipal Waste Incineration: a Poor Solution for the Twenty First Century*, a presentation at the 4th Annual International Management Conference on Waste-To-Energy, Nov. 24 & 25, 1998, Amsterdam.

Denison, R., "Environmental Life-cycle Comparisons of Recycling, Landfilling, and Incineration: A Review of Recent Studies," Annual Review of Energy and the Environment, Vol. 21, pp. 191–237, 1996.

ECOTEC Research and Consulting Limited, *Beyond the Bin: the Economics of Waste Management Options: A Final Report to Friends of the Earth, UK Waste and Waste Watch*, 2000.

Gibbs, L. et al., *Dying From Dioxin: A Citizen's Guide to Reclaiming Our Health and Rebuilding Democracy*, South End Press, Boston, Massachusetts, 1995.

Glyszynski, P., and Kruszewska, I., *Western Pyromania Moves East: a Case Study in Hazardous Technology Transfer*, Greenpeace, 1996.

Greenpeace, *Warning: Incineration Can Seriously Damage Your Health; A Report on the Hazardous Waste Incineration Crisis*, 1991

Sound Resource Management, *Competition Between Recycling and Incineration*, Seattle, Washington, 1996.

Section 2:
ALTERNATIVES TO INCINERATION

A young waste picker in an incinerator ash landfill in Thailand. © Greenpeace

Incinerators and landfills are both attempts to answer the question, "what do we do with waste?" Over the last century, governments have invested billions of dollars in increasingly sophisticated technologies in the vain hope of making waste disappear. Yet neither incinerators nor landfills truly dispose of waste; each creates significant, hazardous byproducts and generates additional waste streams that require further management. This is because waste, like all matter, can never truly be destroyed. The current paradigm of waste management attempts to impose a linear production model on a cyclical ecosystem. True solutions will be found by challenging this model, and, indeed, by challenging the very notion of waste.

In the linear model of the human economy, materials are first extracted from nature, then processed into goods, then consumed, and finally discarded. When the human economy was small in proportion to the natural world, this model seemed workable. But with human pollution in every corner of the planet,

and a large share of the Earth's resources now going to support human society, we can no longer afford to treat the planet as both granary and cesspit. The challenge, therefore, is not merely to find a new method of dealing with waste, but to completely change the manner in which materials flow through human society. Human discards must not strain the already overtaxed assimilative capacity of the Earth, either because of their quantity or their hazardous, non-biodegradable nature. At the same time, those discards must be fed back into the economy in ways that reduce the pressure on natural resources. At that point, they are no longer wastes, but resources.

Alternative approaches must begin by questioning the fundamental assumptions of traditional waste management. These include the ever increasing quantity of waste generated, the mixing of disparate materials in the waste stream, and failure of much industrial design to take wastes properly into account. Waste generation — particularly municipal waste generation — is often projected to increase without limit for the foreseeable future. This is a convenient assumption for the private sector. Those industries whose lifeblood is managing ever-larger quantities of waste stand to profit by such a trend, as do those industries that have found that they can shift some of the cost of their products onto the public, in the form of waste disposal. But it should be obvious that waste — and therefore resource consumption — cannot grow infinitely on a finite planet.

Clean Production is Based on a Circular Vision for the Economy

Clean Production aims to eliminate toxic wastes and inputs by designing products and manufacturing processes in harmony with natural ecological cycles. Clean production is discussed on pages 57-59.

Waste management must therefore be replaced by materials management: creating a closed-loop economy that neither generates significant wastes nor consumes resources beyond their replacement rate. In order to achieve this closed-loop economy, true waste (material that is of no use and must be disposed) must be differentiated from discards: materials that are of no further use to their present owner but are still a resource to be fed back into the economy. This means an end to the mixed waste stream. When discards are mixed, they become useless and appear to require large-scale disposal technologies to manage them. If discards are not commingled, they are amenable to more sensible and effective management strategies such as recycling and composting.

Currently, waste management is treated as wholly unrelated to an economy's production and consumption patterns. Governments collect and manage most waste while private firms and consumers produce it. As a result, private businesses shift a significant portion of their costs onto society as a whole by not taking responsibility for their waste streams and by manufacturing products that cannot readily be recycled. Even when producers do have responsibility for their wastes, such as process wastes from a factory, they rarely pay the full cost of managing them. Incineration and landfilling merely transfer the problem to other populations and future generations. Large-scale industrial redesign is needed to eliminate

wastes that result from production and change products so that they are amenable to recycling.

Ultimately, an effective program for dealing with waste is more about materials management than about technology. Although the details vary considerably, three principles are key to solving the waste problem: prevention/minimization, waste stream segregation and industrial redesign.

MUNICIPAL WASTE

Municipal waste, municipal solid waste (MSW), household waste and general waste are all terms used to refer to the mixed waste streams produced by residential and commercial establishments such as houses, apartment blocks, hotels, shops, offices and restaurants. Municipal waste does not usually include residues from industrial manufacturing. Municipal waste is extremely varied in composition and generated in small quantities throughout the city, making it difficult to aggregate into economically viable quantities. That aggregation, however – into distinct classes of material, in quantity – is a key challenge of intelligent materials management.

Trash is created by mixing; a landfill near Minsk, Belarus. © Vasily Mazaev/Foundation for the Realization of Ideas

The fundamental problem of municipal waste is that it is mixed. With the exception of a small share of toxic materials (paints, batteries, vinyl/PVC, etc.), it is generally not hazardous and most of it has some value. Depending on the income level, climate, and culture, municipal waste consists of large portions of food scraps, yard waste such as leaves and grass clippings, paper, glass, cardboard, metals and plastics. All of these materials, save some of the plastics, have value and can be usefully recycled. Mixed together and contaminated with hazardous materials, however, this value is lost.

The second problem of municipal waste is its changing and complex nature. Municipal waste has grown substantially in its complexity and toxicity. When governments first began to

consider mass burn and bury technologies a century ago, only 7 percent of municipal discards were products and packaging. In the United States today, products and packaging comprise 75 percent to 87 percent of municipal discards.[120] These products – be they broken office chairs or obsolete computers – are difficult to disassemble and recycle, and many contain hazardous components. Many plastics are hazardous to recycle or cannot be recycled at all. Industries must redesign their products so that they are non-hazardous and can be easily recycled. At the same time, it is important to create reuse and recycling opportunities for discarded materials. These two approaches, at the front and back ends of the materials cycle, work in tandem to transform the municipal waste system.

The Problem with Landfills

This report argues that incineration is an unacceptable form of waste treatment, but it does not endorse raw waste landfilling. Landfilling of raw (unsorted) municipal waste leads to a variety of problems, much of it associated with the organic material.

A child forages a typical dump in the south for recyclables.
© Greenpeace

- **Leachate:** The organic material decomposes, producing acids. These acids mix with rainwater, dissolve heavy metals and other toxics from the waste, and then percolate down through the landfill. If not stopped by a liner, this leachate will eventually contaminate groundwater or surfacewater supplies. If a liner and collection system are in place, leachate treatment becomes an additional problem and expense. However, even with a liner, all landfills eventually leak.

- **Greenhouse gases:** The decomposition of organic material under anaerobic (without oxygen) conditions produces large quantities of methane. Methane is a contributor to the "greenhouse effect," which is driving global climate change.

- **Landfill fires:** Methane is also highly flammable, and landfill fires are common and difficult to put out. The uncontrolled burning of wastes in a landfill is likely to result in air emissions similar to those from incinerators.

- **Vermin:** The organic material can attract rodents and other pests. This is particularly problematic when landfills are located close to areas where people live or work.

- **Odor:** The rotting organics produce a strong, unpleasant odor.

- **Waste of land:** Landfills consume huge areas of land, often near metropolitan areas where available land is scarce.

- **Waste of materials:** Landfills remove resources, both organic and inorganic, from the economy in much the same way as do incinerators.

In Southern countries, landfills are even worse than in the North, as they are often no more than unlined open dumps, scavenged by both people and animals. The precarious living of such resource recoverers has been dramatically demonstrated by the Payatas landfill disaster in the Philippines, where 200 people were killed in a landfill collapse in 2000.[121] As long as people make a living from others' discards, governments must design systems to protect their lives and livelihoods as well as the environment.

MSW in the South

Around the world, communities have adopted a variety of approaches to address both ends of the municipal waste problem. No two of these programs are identical, nor should they be. Successful programs must take into account local cultures, economies, and physical conditions. For example, it is no use designing systems that rely on a 24-hour electricity supply in cities where blackouts are frequent. It is also important to understand traditional systems for handling household waste, and the cultural importance of waste, including who handles it and how. Cow dung, for example, which is viewed only as a contaminant in some countries, is used as a fuel and a construction material in others. To be effective, solutions must be designed locally, by those who will put them into action, rather than imported wholesale.

Several factors make discards management a very different proposition in the South than in the North. Among them:

- The South consumes less. Not only is there less waste per capita, but its composition is very different: more organics, fewer metals, less plastic, and far fewer of the reparable objects (such as furniture and refrigerators) that make up a significant portion of the waste stream in the North.

- Labor is cheap and capital expensive, so capital-intensive solutions such as incinerators make even less sense in the South than they do in the North. Labor-intensive tasks, such as hand sorting of waste, are cheaper and can be more thorough, although attention must be paid to worker safety.

- Cultural norms are different. Solving the municipal waste problem requires extensive public education, changes in individual behavior (practices as simple as putting vegetable peelings in one bucket and paper in another), and new roles for those who have traditionally handled waste.

- Law enforcement is less reliable. Lack of resources, corruption, and lack of transparency in government are facts of life in many Southern countries, and effective programs need to take these factors into account. For example, an outright ban on certain products will be easier to enforce – and therefore more effective – than a graduated tax on content that might be more efficient in an economist's model.

Any solution to municipal waste issues in the South must embrace the informal sector. In most of the world, significant populations make a living by scavenging resalable items from municipal dumps, bundling them into commercially viable quantities, and selling them to a broker or recycler. These activities return valuable materials to the economy, reduce demand for raw materials, and cut the amount of material going to landfill. However, the risks to such

individuals are great, and wastepicking is rarely a profitable venture.[122] Too often, policymakers view the informal recycling sector as an obstacle to their plans, rather than as a resource and a constituency. This reduces to their ability to plan and implement changes in the waste management system, because wastepickers are the ones who know the current situation the best and are thus best able to contribute to its redesign. It is also often environmentally unjust: those who bear a disproportionate burden of society's environmental ills should not also be threatened with a loss of livelihood in order to rectify those ills. The challenge of improving discards management in the global South is not only to minimize waste, but also to improve conditions for those who make a living from discards.

The *Zabbaleen* of Cairo[123]

Zero Waste may be a new name, but it is not a new concept. While waste experts in wealthy countries have been coming to the realization that resource flows through a society must be circular rather than linear, the poor of the world have long recognized that any waste is a potentially profitable resource, and have struggled to take advantage of it, for their own sake. In so doing, a few communities have succeeded in creating successful systems of resource management that approach the goal of zero waste and simultaneously employ thousands. One such example is the *zabbaleen* of Cairo.

A Zabbaleen sorting out papers and cardboards for recycling in Cairo, Egypt. © CID

The *zabbaleen* are a community from the south of Egypt who migrated to the city and saw in its trash an economic opportunity. Working with the traditional collectors of paper, they set up door-to-door collection systems, with each family working its own daily route, to collect source-separated household discards. As each collector works the same route, he[124] establishes a working relationship with the families he collects from. These discards are then separated: recyclable materials are resold at market rates; food scraps are fed to pigs; and the rest is trucked to a landfill. Although some families pay the *zabbaleen* for the garbage pickup service, most of their income comes from the sale of recyclable materials.

The success of this system — for the *zabbaleen* and the community as a whole — is evident in the numbers. Approximately 40,000 people are gainfully employed in this system; they collect 3,000 tons of household waste daily; and with their intensive separation scheme, they manage to divert 80-85 percent of household waste away from landfills. All of this occurs with no support from the government or outside agencies. With government permission, the *zabbaleen* could expand their network to cover the two-thirds of Cairo that is currently un- or under-served. Yet instead of looking to these indigenous entrepreneurs, the government has announced that it intends to grant exclusive contracts to foreign multinational waste management companies to collect and landfill all of Cairo's waste. If this plan goes ahead, it will throw the majority of the *zabbaleen* out of work, end their economic independence, and recreate the garbage problem that they have laboriously solved.

A New Direction

Notwithstanding the need for local solutions, there are some broad generalizations that can be made about municipal discards management.

For several reasons, the most important fraction of discards to be dealt with is organic material. First of all, in most countries, it makes up the largest share of waste (see "Waste Composition in Selected Countries" box). Second, it is responsible for most of the problems of landfills and open dumps. Third, mixing organics with paper and cardboard renders the latter unfit for recycling, and increases the difficulty (and unpleasantness) of recovering wood, metals and plastics. Last but not least, the organic fraction of municipal waste is perfectly suited for the cheapest, simplest, and most fundamental recycling method of all: composting. A good composting system will produce a high-quality product that can be used in agriculture — a significant boon in many parts of the world that are suffering from loss of topsoil and soil fertility. As composting can be done with little or no advanced technology, the costs of a separate organics collection and composting program are quite low, and consist of transport, public education, and manual labor. If composting is not viable, for whatever reason, there are alternatives, including feeding the organics to animals or vermicomposting (the use of worms in a contained system to rapidly break down organic waste).

The Citizens' Plan Pays Off

Since the mid-1990s, Nova Scotia, a Canadian province of some 930,000 people on the Atlantic coast, has been the site of some spectacular successes with popular involvement in waste management. An active and engaged citizenry first rejected the expansion of a number of disastrous municipal landfill sites, and then, in a pattern now familiar, rejected the government's proposal for a 500 ton-per-day municipal waste incinerator. At that point, instead of taking the all-too-common approach of ignoring public opinion, the government organized a province-wide consultation process under the auspices of a respected, independent third party. Using data generated by the government's research into waste diversion schemes and pilot projects, a new management plan was prepared by the citizens themselves. The management plan did not even refer to "waste," but rather to "resources." Among other ingredients, the citizens' plan outlawed the disposal of organics or hazardous materials directly into landfills. In Halifax, the capital city, they took it even one step further, requiring that any dirty organics that could not be composted would be screened for hazardous materials, then stabilized before burial.

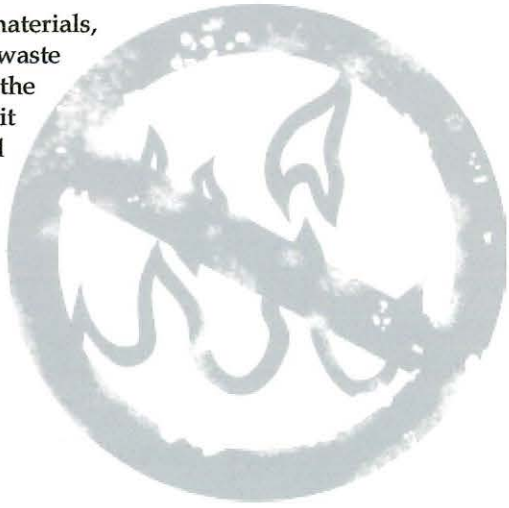
The plan called for a province-wide 50 percent diversion rate within five years. Nova

Scotia passed its self-imposed deadline nine months early, and diversion continues to increase. Halifax,with 40 percent of the province's population, has reached 65 percent diversion. The elements that have made Nova Scotia such a success include:

- Establishing 90 drop-off recycling centers throughout the province which have helped raise return rates for beverage containers to 84 percent.
- Establishing a 10 to 20 cent deposit per beverage container, half of which is returned when returning the container.
- Extending curbside recycling to 100 percent of the population.
- Banning several recyclable materials from the landfill (such as compostable organics, metal and glass containers, HDPE plastics, newsprint and cardboard).
- Offering curbside collection of compostable organics to 75 percent of the population.
- Implementing a province-wide education and awareness campaign.
- Creating a used tire management program, which collects used tires from 900 tire dealers and delivers them to a new recycling facility.
- Establishing stewardship agreements with the newspaper industry, the milk industry, and pharmacies (for used sharps and needles).
- Establishing a province-wide used paint recycling program, funded by industry and beginning June 1, 2002.

As a result of these programs, over 1 billion beverage containers have been recovered in five years; 3.5 million used tires have been recycled since 1997; and 1000 new jobs have been created in the recycling industry. The program is not perfect, but it demonstrates how quickly a non-disposal municipal waste system can be implemented, above all if it has the active involvement of the people. "The success and longevity of our strategy is due mainly to the interaction of the public," says Barry Friesen, the province's Solid Waste-Resource Manager.[125]

A strict segregation scheme for organic materials, preferably at source, can approximately halve the waste problem, with minimal investment. In order for the compost to be usable and marketable, however, it must be free of hazardous material. Extended producer responsibility programs (see below) and separate collection of hazardous wastes are needed to prevent commingling of toxics and organics.



Waste Composition in Selected Countries[126]

(percent by weight)

Location	Organics	Paper and Cardboard	Plastic and Rubber	Glass	Metals
Argentina (Buenos Aires)	38.4	24.1	13.8	5.2	2.5
Brazil	52.5	25.5	2.9	n/a	2.3
Egypt (Cairo)	46	21	4	2	2
Finland	41	37	5	2	3
Hong Kong	37.0	26.6	16.0	3.4	3.1
India (Delhi, low income)	65 - 71	4.8	4.1	2.9	n/a
India (Delhi, high income)	79 - 84	6.3 - 9.0	7.1 - 8.65	0.85 - 2.2	n/a
Ireland	15.1	58.6	10.6	3.4	1.7
Japan (Utsunomiya, rural)	62	17	12	n/a	n/a
Japan (Utsunomiya, urban)	55	22	12	n/a	n/a
Jordan	61	23	4	4	3
Malaysia	32.0	29.5	18.0	4.5	4.3
Nepal (Kathmandu)	67.5	8.8	11.4	1.6	0.9
Philippines (Manila)	42	19	17	3	6
Puerto Rico (San Juan)	30.5	16.0	37.8	4.4	6.5
Russia (Volgograd)	31.7	37	5.2	3.7	3.8
South Africa (Cape Town)	60	15.8	11.4	5.7	3.4
Taiwan	27.76	26.37	23.35	7.31	3.73
Thailand (Bangkok)	29	11	19	10	n/a
United Kingdom (Hampshire)	30.3	32.5	12.8	4.2	5.1
United States	23.0	38.1	10.5	5.5	7.8

Note: This table is provided for illustrative purposes only. Because of significant differences in methodology, definitions and reliability of the data, meaningful comparisons between studies are difficult. Also, not all categories are included here. Significant ones that have been excluded from this table include textiles, inert material (such as ashes from fuel), leather, and "unclassifiable."

Just as organics are recirculated in the economy through composting, the loop can be closed for synthetic materials and products through recycling. Although a smaller component of the waste stream than organics (in most countries), recyclables are the key to the economic success of a sustainable MSW program. Recycling has a number of benefits in addition to reducing waste and reducing the pressure on natural resources by replacing raw materials. It is a significant source of revenue and employment. Most recycling operations in Southern countries lie outside the formal sector, so it is difficult to obtain reliable statistics on employment. In Northern countries, however, the employment benefits of recycling are well documented. In the United States, the sorting of recyclables alone generates ten times as many jobs per kilogram of waste as do landfills and incinerators.[127] Recycling industries in the United States employ approximately 1.1 million people with a combined annual payroll of US$37 billion.[128] This economic stimulus is also reflected in the taxes paid by recycling industries — US$12.9 billion in direct revenues.[129] Job creation figures are likely to be even higher in countries where wages are lower.

An ambitious U.K. study, *Beyond the Bin,* attempted to compare the financial costs and benefits of recycling, incineration and landfill. The variety of different scenarios and the number of externalities[131] that must be included make for a wide range of costs; yet the report concluded that recycling is reliably a less costly option option than landfilling, and far cheaper than incineration.[132] Another recent study compared composting, landfilling and incineration in the European Union and, despite wide variations in costs, found incineration to be the most expensive option.[133]

> Advances in the collection of solid waste and recyclables are only one piece of recycling's economic success. Recycling also has made a vital contribution to job creation and economic development. Recycling creates or expands businesses that collect, process, and broker recovered materials as well as companies that manufacture and distribute products made with recovered materials. **Numerous studies have documented the billions of dollars invested and the thousands of jobs created by recycling.** A 1995 recycling employment study for the state of North Carolina, for instance, documented that recycling activities support more than 8,800 jobs in the state, most of which are in the private sector. The study also found that recycling was a net job creator — for every 100 jobs created by recycling only an estimated 13 were lost in solid waste collection and disposal and virgin material extraction within the state.
>
> — USEPA[130]

Extended Producer Responsibility

The greatest barrier to recycling — perhaps even more formidable than the commingling of discards — is the fact that many products are not designed for easy disassembly and reuse. This problem cannot be addressed at the end of the product life. Extended Producer Responsibility (EPR) is a policy approach that has gained increased popularity in recent years for its use of economic incentives to reduce waste. The basic concept is that firms must take physical or financial responsibility for their products over their entire life cycles; responsibility does not end when the product is sold.

EPR programs are intended to eliminate the opportunity for manufacturers to externalize the costs of eventual disposal of their products onto governments and consumers. If implemented properly, EPR creates a feedback mechanism that drives firms to stop producing non-recyclable and non-reusable products that contain hazardous materials. If producers must re-collect their products and associated packaging at the end of their useful lives, they have a strong incentive to redesign their products to reduce toxicity and be easily recycled. EPR closes the loop, forcing producers to redesign their products to avoid insurmountable disposal problems. EPR has been applied to packaging,[134] durable goods such as cars,[135] tires, electronics and household toxics.[136] Though not flawless, EPR programs have shown considerable potential in forcing cleaner product design and reducing waste of materials.

Product Bans

In some situations, EPR may not be practical, either because products are imported and sold primarily through the informal sector or because government is incapable of enforcing a take-back scheme. Nevertheless, the principle is important: the manufacturers of consumer products must be prohibited from imposing on local communities the responsibility for managing their products at the end of their useful life. In such cases, outright product bans are advisable. Products and packaging that create waste problems (non-recyclable or hazardous waste) for the society, not the producers, should simply not be allowed entry into the economy. Several forms of packaging, such as polyethylene carry bags, which are not practically recyclable, would thus be replaced by reusable or at least recyclable packages. Bans are also appropriate for those materials, such as PVC and heavy metals, that are problematic at every stage of their life cycle.[137]

There are likely to be positive side effects from the elimination of products and materials from the waste stream through EPR programs and bans. One study indicated that banning PVC would result in a dramatic net increase in employment as other industries expanded to replace PVC products.[138]

Diversion Rates and Zero Waste

A conventional measure of the success of municipal waste management programs is the "diversion rate," the share of the waste stream that is eliminated or diverted from landfill or incineration to other, productive uses. It is an imperfect measure, as it is often difficult to quantify waste that is prevented, but still serves as a useful index of the effectiveness of back-end (post-consumer) programs. Using standard methods of segregation, composting, reuse and recycling, it is clear that the majority of waste in most countries can be diverted. Diversion rates of over 50 percent are being achieved in North America; in some places, they reach 70 percent and higher. However, it is not possible to divert 100 percent of municipal waste using conventional end-of-pipe techniques.

As long as waste management companies continue to profit from waste disposal, and other firms can shirk their responsibility for dealing with their wastes and end-of-life products, there will be significant financial incentives to increase the quantity of waste going to landfills and incinerators. These must be tackled with aggressive product bans and EPR policies. Combining these front-end solutions with separated collection systems, intensive recycling and composting has the potential to dramatically change the nature and scale of municipal discards, with diversion rates approaching 100 percent. This fundamentally new vision for society has been termed "Zero Waste" and is rapidly gaining popularity in various parts of the world.[139] Since 1999, 45 percent of New Zealand's Local Authorities have adopted Zero Waste targets. Zero Waste has also been embraced by local governments in Australia, Canada, U.K.

and the United States; by the state governments of Western Australia and California (the latter with a population of 35 million); and at the national level in South Africa.

Examples of Municipal Discards Diversion Rates[140]

Below are listed examples of municipalities, counties and even nations with high rates of municipal waste diversion (re-use, recycling and composting). These examples indicate that municipal discards management systems that achieve high diversion rates are feasible in a number of different countries, with varying economic and physical conditions. Unfortunately, few statistics are available from Southern countries. This does not reflect a lack of recycling in those countries; indeed, successful programs are known to be operating in Brazil, Egypt, Guadeloupe, India and the Philippines, to name a few. Rather, the paucity of data reflects the fact that few attempts have been made to gather comparable data in those places.

Locality	**Diversion Rate** (percent)
Zabbaleen-served areas of Cairo, Egypt	85
Opotiki District, New Zealand	85
Gazzo (Padua), Italy	81
Trenton, Ontario	75
Bellusco (Milan), Italy	73
Netherlands	72
Northumberland County, Ontario, Canada	69
Sidney, Ontario	69
East Prince, Prince Edward Island, Canada	66
Boothbay, Maine, U.S.A.	66
Halifax, Canada	65
Chatham, New Jersey, U.S.A.	65
Falls Church, Virginia, U.S.A.	65
Galway, Ireland	63
Belleville, Ontario	63
Canberra, Australia	61
Bellevue, Washington, U.S.A.	60
Guelph, Ontario, Canada	58
Gisborne District, New Zealand	57
Clifton, New Jersey, U.S.A.	56
Loveland, Colorado, U.S.A.	56
Denmark	54
Bergen County, New Jersey, U.S.A.	54
Worcester, Massachusetts, U.S.A.	54
Leverett, Massachusetts, U.S.A.	53
Ann Arbor, Michigan, U.S.A.	52
Crockett, Texas, U.S.A.	52
Dover, New Hampshire, U.S.A.	52
Kaikoura District, New Zealand	52
Switzerland	50
Nova Scotia, Canada	50
Portland, Oregon, U.S.A.	50
Madison, Wisconsin, U.S.A.	50
Fitchburg, Wisconsin, U.S.A.	50
Visalia, California, U.S.A.	50

Getting to Zero: Steps Towards a Zero Waste Program[141]

Zero Waste is an approach to municipal waste that aims to achieve 100 percent diversion rates through a mixture of waste minimization, industrial redesign, composting, recycling and reuse programs. No two Zero Waste programs are the same, and no one approach will work everywhere; but the ten steps listed below are applicable to most communities pursuing a Zero Waste future.

1. Adopt a goal of Zero Waste: no waste to landfills or incinerators.

2. Seek public input. Citizen involvement, including the informal sector, is crucial.

3. Target a wide range of materials for reuse, recycling and composting (especially several grades of paper and all types of organics) and keep these materials segregated from mixed trash.

4. Compost. Composting is key to achieving 50 percent and higher diversion levels and doing so cost-effectively.

5. Make program participation convenient. The more people participate, the more materials will be diverted from disposal.

6. Institute economic incentives that reward waste reduction and recovery over disposal, such as reduced tipping fees for recyclable and compostable materials and pay-by-volume fees for trash collection.

7. Enact regulations to improve the environment for recycling and recycling-based businesses, such as: banning recyclables from landfills and incinerators; banning products that cannot be reused, repaired, recycled, or composted; and requiring the reuse and recovery of building materials in new construction.

8. Develop markets for recycled materials and products, particularly local manufactures. Government procurement can be a powerful tool to create demand for recycled goods.

9. Require producers to take back their products and packaging at the end of their useful lives (Extended Producer Responsibility programs).

10. Education and outreach are critical for continued participation.

HEALTH CARE WASTE

Health care waste is generally defined as all waste generated by health care facilities, such as hospitals, doctors' offices and clinics, and also often includes waste from veterinary facilities, funeral homes and laboratories that prepare medicines or deal with human tissue. Although health care waste comprises a very small portion of the entire waste stream (less than 2 percent in the United States),[142] it has received considerable attention because of the hazards it poses to human health. It is also an extremely complex problem to tackle, because of the variety of wastes generated by health care facilities. Wastes requiring special attention include those that are

potentially infectious (also referred to as biohazardous); sharps (needles, scalpels and other objects capable of breaking the skin); mercury-contaminated wastes; radioactive residues of nuclear medicine; pharmaceuticals; genotoxic and cytotoxic residues of chemotherapy drugs; and a variety of chemically hazardous wastes used in laboratories, x-ray developing, and other medical technologies.

Because of the widespread concern around health care waste — and the recognition that medical waste incinerators are a leading source of dioxins and mercury air emissions — many organizations around the world are addressing this issue. Health care facilities wishing to improve their environmental performance therefore have a vast pool of experience to draw upon. An especially helpful network is Health Care Without Harm (HCWH), an international coalition of over 300 health care providers and non-governmental organizations around the world dedicated to eliminating pollution from the health care sector (for HCWH contact information please see the Resources section). HCWH has member organizations in over 40 industrialized, low-income and middle-income countries, working under the wide variety of conditions found in those nations.

Health care facilities vary widely in their circumstances, including financing, skilled staff, access to infrastructure, treatments offered, etc. Therefore, there is no one approach to health care waste that will fit all facilities. Nevertheless, several principles are common to effective solutions in any context.[143]

In a facility with a well-run system for waste separation at source, those waste streams requiring special handling will account for no more than 15 to 20 percent of the total waste generated. In other words, 80 to 85 percent of all wastes from health care facilities is similar to ordinary municipal waste, and consists of food scraps from the cafeteria, office paper, packaging, and so on. This material can be handled like any other

Top: Incinerators discourage sustainable medical waste management, often becoming a convenient way to mix and burn all waste types(Kerala, India, 2002).

Center: Not only are incinerator releases dangerous for the global environment, they also endanger workers and people nearby, including patients and neighbors. Here, an incinerator operator is wearing a motorcycle helmet instead of respiratory protective gear (Punjab, India, 2002).

Bottom: Broken ash door and clogged air inlets in a year old medical waste incinerator (Kerala, India, 2002)

municipal waste, as long as it is kept separate from more hazardous waste streams. Thus a good waste management system for health care facilities must be grounded in a strict and well-maintained source separation program.

A small autoclave in operation.
© Photo courtesy of Neil Tangri

Strict separation at source of the various waste streams requiring special attention is also necessary. Once potentially infectious waste (often known as "red bag" waste) is mixed with non-infectious wastes, all of it must be considered potentially infectious. Similarly, chemical hazards that are easily managed separately may become intractable problems if combined or mixed with other waste streams. As a result, health care institutions must have a multitude of distinct waste streams that are handled and treated separately.

It is often argued that potentially infectious waste requires incineration. In fact, several other disinfection technologies are available and in common use. Using incineration to disinfect waste is overkill, because incineration not only kills the pathogens that are of concern, but destroys the material that they rest upon.[144] Other technologies, such as microwave, or autoclave and its variants, kill the pathogens without chemically altering the waste, thus avoiding the many environmental problems of incineration. These technologies are commercially available, widely used in the health care sector, easier to maintain and properly operate than an incinerator and in many cases cheaper.[145] An assessment of various technologies is to be found in Health Care Without Harm's document "Non-Incineration Medical Waste Treatment Technologies."[146]

After disinfection, it is important that hazardous medical wastes, particularly the sharps, be secured in such a way as to prevent re-use, scavenging, or other forms of human contact. Where secure landfills are not available, WHO recommends encapsulation by filling a sharps container with a cement-like substance to render the sharps immobile and useless.[147] The reuse of hypodermic needles, although it would cut down on waste, has been shown to correlate to a rise in infection rates[148] and thus is one of the few instances where there is good reason to use disposable items, creating a certain amount of unavoidable waste. It should be noted, however, that sharps are typically 1 percent or less of a hospital's waste stream.[149]

"Incineration of medical waste converts a potential biological problem into an actual chemical one."

— Dr. Paul Connett

In the case of chemical hazards, the old rule of "reduce, reuse, recycle" applies well to the health care sector. Some chemical hazards, such as mercury, can be reduced to the point of elimination.

Mercury is used in a wide range of medical equipment, including thermometers, sphygmomanometers (blood pressure cuffs), and feeding tubes. In normal use, this mercury is completely contained within the equipment. But breakage is a fact of life, and when the mercury is released, it poses an immediate threat to persons in the vicinity, including staff and patients. Mercury that is recovered is often sent either down the sewage drains or with the infectious waste, resulting in discharge to the environment. As mercury is an element, it cannot be broken

down by any form of waste treatment. The only way to prevent mercury releases, therefore, is not to use mercury-containing equipment. Fortunately, good substitutes for mercury-containing equipment are now commercially available, and have been shown to be of equal or superior efficacy under field conditions.[150] In fact, many jurisdictions now ban the sale of mercury-based thermometers.

Other chemicals for which no good substitutes exist can be effectively and economically recycled. This is the case for the chemicals used in developing and fixing x-rays, which contain silver and will actually net a profit in recycling. Other laboratory chemicals, such as xylene, can be re-purified and re-used, which avoids both discharges of chemical waste and the need to purchase additional chemicals.

Burning unsorted waste at on-site incinerator in Ngelwezane Hospital, South Africa © groundWork

Chemotherapy drugs are of particular concern because of their extreme toxic potency and high chemical stability. These drugs exist in small quantities as the unused portion of prescriptions and in larger quantities as expired drugs. Trace quantities of chemotherapy drugs are also found in syringes, bottles, intravenous tubing and other equipment used to store and administer these drugs. In no case should chemotherapy drugs (even in trace quantities) be sent to standard disinfection technologies (such as autoclaves) which will not break them down. Even most incinerators are not capable of reliably breaking down chemotherapy drugs; WHO recommends that, if chemotherapy wastes are to be incinerated, the incinerator must be two-chambered, with the second chamber reaching 1200°C and a residency time of two seconds.[151] Failure to do so will result in the release of these extremely potent toxins directly to the environment. WHO also states that incineration is not the preferred option for chemotherapy drugs.[152] Health care facilities should ideally return unused chemotherapy drugs to the manufacturer where they can either be reformulated or disposed of in a more controlled manner than hospitals can manage. Language mandating such take-backs can be built into contracts with the pharmaceutical companies that supply the drugs.

The importance placed upon waste and toxicity minimization in the health care sector is reflected in a 1997 memorandum of understanding between the American Hospital Association and USEPA. This agreement includes a commitment to reduce total waste by one-third by the year 2005 and by 50 percent by 2010; to virtually eliminate mercury-containing waste by 2005; and to minimize the production of persistent, bioaccumulative, and toxic (PBT) pollutants.[153]

Tackling the Medwaste Monster

Although small in quantity, health care waste can pose major challenges. In areas where it is well-regulated and strictly monitored, the handling, transport, treatment and disposal of health care waste is a costly endeavour. In other settings, where that infrastructure does not exist, there may be no ready infrastructure for the treatment and disposal of health care waste. In either case, a focus on waste minimization and low-technology treatment can greatly reduce the problem.

Beth Israel is a major urban hospital center in New York City with multiple campuses, specialty care units and over 1200 beds. Like many U.S. hospitals in the 1990s, it faced increasing public concern and government regulation about the handling of health care waste. Beth Israel chose to bring on a dedicated health care waste manager, who implemented a comprehensive waste management strategy that includes:

- reducing the tendency of hospital staff to "overclassify," i.e., to treat non-potentially infectious wastes as if they were infectious by placing them in red bags.
- recycling of paper, cardboard, newspapers, magazines and other materials.
- toxicity reduction through in-house recycling of laboratory chemicals, reduced use of PVC, mercury, etc.
- environmentally preferred purchasing.
- on-site waste treatment using non-burn technologies.

At Beth Israel, the proof is in the numbers: "red bag" (potentially infectious waste) was reduced by as much as two-thirds (over 630,000 kg annual reduction from the hospital's largest unit). This was reflected in cost savings of over US$1 million per year – up to 70 percent of the hospital's waste management budget.[154]

At the other end of the spectrum, a small (12 bed) but busy maternity home in Pune, India has discovered that the simple garden technique of composting is enough to answer its needs. The maternity home produces few sharps; placentae and sanitary napkins comprise the majority of its potentially infectious waste. Rather than send these to the city's incinerator, the hospital constructed two small (1 cubic meter) compost bins in the back parking lot. In three years, these two bins have digested 11,500 sanitary napkins, 860 placentae and dressings from 800 surgeries, producing only a dark, thick, mudlike compost. Furthermore, this compost has been tested for pathogens and found to be cleaner than ordinary soil. Hepatitis B, for example, when injected into the compost bins, survived two weeks as opposed to the four weeks that it lasted in ordinary soil. The compost bins are non-odorous and inconspicuous. The one-time capital cost for the bins was roughly equivalent to the annual cost of sending health care waste for incineration.[155]

A focus on waste prevention, good segregation practices, and non-burn treatment technologies can radically reduce both the scope and the hazards of health care waste. These savings are then reflected in lower costs, fewer management headaches, and a cleaner environment.

When dealing with health care waste, the health and safety of workers deserves special attention. Workers in health care institutions, including nurses and cleaning staff, are those

most at risk from the poor handling of health care waste. Sharps pose the greatest infection risks at the point of generation and in their movement through the facility. Incineration does nothing to minimize those risks, but it does encourage a lackadaisical approach to segregation. A strict sharps segregation program is crucial for worker safety, but the knowledge that all waste is going to be incinerated undermines such programs.

Health care waste can thus be greatly reduced, both in quantity and toxicity. Certain elements, such as potentially infectious sharps and expired pharmaceuticals, will continue to be a waste stream for the foreseeable future; but these can easily be managed without incineration and without engendering other environmental problems.

HAZARDOUS AND INDUSTRIAL WASTE

Industrial wastes, both hazardous and non-hazardous, are primarily process residues. The natural place to solve this problem, therefore, is in the production processes themselves. At the same time, an entirely new approach to product design is necessary to ensure that discarded products can be easily and safely reclaimed. Clean Production brings these two principles together.

Clean Production is a paradigm shift away from current standards of product and process design. It begins by redesigning the product to avoid hazardous inputs and excess material use. Just as important is redesigning the production process to eliminate hazardous wastes and minimize overall wastes. It attempts to mimic the natural ecological flows of materials by replicating efficient, non-hazardous and useful manufacturing processes and products. Because local material flows can be the most efficient in terms of material, energy, and water use, Clean Production favors the judicious use and consumption of local materials. With the aim of protecting human health, biological integrity and cultural diversity, Clean Production encourages an approach to production and consumption that is precautionary, preventive, and democratic.

Much of the focus of Clean Production is on redesigning industrial processes to eliminate the generation of hazardous wastes. Non-hazardous industrial residues are often easier to reclaim and recycle than household waste because they tend to be less varied in composition, of uniform quality, and generated in significant quantities at specific locations. In other words, they are often effectively "pre-sorted" and thus easier to place with a user, manufacturer or recycler. In fact, materials exchanges in many regions now serve as networking hubs where those wishing to discard manufacturing residues or byproducts are matched with those that can use them.[156]

"The significant problems we face cannot be solved at the same level of thinking we were at when we created them."

— Albert Einstein

The four principles of Clean Production are:

1) **The Precautionary Principle.** "When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically[157]." For more on the Precautionary Principal, please see discussion on International Law in Section Three (Putting Out the Flames).

2) **The Preventive Principle.** It is cheaper and more effective to prevent environmental damage than to attempt to manage or "cure" it. Prevention requires examining the entire product life cycle, from raw-material extraction to ultimate disposal. It encourages the exploration of safer alternatives and the development of cleaner products and technologies. For example, prevention requires changes in processes and products — designing non-hazardous products from materials that can be safely recycled or composted — in order to avoid the generation of waste that is incinerated.

3) **The Democratic Principle.** Clean Production involves all those affected by industrial activities, including workers, consumers, and communities. Access to information and involvement in decision-making, coupled with power and resources, will help to ensure democratic control. Clean Production can only be implemented with the active involvement of workers and consumers within the product chain.

4) **The Holistic Principle.** Society must adopt an integrated approach to resource use and consumption. Effective analysis of environmental issues cannot be piecemeal; instead, analyses must look at entire systems. For each product, consumers need to have access to information about the materials, energy, and people involved in making it. Access to this information helps build alliances for sustainable production and consumption. A holistic approach is also necessary to avoid creating new problems while addressing old ones (e.g. replacing pesticides with genetically engineered plants) or to avoid shifting the risk from one sector to another.

> "Cleaner production is the conceptual and procedural approach to production that demands that all phases of the life-cycle of a product or process should be addressed with the **objective of prevention or minimization of short and long-term risks to humans and the environment.** A total societal commitment is required for effecting this comprehensive approach to achieving the goal of sustainable societies."
>
> —United Nations Environment Program

A number of global initiatives have adopted approaches to material design similar to these four principles. They include the United Nations Environmental Program Cleaner Production Program (UNEP CPP); the Natural Step, an organization based on a set of principles developed by a Swedish cancer physician; and various industrial ecology programs and environmental design programs created by architects, ecological engineers and other business and academic programs. Strategies to promote Clean Production include:

- measuring and reducing resource use and waste
- establishing and strengthening right-to-know laws (e.g. the U.S. Toxics Release Inventory and other Pollutant Release and Transfer Registries)

- conducting product life cycle assessments
- eco-labeling
- strengthening producer responsibility for environmental and health protection (e.g. take-back schemes that require manufacturers to take a product back at the end of its use)
- ecological tax reforms that penalize pollution and create incentives for Clean Production
- redesigning industrial systems to substitute services for products

Clean Production also includes the use of locally available and culturally appropriate materials (promoting self-reliance and reducing dependence on imported materials). Local economic conditions, technical ability to handle synthetic discards, and even climatic conditions will determine the contours of Clean Production in different societies.

Clean Production in Practice

Less Toxic Toys: Moving Toward Cleaner Material Use[158]

Recent concerns about the use of chemical softeners called phthalates in vinyl (PVC) baby toys have stirred an international debate among toy manufacturers, consumers, and governments. Evidence about the safety or danger of phthalates, plastic softening agents which can leach out of toys into babies' mouths when chewed, is still being collected and debated. Meanwhile, some countries, including Denmark, Sweden, the Netherlands, Greece, Austria, France and Germany have taken their own initiatives based on the Precautionary Principle and banned the use of phthalates in soft baby toys.

As the Danish Environment Minister stated in response to legal action by the toy industry: "The scientific proof will unfortunately only be available when the damage is done, and there is real solid basis for concern in this case."[159] Consumer groups note that banning phthalates alone will not address the development of new softeners which might be hazardous or address other dangers from the PVC life cycle (dioxins are created when the feedstocks for PVC are produced, and dioxins are created when PVC is burned). The majority of manufacturers have therefore switched to non-PVC materials to avoid entirely the use of these toxic resins.

Dry Cleaning: Neither Dry Nor Clean[160]

In the United States, the dry cleaning industry is traditionally viewed as a small, neighborhood-based industry. But the nation's almost 40,000 dry cleaners constitute one of the largest users of chlorinated solvents, a class of chemicals associated with a variety of environmental and human health impacts. The dry cleaning industry uses perchloroethylene (PERC), a toxic and environmentally dangerous solvent linked to several forms of cancer in dry cleaning workers. Revelations about groundwater contamination and fugitive emissions in residential buildings have led to additional liabilities and restrictions for the industry.

Hundreds of cleaners are PERC-free in the United States today and as many as 3,000 offer safer, water-based "wet cleaning" in their shops. Wet cleaning and liquid carbon dioxide offer the most promising and non-toxic alternatives. Both remove stains well, although wet cleaning is based primarily on the skill of the workers while carbon dioxide uses new, sometimes expensive machinery.

Waste Not a Drop

When Namibian Breweries decided to open a new sorghum beer facility in the inland desert of Namibia in 1997, it also adopted a new principle: "good beer, no chemicals, no pollution, more sales and more jobs." Working with an array of specialists, the brewery embedded itself in a complex of projects that were designed to feed off of each other's waste products, imitating natural materials cycles. Spent grain from the brewing process is used to raise mushrooms (400 kg per week) and pigs (120 per year) for food. The pig manure is then sent to a digester to produce methane, which substitutes for firewood. The investment of US$400,000 in these additional systems paid itself back in just four years.[161]

Alternative Technologies for Hazardous Waste Stockpiles

Clean Production offers a methodology for eliminating hazardous industrial process wastes, as well as eliminating the hazardous components of products which will eventually become waste. However, Clean Production is unable to address the problem of stockpiles that already exist.

Stockpiles of hazardous wastes (also referred to as historic wastes) such as pesticides, PCBs, chemical warfare materials and other military wastes, are found around the globe. The mere existence of these toxic stockpiles poses a threat to nearby communities. In the case of POPs, the threat is also global in nature. Treatment of such wastes is therefore a matter of urgency, and recycling is inappropriate. Using incineration would result in the problems described in the preceding section, plus additional issues unique to the dangerous nature of the substances – for example, the release of chemical warfare agents out of the stack, which has been documented in several cases.[162] The only interim solution for treatment of these wastes is through technologies that can prevent, to the greatest extent possible, additional hazardous releases into the environment.

Citizen Participation in Weapons Destruction[163]

The U.S. Army is poised to spend over $20 billion to burn its stockpile of 30,000 tons of chemical weapons. To do so, the Army plans to use four-furnace incinerators located in communities where the weapons are stored. Citizens living near these stockpile sites want nothing more than to have the deadly weapons destroyed immediately. However, the issue of how to dispose of them remains a complex debate between government officials (both military and civilian) and citizens concerned with the health impacts of incinerator emissions. The Army's first weapons incinerator, on Kalama Island in the Pacific, and its currently operating incinerator in Tooele, Utah have been plagued with fires, shutdowns and leaks of chemical agent within the facility and out of the smokestack.

The decision to burn the most lethal chemicals on the planet was made in the mid-1980s without citizen input. In addition to the problems common to all incinerators, chemical weapons incinerators offer the added threat of chemical agent releases out of the smokestack. In 1991, the **Chemical Weapons Working Group** (CWWG) formed as a citizens grassroots coalition advocating the safe, non-incineration disposal of chemical weapons and citizen involvement in the decision-making process.

Although the Army itself had destroyed lethal chemical agents with a neutralization process back in the 1970s, and despite significant advances made in the efficiency of

neutralization and other non-incineration processes, the Army refused to consider these safer methods. Its attitudes about hazardous waste disposal remained stuck in the 1970s and 80s, despite the advent of safer, more efficient technologies.

The CWWG's advocacy for safer, cleaner chemical weapons disposal began to pay off in 1996 when the U.S. Congress passed legislation mandating that the Department of Defense identify, demonstrate and implement at least two non-incineration chemical weapons disposal technologies. As a result, the Assembled Chemical Weapons Assessment (ACWA) program was born.

The ACWA program was an entirely new "level of thinking" for the military. The program includes a Dialogue, consisting of military decision-makers, state and federal environmental regulators, citizen representatives and grassroots environmental activists. The Dialogue, operating by consensus, was empowered to: 1) create technology demonstration criteria; 2) ensure clear communication and flow of information; 3) share oversight of technology demonstrations; and 4) report findings and recommendations back to the U.S. Congress.

Four of the six technologies demonstrated through ACWA passed testing, and were recommended by the Dialogue for implementation. These technologies are: neutralization and a biological treatment; neutralization and supercritical water oxidation; neutralization, supercritical water oxidation and gas phase chemical reduction; and electrochemical oxidation. Two technologies that did not pass demonstrations are Startech's plasma arc and Teledyne Commodore's Solvated Electron Technology.

In Spring 2002 the Department of Defense chose a neutralization and biological treatment method for disposal of mustard agent-filled weapons stored in Pueblo, Colorado. In January 2003 the Department of Defense chose neutralization followed by supercritical water oxidation for disposal of nerve and mustard agent-filled weapons stored in Richmond, Kentucky. In addition, existing chemical weapons incinerators could be retrofitted with an ACWA technology.

Meanwhile, the U.S. Army continues to plod along with its incineration program. As it has, scheduled deadlines have slipped, costs have skyrocketed, lawsuits have proliferated, and the Army's credibility has reached an all-time low. Technical failures continue to plague the incinerator facilities.

The Department of Defense may never have looked seriously at non-incineration technologies without pressure from the CWWG, and if the U.S. Congress had not forced them. But as a result of the ACWA technology search and demonstrations, several communities may soon have safer, cleaner, faster, cheaper technologies available for chemical weapons disposal. The U.S. Environmental Protection Agency has found that the same technologies can be used for safer treatment of a wide range of hazardous wastes, such as PCBs, pesticides and other contaminated materials.[164]

That is where citizen involvement can lead.

Effective hazardous waste treatment technologies should meet the following criteria:

- Achievement of the highest possible destruction efficiency, using the most sensitive analytical techniques. Note that the term "**destruction efficiency**" takes into account all waste outputs (effluents to air, land and water) while "destruction removal efficiency," or DRE, only applies to air emissions. An incinerator achieving a high DRE may still show poor performance on overall destruction efficiency.[165]

- Containment of all byproducts. Given that any technology may produce hazardous byproducts, it is important that those byproducts not be released to the environment. Some refer to containment capability as "hold-test-release." The ideal technology can control the waste and byproducts in a contained environment. The option to re-process wastes within the contained system is also ideal, in order to achieve a higher destruction efficiency.

- Identification of all byproducts. It is impossible to assess the efficiency of a technology that cannot even identify the quantity and toxicity of its byproducts.

- No uncontrolled releases. Regulatory agencies give facilities permits under the assumption that they will perform perfectly. This logic defies the nature and experience of incinerator operations. A precautionary approach to hazardous waste destruction means seeking to prevent, rather than manage, hazardous waste releases.

Other important attributes of effective systems are operation at low temperatures and low pressures; minimal input of caustic solutions; and advanced monitoring systems, to provide a safer, more accountable work environment. Incineration does not meet any of these criteria.

No technology is perfect, and no installation will operate perfectly all the time. That is why end-of-pipe technologies, good as they may prove to be, are not adequate substitutes for the primary practices of waste prevention and toxics minimization. However, the technologies listed below have shown the capability to treat historical hazardous wastes in a contained, controlled system, without combustion. Other technologies now in development at laboratory and pilot scale may prove successful for hazardous waste destruction in the near future.

Some Non-Incineration Technologies for Hazardous Waste Treatment[166]

Technology	Process Description	Potential Advantages	Current Uses
Base Catalyzed Dechlorination	Wastes reacted with alkali metal hydroxide, hydrogen and catalyst material. Results in salts, water and carbon.	Reportedly high destruction efficiencies. No dioxin formation.	Licensed in the United States, Australia, Mexico, Japan, Spain. Potential demonstration for PCBs through United Nations project.
Biodegradation (in enclosed vessel)	Microorganisms destroy organic compounds in liquid solutions. Requires high oxygen/nitrogen input.	Low temperature, low pressure. No dioxin formation. Contained process.	Chosen for destruction of chemical weapons neutralent in the United States. Potential use on other military explosive wastes. Typically used for commercial wastewater treatment.
Chemical Neutralization	Waste is mixed with water and caustic solution. Typically requires secondary treatment.	Low temperature, low pressure. Contained and controlled process. No dioxin formation.	Chosen for treatment of chemical agents in the United States.
Electrochemical Oxidation (Silver II)	Wastes are exposed to nitric acid and silver nitrate treated in an electrochemical cell.	Low temperature, low pressure. High destruction efficiency. Ability to reuse/recycle process input materials. Contained process. No dioxin formation.	Under consideration for chemical weapons disposal in the United States. Assessed for treatment of radioactive wastes.
Electrochemical Oxidation (CerOx)	Similar to above, but using cerium rather than silver nitrate.	Same as above; cerium is less hazardous than silver nitrate.	Demonstration unit at the University of Nevada, United States. Under consideration for destruction of chemical agent neutralent waste.
Gas Phase Chemical Reduction	Waste is exposed to hydrogen and high heat, resulting in methane and hydrogen chloride.	Contained, controlled system. Potential for reprocessing byproducts. High destruction efficiency.	Used commercially in Australia and Japan for PCBs and other hazardous waste contaminated materials. Currently under consideration for chemical weapons destruction in the United States. Potential demonstration for PCB destruction through United Nations project.
Solvated Electron Technology	Sodium metal and ammonia used to reduce hazardous wastes to salts and hydrocarbon compounds.	Reported high destruction efficiencies.	Commercially available in the United States for treatment of PCBs.
Supercritical Water Oxidation	Waste is dissolved at high temperature and pressure and treated with oxygen or hydrogen peroxide.	Contained, controlled system. Potential for reprocessing byproducts. High destruction efficiencies.	Under consideration for chemical weapons destruction in the United States. Assessed for use on radioactive wastes in the United States.
Wet Air Oxidation	Liquid waste is oxidized and hydrolyzed in water at moderate temperature and	Contained, controlled system. No dioxin formation.	Vendor claims 300 systems worldwide, for treatment of hazardous sludges and wastewater.

Non-combustion technologies are starting to make inroads into the treatment of wastes that have traditionally been incinerated. Gas phase chemical reduction has been used in Canada, Australia and Japan to treat PCB stockpiles. The U.S. Government has adopted biological treatment methods for one of its chemical weapons stockpiles. Two agencies of the United Nations – UNDP and UNIDO – have launched an important project whose explicit aim is to eliminate the barriers that deter the use of non-combustion technologies for POPs treatment. The existence of this project shows that there is support within the UN system and within some governments for the view that incineration is an inappropriate form of POPs treatment. However, there still exist regulatory, technical, and economic barriers to the easy implementation of alternative technologies. In order to provide countries with POPs stockpiles a viable option to incineration, the UN agencies are planning full-scale demonstration projects of PCB treatment in Slovakia and the Philippines. The technologies currently under consideration for this project are gas phase chemical reduction, base catalyzed dechlorination and sodium reduction, although more technologies may be added as information becomes available.

Non-incineration technologies do not guarantee trouble-free destruction of hazardous wastes. Some do, however, offer a reasonable alternative for a wide range of commercial and military wastes that would otherwise be destined for an incinerator.

Section 2 Recommended Readings:

ANPED Clean Production Resource List, http://www.anped.org/PDF/11spaccleanprsclist.pdf

Connett, P., "Medical Waste Incineration: A Mismatch Between Problem and Solution," The Ecologist Asia, Vol. 5, No. 2, March/April 1997.

Costner, P. et al, *Technical Criteria for the Destruction of Stockpiled Persistent Organic Pollutants*, Greenpeace International Science Unit, October 1998.

Crowe, E., and Schade, M., *Learning Not to Burn: A Primer for Citizens on Alternatives to Burning Hazardous Waste*, 2002.

Geiser, K., *Materials Matter*. Boston: MIT Press, 2001.

Health Care Without Harm, *Going Green: A Resource Kit for Pollution Prevention in Health Care*, 2001.

Health Care Without Harm, *Medical Waste Treatment Technologies: Evaluating Non-Incineration Alternatives: A Tool for Health Care Staff and Concerned Community Members*, 2000.

Health Care Without Harm, *Non-Incineration Medical Waste Treatment Technologies: A Resource for Hospital Administrators, Facility Managers, Health Care Professionals, Environmental Advocates, and Community Members*, August 2001.

Health Care Without Harm, *Update on Pyrolysis: a Non-traditional Thermal Treatment Technology*, 2002.

Kela, M. et al., *Managing Hospital Waste: A Guide for Health Care Facilities* (Revised Edition), Srishti, New Delhi, 2000.

McRae, G., *Eleven Recommendations for Improving Health Care Waste Management*, CGH Environmental Strategies, December 1997 (revised May 2000).

Murray, R., *Creating Wealth from Waste*, Demos, London, 1999.

Platt, B., *Resources up in Flames: The Economic Pitfalls of Incineration versus a Zero Waste Approach in the Global South*, Global Alliance for Incinerator Alternatives, 2003.

Srishti, *Hospital Waste: Time to Act; Srishti's Factsheets on 8 Priority Areas*, New Delhi, 2000.

Thorpe, B., *Citizen's Guide to Clean Production*, Clean Production Network, August 1999.

Wingspread Statement on the Precautionary Principle, published in *Rachel's Environment & Health News*, #586, February 19, 1998, www.rachel.org

Section III:
PUTTING OUT THE FLAMES

Citizens protest against wasting and burning in the first Global Day of Action on waste incineration on 17 June 2002 © FoE Derby

In city after city, country after country, the incineration industry has proven itself to be phenomenally unpopular. Existing and proposed incinerators are regularly met with vocal opposition from local residents and public interest organizations. In hundreds of cases, the public has succeeded in shutting down operating plants or preventing the construction of new ones. The widespread resistance to incineration is a testament to the popular rejection of this technology. In the short term, popular rejection does not always translate into government rejection, because of industry influence in governments, among other factors. But in the long term, as national bans and international treaties take effect, citizen opposition to incinerators is slowly being translated into law.

THE RISE AND FALL OF THE AMERICAN BURNER

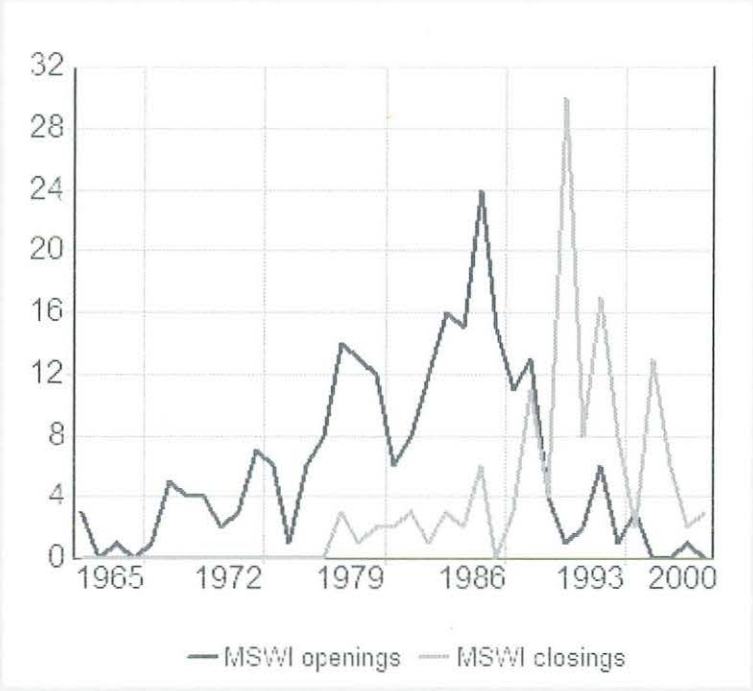
The rapid rise and fall of the incinerator industry was most dramatic in the United States. Although the country built its first municipal waste burner in 1885, incineration was a minor industry until the 1970s, when a confluence of factors spurred hundreds of proposals for municipal and medical waste incinerators. These factors included tax breaks, guaranteed electricity sales, a perceived landfill crisis, and the collapse of the nuclear power industry in the face of public opposition and spiraling costs.[167] When orders for new nuclear

plants dried up, large engineering firms went looking for similarly grandiose public works projects to enable them to continue benefiting from government subsidies. For companies such as Westinghouse, General Electric, Babcock & Wilcox, and Combustion Engineering, municipal waste incineration was the answer.[168]

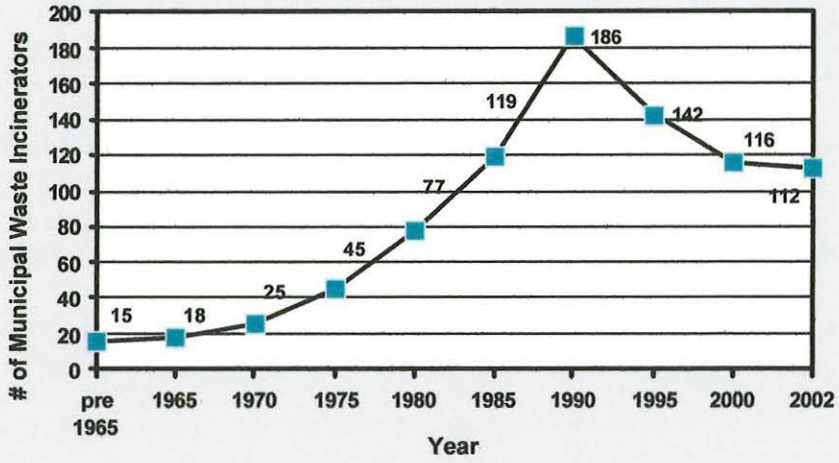
At the same time, ocean dumping of waste produced widely reported incidents of medical waste washing up on beaches, resulting in the closure of popular swimming areas. Combined with the new awareness of HIV/AIDS, this led to greater public concern over health care waste and a call for stepped-up treatment. Many hospitals, fearful of spreading infection, lawsuits or just bad publicity, adopted on-site medical waste incinerators not only to treat their health care waste, but also to remove the hospital's fingerprints on the waste. A syringe or bandage could conceivably be traced to the hospital of origin, but incinerator ash could not.

As a result, incinerator construction increased dramatically in the United States in the 1980's. Yet the trend lasted little more than a decade. By 1990 incineration had clearly crested, and the industry has suffered extreme contraction since then. The number of operating municipal waste incinerators, for example, peaked in 1991 at 171, and has fallen steadily in the decade since.[169] The rapid expansion of incineration sparked one of the largest and most effective grassroots environmental movements in American history.[170] In approximately 15 years, this loosely-linked network of mostly volunteer activists succeeded in stopping over 300 proposed municipal waste incinerators across the country, and in imposing increasingly strict air emissions standards, effectively killing off the American municipal waste incinerator industry.[171]

Openings and Closings of Municipal Solid Waste Incinerators in the United States[172]



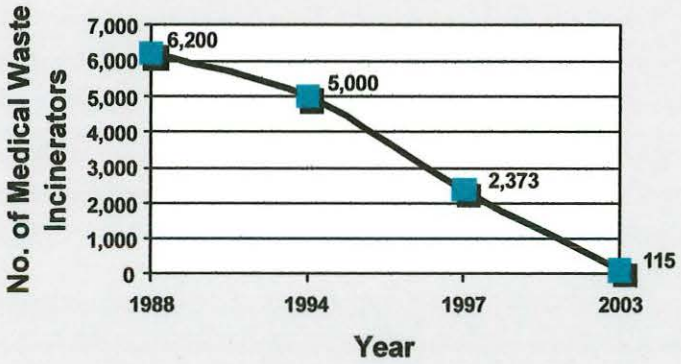
Municipal Solid Waste Incinerators in Operation in the United States[173]



These activists were often derided as NIMBYs (Not In My Back Yard) – people who were selfishly unwilling to share the burdens of modern technology. Although many were drawn to the issue when they felt their own health and wellbeing were directly threatened, they quickly realized the global dimensions of the problems, and became engaged at the policy level as well. As a result of this public pressure, many states and localities in the United States passed bans or restrictions on incinerators (See Appendix B), and the Federal government began to regulate incinerator air emissions, beginning in 1987. This forced the closure of most of the smaller incinerators. The case of medical waste incinerators is particularly dramatic. No one knows exactly how many medical waste incinerators operated in the US in the 1980's, but USEPA estimated 6,200 in 1988.[174] By 2002, that number was down to 767, and falling; of those, only three were built since 1996.[175] In Michigan, for example, all but one of the 290 medical waste incinerators in the state closed down rather than attempt to meet Federal emissions limits imposed in 1997.[176] In 1999, three states certified that they had no operating medical waste incinerators at all.[177]

> NIMBY is industry's name for **democracy in action.**
> — Dr. Paul Connett

Medical Waste Incinerators in the United States[178]



It is significant to note that since June 1996, only seven new medical waste incinerators have been constructed in the United States. The seven new incinerators are very much lower than the original EPA projection of 700 new incinerators that were expected to have been built between 1995 to 2000 based on past trends.

References:
December 1988: "Hospital Waste Combustion Study-Data Gathering Phase," US EPA.

July 1994: "Medical Waste Incinerators-Background Information for Proposed Standards and Guidelines: Industry Profile Report for New and Existing Facilities," US EPA.

January 1996: "Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Medical Waste Incinerators," US EPA.

June 2003: "Status of Current HMIWI Efforts," presentation by Fred L. Porter, US EPA, at the Medical Waste Institute.

Davidson County, North Carolina is listed in the Guinness Book of World Records for having **15,000** people show up for a public hearing on a waste incinerator in 1987 — the most public participation at a public hearing in the history of the United States. This hearing never took place because of the record turnout of residents. The state's Hazardous Waste Treatment Commission had to be escorted out of the county by the Highway Patrol for their own safety. The Commission never came back.[179]

End of the Incinerator Era

According to the U.S. Department of Energy in 1997, "The WTE [incinerator] market has been steadily shrinking in the USA, (and in Europe and Japan) due to the following reasons:

"1. The Federal Tax Policy no longer favors investment in the capital-intensive (because of expensive pollution control and monitoring equipment) WTE technologies. (WTE companies previously had tax-credit benefits.)
"2. Energy regulations, which once required utilities to buy WTE energy at favourable rates, have been revamped.
"3. There have been increasing challenges to interstate waste movement.
"4. With increasing awareness and protest by communities, the governments have been forced to involve them in the decision-making process. This sometimes means having to leave the waste management option to the communities themselves. People are increasingly opting for recycling and composting of waste, and out of WTE."[180]

At the same time as emissions standards were becoming more stringent, some of the subsidies to incinerators were rolled back. In particular, the U.S. Supreme Court ruled that put-or-pay contracts – under which a community was required to deliver its garbage to an incinerator and could not look for cheaper options – were illegal. Caught between public opposition, increasing environmental standards and loss of subsidies, the incinerator industry simply packed up. Indeed, its demise in the United States was so dramatic that it garnered a front-page story in the premier business newspaper, the *Wall Street Journal*.[181] It is now virtually impossible to build a new incinerator in the United States. As a result, the U.S. incinerator manufacturers have either left the industry or shifted to exporting incinerators.

The Demise of the Incinerator Industry, in Their Own Words

"...there is substantial doubt about the Company's ability to continue as a going concern....Because of the downturn in Pacific Rim markets and new USEPA regulations, the Company has concentrated its current marketing efforts on other areas of Asia and selected domestic markets."

– **Consumat Environmental Systems**, an incinerator builder, in a U.S. securities filing.[182]

"Unless there are many changes in the solid waste industry, the waste-to-energy industry will continue in an asset management mode....In other words, there's no new business on the horizon....Everybody else that was ever in the waste-to-energy business, starting with companies like Monsanto and Occidental Petroleum, General Electric and Boeing and on and on – of the probably 100 companies that were once in waste-to-energy, there are three left."

– **David Sussman**, senior vice president of environmental affairs of Ogden Corporation (now Covanta).[183]

Incineration is a " ***dead technology,*** *"* an official of Security Environmental Systems announced when SES dropped its plans to build California's first hazardous waste incinerator when it was required to prepare an environmental impact report and a health risk assessment.[184]

"The only economic thing for Foster Wheeler to do is to just blow the [incinerator] up."
— **John McGinty**, industry analyst on the Robbins incinerator in suburban Chicago, one of many financially unviable incinerators.[185]

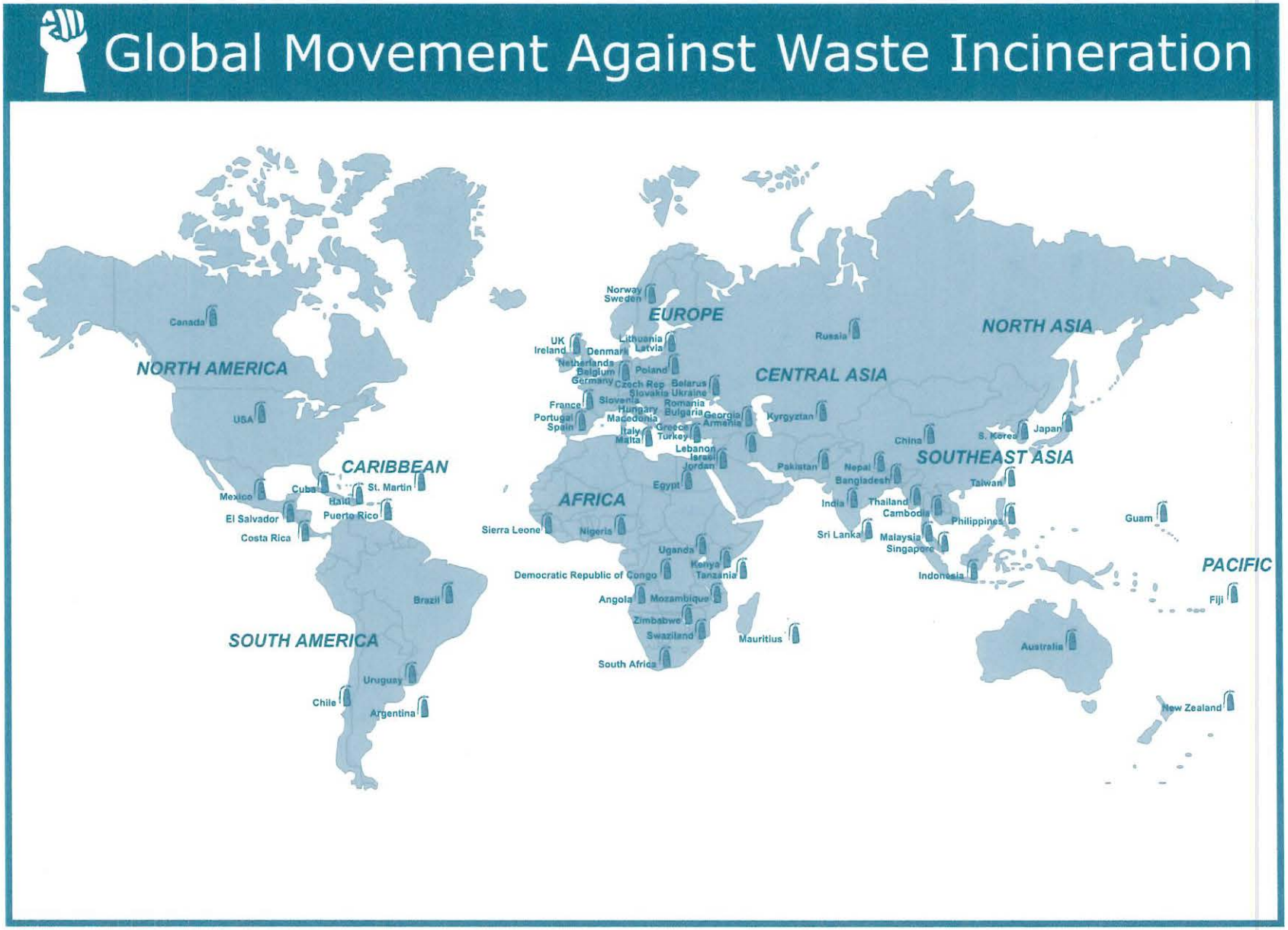
Having defeated the incinerators, American activists were not content to send their waste to landfills. Instead, they poured their energies into recycling and composting programs, which took off with equal speed — doubling in number between 1985 and 1991.[186] California was the first state to embrace a goal of diverting 50 percent of waste by 2000, and is now officially committed to a goal of Zero Waste. By 1999, more than 135 million Americans (half the country's population) were served by curbside recycling programs — more than the number that vote in presidential elections![187]

GLOBAL RESISTANCE

Across the globe, public interest organizations and popular efforts have stopped incinerator proposals, shut down existing incinerators and fought for legislation to ban or restrict waste incineration. Organized resistance to incineration is active in hundreds of communities and on every continent (see map). In 2001 alone, for example, major incinerator proposals were defeated by public opposition in France, Haiti, Ireland, Poland, South Africa, Thailand, the United Kingdom, and Venezuela. And in June 2002, 126 groups in 54 countries participated in the first global day of action against incineration. In December 2000, more than 75 individuals representing public interest organizations in 23 countries met near Johannesburg, South Africa, to launch GAIA. The acronym stands for two names: the Global Anti-Incinerator Alliance and the Global Alliance for Incinerator Alternatives, indicating that GAIA members work both against incineration and to implement alternatives. As of May 2003, GAIA had 378 member organizations in 68 countries, and it continues to expand rapidly.

In every country, opposition to incineration takes a unique form; and it is shaped by the political, physical, and cultural characteristics of that nation. In Japan, for example, resistance is "everywhere," in the words of an incinerator industry representative,[188] primarily in the form of hundreds of local anti-dioxin groups throughout the country, representing tens of thousands of ordinary Japanese citizens. These organizations have succeeded in making dioxin a household word throughout the country and imposing increasingly stringent regulations on the industry.

According to the Japan International Cooperation Agency, which promotes the construction of incinerators abroad, "Incineration [facilities]...are generally considered to be a nuisance. Organized movements against them frequently surface, thus making construction difficult. The basic complaint centers around negative [environmental] impacts caused when technical defects occur."[189] However, Japan is a densely populated country with little available land, so it has not had the luxury of landfilling its waste while developing a recycling system, as the United States has done. Also, an unusually tight nexus between industry and government has kept the incinerator industry alive. With approximately 1800 municipal waste incinerators and thousands of medical and industrial waste burners, Japan is the most incinerator-intensive country on Earth. It also burns the largest percentage of its municipal waste — 75 percent[190] — and the UNEP estimates that in 1995 Japanese waste incinerators alone were the source of 35% of global dioxin emissions.[191]


Global Movement Against Waste Incineration
NORTH AMERICA
Canada
USA
CARIBBEAN
Mexico
Cuba
Haiti
St. Martin
Puerto Rico
El Salvador
Costa Rica
SOUTH AMERICA
Brazil
Uruguay
Chile
Argentina
EUROPE
Norway
Sweden
UK
Ireland
Denmark
Lithuania
Latvia
Netherlands
Belgium
Germany
Poland
Czech Rep
Belarus
Slovakia
Ukraine
France
Slovenia
Romania
Hungary
Bulgaria
Portugal
Spain
Macedonia
Georgia
Armenia
Italy
Malta
Greece
Turkey
Lebanon
Israel
Jordan
Egypt
AFRICA
Sierra Leone
Nigeria
Uganda
Kenya
Tanzania
Democratic Republic of Congo
Angola
Mozambique
Zimbabwe
Swaziland
South Africa
Mauritius
CENTRAL ASIA
Russia
Kyrgyztan
Pakistan
NORTH ASIA
China
S. Korea
Japan
SOUTHEAST ASIA
Nepal
Bangladesh
India
Taiwan
Thailand
Cambodia
Philippines
Sri Lanka
Malaysia
Singapore
Indonesia
Guam
PACIFIC
Fiji
Australia
New Zealand

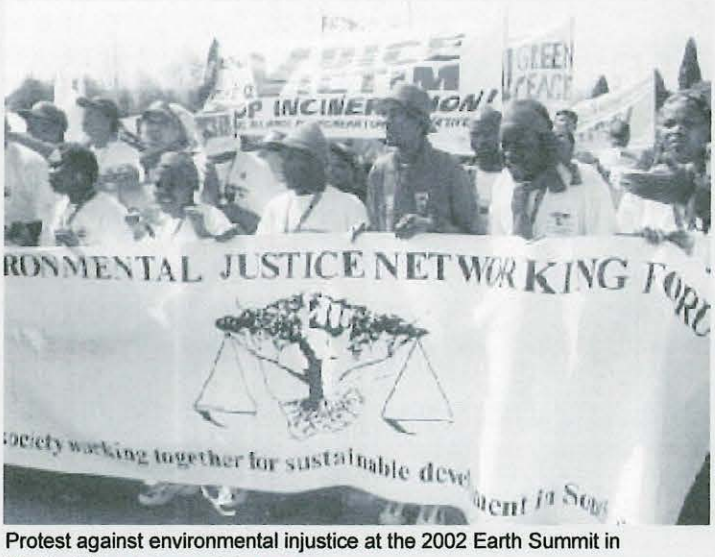
Nevertheless, citizen efforts in Japan have slowed down many incinerator proposals, and forced those that are constructed to face stiffer environmental controls than the national norm. "If municipalities do not accept the citizens' requests for standards lower than the national level, in fact, it will be impossible to site a plant. Municipalities are forced to accept the demands," said one government official. "The most important reason we monitor and keep plants clean is because of the opposition, regardless of the costs. Otherwise, we cannot build incinerators at all."[192] Public demands for stricter emissions standards have forced the closure of over 500 incinerators since 1998.[193] But with Japanese industry making fortunes in the construction of incinerators both at home and abroad, Japanese activists face an uphill battle, despite their numbers and expertise.

"We believe that incineration will **never** play a major role in truly sustainable waste management."

— U.K. House of Commons select committee, 2001.[194]

In Europe, home to the largest incinerator construction firms, resistance has also been widespread, although governments were able to commit to more extensive incineration before being checked by popular dissent. Active opposition to incinerator siting exists in virtually every European country, and has succeeded in blocking the majority of the incinerators proposed since the early 1980's.[195] INFORM, a U.S. environmental policy research organization investigating European incineration practices, found as early as 1986 that, "despite the view held by some in the United States that European plants are sited 'without incident,' all the facilities visited by INFORM confronted opposition."[196]

Indeed, industry watchers now consider the European incinerator market "mature," meaning that there is no scope to build new incinerators; at most, old ones that are retired may be replaced. But even this looks unlikely, since Europeans have dramatically stepped up their composting and recycling rates, reducing the flow of trash to incinerators.[197] This has resulted



Protest against environmental injustice at the 2002 Earth Summit in South Africa © Manny Calonzo/GAIA

"Citizens from across the globe speak out against the use of incinerators to deal with the excesses of our throw-away society."

— Signed by over one hundred fifty NGO delegates from 38 countries during the Johannesburg Summit

in the closure of some existing plants that can no longer obtain sufficient waste to function; others must import waste across national borders in order to have sufficient trash to burn.[198] The European Union has also developed the concept of the "waste hierarchy" – a prioritization of strategies that should be used to address waste. Waste prevention is at the top of the hierarchy, indicating that it is the most favored activity; recycling and composting in the middle; and incineration and landfilling at the bottom.

Some parts of Europe have gone farther. In Bavaria, Germany, home to one of the world's leading incinerator manufacturers,[200] public opposition took the form of a public referendum on incineration. Das Bessere Müllkonzept (The Better Garbage Concept) was a legislative program put forward by a coalition of citizens' organizations in 1989 that proposed a ban on incineration, source separation of household waste, local responsibility for waste management, and the development of intensive recycling and composting operations. In order to even qualify for the ballot, ten percent of the voting population (in this case, 850,000 people) had to go to a polling place and sign a petition in favor of the referendum over the course of just two weeks. The coalition collected over 1 million signatures but then narrowly lost the vote itself, in a campaign marred by approximately 700 alleged breaches of the election law.[201] The strength of the campaign did induce the government to adopt some waste reduction measures, however, which have resulted in an overall decrease in the total waste produced in Bavaria since 1991, in spite of population increases.[202]

The Medical Community Speaks Out Against Incineration

Citizen efforts have been bolstered by the support of various civil society groups, particularly professional associations, which have lent increased legitimacy to the public's concerns about human health and the environment. This has become particularly important around issues of dioxins and other toxics, where the science is intricate, evolving, and highly politicized. Incinerator proponents routinely distort the scientific evidence, using tools such as risk assessment to deceive the public about health risks. For example, one consultant indicates that the risk of contracting cancer from an incinerator is less than from eating peanut butter sandwiches.[203]

In this atmosphere of disinformation, ordinary people find it difficult to distinguish fact from fiction, and the imprimatur of respected organizations is important to legitimize the scientific or factual arguments that public interest groups make. Organizations that have taken a stand against incineration include the World Federation of Public Health Associations, the International Council of Nurses, the American Public Health Association, the American Nurses Association, the Bavarian Medical Association, the German Medical Association of the Munich Region, the California Medical Association, the Massachusetts Medical Society, and Physicians for Social Responsibility.

In the global South as well, citizens have been active in opposing incineration. Mozambique's first environmental organization to emerge after the civil war formed specifically to head off a proposal to incinerate obsolete pesticides in a cement kiln in a residential neighborhood. Livaningo's formation is significant not only for its struggle, but because it reaches across class and color lines in a fractured society. It was widely heralded as the re-establishment of a new, postwar civil society in Mozambique. Nevertheless, the struggle to prevent pesticide incineration became a long battle, with local residents traveling as far as Denmark to persuade the Danish government (the project funder) that the pesticides should be returned to their country of origin instead. Eventually, under pressure from Livaningo and

European groups, the Danish government not only abandoned the incineration of pesticides in Mozambique, it announced that it would no longer promote the use of cement kilns for pesticide destruction anywhere. That battle won, Livaningo is now tackling issues of medical and municipal waste incineration.

Struggles against incineration often pit resource-poor community activists against an alliance of industry and government officials. As such, citizens must often resort to direct action of various kinds, from marches and demonstrations to sit-ins and hunger strikes, in order to bend the government to the public will. In the U.K., Greenpeace activists physically occupied an incinerator, blocking the loading cranes and smokestacks, in order to shut it down. They were ultimately removed by the police, arrested, and charged with trespass. However, the jury refused to convict them, finding instead that they acted in the public interest.[204] In Kwangju, South Korea, launching pad for that country's successful democracy struggle in the 1980s, veteran activists are now engaged in fighting the incinerator industry. They see the government's

Koreans oppose the planned incinerator facility in Masan.© KFEM/KWMN

attempts to impose incineration on communities as a direct affront to the democracy for which they fought. "If we can beat a military dictatorship backed by the full strength of the U.S. military," says one, "we can certainly defeat an incinerator!"[205] In Lebanon, a sit-in in front of a municipal waste incinerator prevented the delivery of waste for two weeks. The Minister for the Environment declared that as long as the public continued to blockade the incinerator, the government would stop collecting waste. This sparked a large-scale community protest. When the police cracked down, the protestors became unruly, and in the ensuing confusion, the incinerator was destroyed – literally torched. The government did not repair the incinerator, but instead built a nearby separation facility for recycling.[206]

At the policy level, citizen efforts to legally restrict incineration have been successful in many jurisdictions in at least 15 countries (see Appendix B). Although some of these moratoria have expired, and one ban was overturned after heavy industry lobbying, they have largely

been effective in preventing the construction of new incinerators. In 1999, the Philippines made history as the first nation to ban all forms of incineration. This was entirely the result of the efforts of public interest groups, and has been continuously under attack by both industry and international agencies such as the Asian Development Bank, which see it as an affront to their commercial interests. Other nations, reluctant to legally commit themselves to a ban on incineration, have nevertheless stated that they will avoid incineration as a matter of policy. For example, the Greek Ministry of the Environment has prohibited the use of incineration for municipal wastes.[207] The Turkish Minister for the Environment issued a circular stating that incineration should be phased out and replaced with clean technologies such as recycling, sterilization of clinical waste and "proper" landfilling. He cited high investment and operating costs, dioxin and furan emissions, and high monitoring costs as reasons why incineration was being phased out worldwide.[208]

The Philippine Incinerator Ban[209]

In 1999, the Philippines became the first country in the world to prohibit all forms of waste incineration, including open burning. This environmental milestone was achieved after years of campaigning by environmental and community groups opposing proposals for incinerators, landfills and dumpsites in various parts of the country.

Prior to the passage of the incineration ban, a key feature of the Clean Air Act, multinational waste management companies targeted the Philippines because they saw enormous business opportunities in the worsening garbage problems of Metro Manila and the country's other major urban centers. Representatives from such firms – which included Ogden (now Covanta), Vivendi (formerly Générale des Eaux), Steinmuller, Asea Brown Boveri, Olivine and some Japanese companies – fanned out across the country, presenting flashy incinerator proposals to unsuspecting national and local government officials.

In some instances, such initiatives had the backing of foreign diplomats, including the Swedish and Danish embassies, economic groupings, such as the American and European Chambers of Commerce, and development banks and multilateral aid agencies like the Asian Development Bank and the Japan International Cooperation Agency (JICA). These powerful foreign business and government institutions worked with incinerator promoters in the Philippine government to prevent the ban from being legislated. They sent letters to the Philippine Congress warning of World Trade Organization sanctions, arranged special lobby missions, and organized foreign junkets for Philippine officials to witness firsthand the operation of modern, "clean" incinerators in industrialized countries.

The anti-incinerator activists, however, were not to be intimidated. The environmental groups banded together with various sectoral and community groups to form the Clean Air Coalition. The coalition later presented to Congress more than two million signatures in support of the incineration ban and the removal of lead from fuels in the Philippine Clean Air Act of 1999. Linking with anti-landfill groups and communities, the Clean Air Coalition eventually expanded to become the Eco-Waste coalition, with more than a hundred members nationwide. The broadened coalition successfully campaigned for the approval of an Ecological Waste Management Act, which mandated the source segregation and recycling of municipal waste. The same law also reaffirmed the ban on incineration. The mix of policy advocacy, public campaigning, coalition work and citizen's resistance at the grassroots level is steering the Philippines in the right direction, forcing the adoption of real solutions to the country's waste problems.

INTERNATIONAL LAW

The growing consensus against incineration has also been reflected in the body of international environmental law, which has increasingly restricted its use and acceptability. In a few cases, conventions have addressed the question of incineration head-on. More often, however, international lawmakers have preferred to articulate a number of general principles that mitigate against the use of incineration and its variants (such as pyrolysis). When incorporated into national law and policy-making, these principles clearly push nations away from the use of incineration, although they still fall short of outright bans. Communities and advocates for sustainable discards systems can use the following language from treaties and conventions as leverage, especially those treaties and conventions that a country has signed or ratified. The International POPs Elimination Network and Basel Action Network can provide information on status of countries with respect to the Stockholm Convention and Basel Convention (see Resources section for contact information).

The Precautionary Principle was devised to solve the problem that scientific uncertainty poses for policy-making. Many countries will not restrict an activity or substance until it has been proven harmful to human health or the environment. On its face, this seems a reasonable approach. However, given the thousands of synthetic chemicals to which humans are exposed, the complexities (largely unexplored) of interactions between these chemicals, and the limited research budgets of most countries, it is simply not feasible to test every conceivable combination of chemicals for their effects on humans. Even if that were feasible, it would still be impossible to conclusively establish causal links between a particular facility's releases and the illness or death of any individual or group of individuals. In any case, by the time such a causal link is established, it is too late: the population has already been exposed and suffered the consequences. This has sarcastically been referred to as the "count the dead bodies technique" of chemicals testing.

At any given time, therefore, many substances are in the "gray area" of scientific uncertainty: their harmful effects are not conclusively proven, but sufficient evidence of harm exists to suspect that they are not safe. The Precautionary Principle, as stated in the 1998 Wingspread Statement, is: "When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically. In this context, the proponent of an activity, rather than the public, should bear the burden of proof. The process of applying the Precautionary Principle must be open, informed and democratic and must include potentially affected parties. It must also involve an examination of the full range of alternatives, including no action."[210]

> **"Lack of evidence of harm is not evidence of lack of harm."** – Anonymous

Several important documents in international law reference the Precautionary Principle, although each uses a somewhat different formulation, and some refer to it without any definition. It is clearly spelled out as principle 15 of the Rio Declaration on Environment and Development, adopted at the Earth Summit in Rio de Janeiro, Brazil, in 1992: "In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation." The 1996 Protocol to the London Convention states as its first general obligation that: "...Parties shall apply a precautionary approach...whereby appropriate preventative measures are taken when there is reason to believe that wastes or other matter introduced into

the marine environment are likely to cause harm even when there is no conclusive evidence to prove a causal relation between inputs and their effects." Precaution is also referenced in the Preamble to the Protocol to the Convention on Long-Range Transboundary Air Pollution (LRTAP) on Persistent Organic Pollutants, a European regional treaty concerned with cross-border air pollution effects. Under the OSPAR Convention for the protection of the North Atlantic Ocean, implementing the Precautionary Principle with respect to the marine environment is an obligation of the signatory nations.[211] The Bamako Convention[212] similarly obligates its members to implement the precautionary approach "without waiting for scientific proof" of the harms in question.

Most recently, the Precautionary Principle is "embedded" in the Stockholm Convention on Persistent Organic Pollutants. It is referenced in the Preamble; in the Objective; and it is operationalized in at least two significant ways. The Stockholm Convention begins by listing 12 chemical substances that are subject to restriction, but it is envisioned to add new substances, in accordance with the Precautionary Principle. In other words, under the existing treaty framework, "lack of full scientific certainty shall not prevent" a chemical from being listed if the signatory nations have sufficient evidence to indicate that the chemical meets the POPs criteria and is of concern. Secondly, the treaty enjoins parties to use Best Available Techniques in order to minimize the production and release of POPs from new and existing sources, and the definition of Best Available Techniques includes precaution.

The Precautionary Principle bears on incineration in two different ways. First, combustion is an extremely complex process, and it is still not known precisely what substances are produced and released through the incineration of wastes. This is particularly true when the waste in question is highly variegated, as in the case of municipal or health care waste. Without knowing the pollutants produced, their quantities, environmental fate, or health effects, it is impossible to assure the safety of such a process (even if the known dangers could somehow be eliminated). Thus, precaution argues for avoiding the activity, i.e., incineration. Second, many of the substances which have been identified in air emissions and incinerator ash have varied and subtle effects on the human body, which are still being investigated. Some, such as lead and PCBs, may also interact with each other or other pollutants present in the environment to create synergistic effects. Given the uncertainty surrounding these health effects, precaution again argues for avoiding their production and release.

A second principle found in international law, although more rarely mentioned by name, is prevention. This is simply the common-sense notion that it is better to prevent harm than to allow damage to occur and then attempt to mitigate it or clean it up. International law clearly indicates that the minimization of environmental damage is to be prioritized over end-of-pipe techniques. Thus, Agenda 21, the framework document adopted at the Earth Summit in 1992, states that a target of hazardous waste policy must be "preventing or minimizing the generation of hazardous wastes as part of an overall integrated cleaner production approach."

Minimization is also specifically required in the LRTAP Convention of 1979;[213] the World Charter for Nature, adopted by the UN General Assembly in 1982; the UNEP Governing Council Decision on Cairo Guidelines and Principles for the Environmentally Sound Management of Hazardous Wastes of 1987; the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal of 1989; the Convention on the Transboundary Effects of Industrial Accidents of 1992; and the Washington Declaration on Protection of the Marine Environment from Land-Based Activities of 1995. Prevention is explicitly brought to the fore in the European Union's waste hierarchy, which prioritizes waste avoidance and waste minimization, and places incineration and landfilling in the least-preferred categories. As with the Precautionary Principle, prevention is woven throughout the Stockholm Convention. It is

referenced in the Preamble and is present in the specific obligations. Most significantly, the Convention speaks of preventing the formation and release of POPs – indicating that end-of-pipe technologies which seek to destroy or trap the pollutants are not sufficient: their very formation should be prevented. This is the true application of the prevention principle.

It is the Bamako Convention, however, which most clearly lays out the prevention principle and its implications for industry, saying: "Each party shall...ensure that the generation of hazardous wastes within the area under its jurisdiction is reduced to a minimum taking into account social, technological and economic aspects." It then goes on to specifically require the implementation of clean production: "Each Party shall strive to adopt and implement the preventive, precautionary approach to pollution problems...through the application of clean production methods, rather than the pursuit of a permissible emissions approach based on assimilative capacity assumptions." It then goes on to define clean production methods as applicable to the entire life cycle of the product, including: "raw material selection, extraction and processing; product conceptualisation, design, manufacture and assemblage; materials transport during all phases; industrial and household usage; reintroduction of the product into industrial systems or nature when it no longer serves a useful function. Clean production shall not include 'end-of-pipe' pollution controls such as filters and scrubbers, or chemical, physical or biological treatment. Measures which reduce the volume of waste by incineration or concentration, mask the hazard by dilution, or transfer pollutants from one environmental medium to another, are also excluded."

The Bamako Convention's detailed wording clearly indicates the contradiction between prevention and incineration. On the one hand, incineration, as a waste treatment technology, is an indication of a failure to implement clean production and waste minimization. On the other hand, as a technology that produces hazardous byproducts, incineration itself runs counter to the prevention principle.

The third principle, cited in documents too numerous to mention, is the importance of limiting transboundary environmental effects. As the Cairo Guidelines on hazardous waste state: "States and persons involved in the management of hazardous wastes should recognize that protection of health and the environment is not achieved by the mere transformation of one form of pollution into another, nor by the mere transfer of the effects of pollution from one location to another, but only by the use of the waste treatment option (which may include transformation or transfer) which minimizes the environmental impact."[214] This was reiterated in the Rio Declaration, which states in principle 14: "States should effectively cooperate to discourage or prevent the relocation and transfer to other States of any activities and substances that cause severe environmental degradation or are found to be harmful to human health." This is an abiding concern of international law, for the obvious reason that national laws are insufficient to address environmental harms whose root causes lie in another country. Given the tendency towards long-range transport exhibited by many incinerator pollutants, it is impossible to confine incinerator emissions to the national territory or airspace of any country. Thus, incineration clearly contradicts the principle of minimizing transboundary environmental effects.

The International Joint Commission's Statement on Incineration

A Policy Statement On Incineration of Municipal Waste by the International Joint Commission (excerpt):

iii) Any further deployment of this technology [incineration] by any jurisdiction should be done on the basis of a net reduction of emissions of persistent toxic substances, jurisdiction wide, from such facilities.

iv) The total amount of persistent toxic substances released by incineration facilities in a jurisdiction, defined as the sum of those to the atmosphere and in the residuals, must also be decreased whenever a new incineration facility is permitted.

The International Joint Commission is an independent, bilateral body set up by the United States of America and Canada to prevent and resolve disputes under the 1909 Boundary Waters Treaty.[215]

In addition to these general principles, several treaties single out incineration for partial bans. In 1996, the Protocol to the London Convention outlawed incineration at sea. The Protocol replaced the 1972 London Convention,[216] which banned ocean waste dumping, but not hazardous waste incineration at sea. Ocean incineration had been practiced by a few countries since 1969, in an effort to avoid national air emissions norms. Thirty-seven of the countries party to the London Convention agreed to a phase-out by 1993, but, in fact, the last incinerator ship had ceased operation in 1989.[217] In 1998, the OSPAR Convention re-affirmed this ban on at-sea incineration, although its applicability is limited to the North Atlantic. The Bamako Convention, as has already been mentioned, clearly defines incineration as an end-of-pipe technology not compatible with clean production; it also outlaws incineration at sea but includes territorial and internal waters as well as the high seas in its ban. The Bamako and Basel Conventions also define the wastes resulting from incineration and pyrolysis as hazardous wastes subject to the respective treaties. And the Stockholm Convention, although stopping short of a global ban on incineration, throws up several formidable barriers to its use.

THE STOCKHOLM CONVENTION AND INCINERATION[218]

The Stockholm Convention on Persistent Organic Pollutants (POPs)[219] is an international treaty, concluded in 2001, that seeks to protect human health and the environment from a particular class of synthetic chemicals, namely POPs. Initially, the treaty applies to 12 pollutants, of which eight are pesticides,[220] two are industrial chemicals (hexachlorobenzene and PCBs);and two are produced only as unintentional byproducts (dioxins and furans). In fact, the latter three are themselves classes of chemicals. The treaty includes provisions to expand this list to include other chemicals, using the Precautionary Principle to judge their fitness for inclusion in the list.

Although the Stockholm Convention does not ban incineration or even the construction of new incinerators, it does place serious obstacles in the path of any incineration project. The Convention specifically states in Annex C that "waste incinerators, including co-incinerators of municipal, hazardous or medical waste or of sewage sludge; cement kilns firing hazardous waste" are among the technologies that have the "potential for comparatively high formation and release of such unintentional POPs." In fact, incinerators are significant sources of four of the 12 listed pollutants: dioxins, furans, PCBs, and hexachlorobenzene. As such, incinerators

as a class are clearly subject to the restrictions of the Stockholm Convention.

The Convention requires parties to take "measures to reduce the total releases derived from anthropogenic sources" of the unintentional POPs. Within this context, it becomes very difficult to justify any new or additional sources of POPs, such as a new incinerator or increased quantities of waste sent to an existing incinerator. This could be interpreted to allow new sources of POPs if they were counterbalanced by much deeper cuts in POPs production or releases from other sources; but that is not made explicit in the treaty. As it stands, the treaty clearly requires parties to take action to reduce overall releases.

In fact, the Convention goes further; it is the strongest legal expression to date of the preference for source prevention over mere control of environmental hazards. For most of the intentionally produced POPs, the Convention requires elimination. For the unintentionally produced, or byproduct, pollutants, the treaty's Article 5 establishes a goal of their "continuing minimization and, where feasible, ultimate elimination."

The Stockholm Convention makes a significant departure from past policy regarding incineration's environmental impacts because it does not apply to air emissions alone for determining dioxins minimization rates. Rather, the Stockholm Convention looks at *total releases*, which include solid and liquid residues, including residues from air pollution control devices (fly ashes). Most past justification of incinerators was based on the argument that dioxin emissions to the atmosphere could be captured and therefore controlled. However, the Stockholm Convention considers such solid and liquid releases to be part of what must be continually minimized and, where feasible, eliminated.

Indeed, Article 5 also contains a particularly relevant substitution principle, which states that Parties to the treaty shall "Promote the development and, where it deems appropriate, require the use of substitute or modified materials, products and processes to prevent the formation and release of [unintentional POPs]." It is important to note the use of the term "formation" and to realize that this obligation makes it apparent that where there are alternative methods of waste management, any process that produces dioxins should be avoided. Again, with such clear signals provided for in this new body of international law, it is especially difficult to justify creating a new source of unintentional POPs, no matter how many end-of-pipe control measures are envisaged. The Convention recognizes that such technologies are not equivalent to preventing the formation of POPs, and therefore specifically calls for the use of substitute processes.

The Stockholm Convention also contains strong direction on the management and treatment of existing stockpiles of POPs wastes (which are often treated in hazardous waste incinerators). Article 6 calls for Parties to take measures so that POPs wastes are "disposed of in such a way that the persistent organic pollutant content is destroyed or irreversibly transformed so that they do not exhibit the characteristics of persistent organic pollutants." Although this text is followed with some caveats, such as excepting low levels of POPs content, which must await further interpretation, the use of the words "destroyed or irreversibly transformed so that they do not exhibit the characteristics of POPs," is meant again to be inclusive of all formation and outputs (not just air emissions). This goes far beyond what has previously been envisaged for any chemical waste in international law.

While it is true that many countries currently continue to operate various types of incinerators, the Stockholm Convention has placed the future of incineration and all waste combustion in great doubt. Existing incinerators will no doubt continue to operate for some years to come, but it will now become increasingly difficult to justify the construction of new

incinerators. As feasible alternatives exist to all types of incineration, the treaty's requirement to "eliminate and substitute" processes for new sources will be the operating principle. Indeed it will take a fundamental bending of the intent of the Stockholm Convention to promote any new source of POPs while alternatives exist.

One hundred twenty-seven nations signed the treaty in May 2001 in Stockholm. Although the Convention will not come into force until 50 nations have ratified it, and then only in the ratifying countries, it is not toothless in the interim. Under international law, signing a treaty is a statement of commitment to comply with the treaty; and governments that do sign are enjoined from taking actions that are clearly prejudicial to the goals of the treaty, even though they may not yet have ratified it. As such, the Stockholm Convention is already a barrier against the construction of any new incinerator in signatory nations.

Section 3 Recommended Readings:

Luscombe, D., and Costner, P., *Zero Toxics: Sources of By-product POPs and Their Elimination*, Greenpeace International, May 2001.

Rachel's Environment and Health News, Environmental Research Foundation, www.rachel.org

Walsh, E., Warland, R. and Smith, D., *Don't Burn it Here: Grassroots Challenges to Trash Incinerators*, University Park, PA: Pennsylvania State University Press, 1997.

CONCLUSIONS

Incineration is a dying technology. It has failed to deliver on virtually every count imaginable,

- As a waste treatment technology, it is unreliable and produces a secondary waste stream more dangerous than the original
- As an energy production method, it is inefficient and wasteful of resources
- As an economic development tool, it is a catastrophe
- Its environmental problems are still being tallied
- It is profoundly unpopular and undemocratic

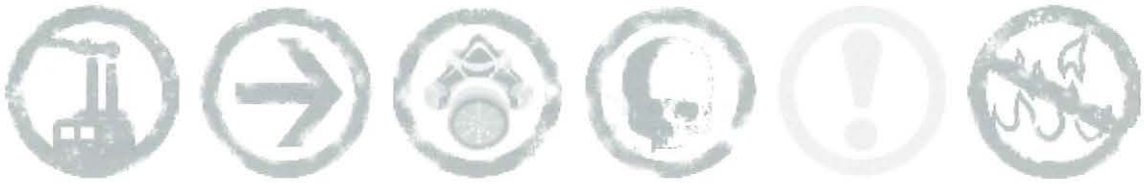
In spite of all of the above, incineration's promoters are still active, arguing perennially that the new generation of devices has solved all of last year's problems. For many, of course, there is a direct financial incentive for supporting incineration, and so the scientific debate becomes clouded by private interests. Each decade brings a new set of technologies for air emissions control, ash treatment, furnace design, etc., all desperately tinkering with a technology that is fundamentally misguided. For the problem of incineration is not just the technology: it is the purpose of the technology and its ascribed goals.

As long as waste is considered an inevitable consequence of human activity, we will contend with the problem of waste disposal: getting rid of it. Waste disposal is never going to be a sustainable exercise. On a planet stressed beyond capacity by toxics and desperately short of resources for the majority of its people, a fundamental re-evaluation of waste generation and materials use is needed. Humans are continuously extracting resources from the environment, and returning only waste. Much of that waste cannot be usefully absorbed or refashioned, because of its volume or synthetic or hazardous nature. On a finite planet, this kind of activity clearly can continue for only a limited amount of time before we literally choke on our own waste. No new furnace design or filtration system is going to alter this fundamental issue: waste generation and disposal removes materials from useful circulation, which further impoverishes the planet.

Only by altering the systems of production, transportation and consumption can society change this dynamic. The solutions indicated in the second section of this report all attempt to address this issue. Through waste minimization, toxics reduction, re-use, recycling, composting, and a host of other strategies, we can sharply cut the leakage of materials out of the economy. These strategies simultaneously reduce our demands on the earth's resources and our discharges of waste. They ultimately may bring us to a stable, sustainable economy.

In terms of policy, the way forward for governments is clear. They need to put a stop to existing and proposed incinerators, and implement alternatives. Although incineration's problems are universal, there are no universal solutions. Each country, each city, each industry and each institution will have to develop its own systems for sustainable materials management. In many cases, these will be local, even extremely local: backyard composting at the household level, for example. In other cases – the application of Extended Producer Responsibility to items in international trade – changes may need to reach across the globe. There will be no "one size fits all" model; however, we have laid out some general principles that successful systems are likely to follow and a few examples that may indicate model programs.

For individuals and activists, there are at least two clearly demarcated fronts on which to engage the issue. Continuing to close incinerators, landfills, and other end-of-pipe technologies puts increasing pressure on the entire economy to produce less-hazardous waste, and less of it. At the same time, viable alternatives are needed. Although these are usually the domain of government, few governments or industries have shown the creativity and commitment necessary to actively engage the public and create appropriate, home-grown materials management systems. As such, it will be important for some time into the future for individuals and public-interest organizations to describe and realize practical alternative solutions. Ultimately, of course, governments must become more responsive to the people they serve, but in the meantime, ordinary citizens will continue to lead the way.



GLOSSARY

ACWA (Assembled Chemical Weapons Assessment): a program of the U.S. government to demonstrate the viability of non-incineration methods for treatment of chemical weapons stockpiles.

AFSSA (Agence Française de Sécurité Sanitaire des Aliments): the agency for food safety in the French Ministry of Health.

Basel Convention: an international treaty which, as amended (with the Basel Ban) prohibits the export of hazardous waste from OECD (wealthy) countries to non-OECD countries.

Bamako Convention: an international treaty which regulates hazardous waste within Africa, including a ban on importing hazardous waste from outside the continent and provisions for minimization of hazardous waste generation.

bioaccumulation: the process in which a pollutant builds up in the body over an individual's lifetime.

biomagnification: the process by which a pollutant becomes increasingly concentrated as it moves up the food chain.

body burden: the load of a given pollutant that an individual carries in his/her body.

bottom ash (also, clinker): the residue from an incinerator that falls through the grate mechanism at the bottom of the furnace.

Clean Production: an approach to designing products and manufacturing processes that takes a life cycle view of all material flows, from extraction of the raw material to product manufacture and the ultimate fate of the product at the end of its life. It aims to eliminate toxic wastes and inputs and promote the judicious use of renewable energy and materials.

clinker: see bottom ash.

destruction and removal efficiency (DRE): a measure of the efficacy of a treatment technology for preventing the release to air of a given pollutant. DRE is the percentage of the pollutant in the waste stream that is not released to the air through the stack. Releases to other media are considered "removal." Cf. destruction efficiency.

destruction efficiency (DE): Another measure of the efficacy of treatment technologies. DE is the percentage of pollutant that is destroyed by treatment, i.e., not released in gaseous, liquid or solid form. Cf. destruction and removal efficiency.

dioxins: as used in this report, polychlorinated dibenzo dioxins (PCDD), polychlorinated dibenzo furans (PCDF) and coplanar polychlorinated biphenyls (PCBs). These are all aromatic chemical compounds formed during the incineration process. Dioxins belong to the class of chemicals known as persistent organic pollutants (POPs).

discards: materials of no immediate use to their present owner, to be differentiated from waste, which are materials of no possible use to anyone.

diversion rate: the percentage of discards that are re-used, recycled, composted or otherwise prevented from being wasted.

emissions: releases of byproducts from a process (e.g. incineration) to the air. Cf. releases.

end-of-pipe: interventions to reduce the environmental impact of an activity that are not integrated into the design but added at the end of the process, often as an afterthought.

energy recovery: a euphemism usually used for waste-to-energy or energy-from-waste incineration.

energy-from-waste (EFW): incineration with an attached steam turbine to generate electricity. This term occasionally refers to non-incineration technologies.

extended producer responsibility (EPR): a policy approach that makes firms responsible for their products and packaging in the post-consumer phase, providing an incentive to design products for end-of-life recycling.

flow control: legal measures adopted by certain jurisdictions to ensure that all municipal discards from that jurisdiction go to a particular waste treatment facility rather than finding the cheapest option available on the market.

fly ash: the ash recovered from an incinerator's air pollution control equipment. Cf. bottom ash.

hazardous waste: wastes which are corrosive, ignitable, reactive or toxic.

health care waste: all waste generated by health care facilities, such as hospitals, doctors' offices and clinics; also includes veterinary facilities, funeral homes and laboratories that prepare medicines or deal with human tissue.

life cycle assessment: a process to evaluate the environmental burdens associated with a product, process, or activity by identifying energy and materials used and wastes released to the environment, and to evaluate and implement opportunities to affect environmental improvements.

lipophilic: (chemicals which) have an affinity for and tend to combine with lipids (fatty substances).

medical waste: an ambiguous term, sometimes used to refer to all health care waste and sometimes only to that portion which is potentially infectious.

microgram: 1 x 10-6 gram, or one one-millionth of a gram.

MNCs (multinational corporations): see TNCs.

municipal discards: as MSW, below, but disaggregated so that each fraction can be dealt with appropriately (recycling, composting, etc.).

municipal solid waste (MSW): the mixed waste stream produced by residential and commercial establishments (but generally not industry).

nanogram: 1 x 10-9 gram, or one one-billionth of a gram.

neutralent: the liquid waste stream resulting from neutralization of chemicals weapons agent.

NGO (non-governmental organization): usually refers to non-profit organizations working for the public interest.

Northern: as used in this report, Northern refers to those countries with relatively high per capita (average) incomes and large industrial bases, roughly corresponding to the 30 member countries of the Organization for Economic Cooperation and Development. It is not a strictly

geographic term. Cf. Southern.

PBTs (persistent, bioaccumulative toxics): a class of chemicals whose members are persistent in the environment; bioaccumulate in living creatures; and are toxic to life.

PCBs (polychlorinated biphenyls): a class of chemicals composed of two benzene rings linked by a single carbon-carbon bond, with one or more chlorine atoms in place of hydrogen. Often, coplanar PCBs (those with the two benzene rings in the same plane) are included in the set of dioxin-like compounds for their similar structure, origin, and effects.

PCDD (polychlorinated dibenzo dioxin): a class of chemicals, referred to as dioxins, composed of two benzene rings linked by two oxygen molecules, with one or more chlorine atoms in place of hydrogen.

PCDF (polychlorinated dibenzo furan): a class of chemicals, referred to as furans, composed of two benzene rings, linked with a carbon-carbon bond and through a single oxygen molecule, with one or more chlorine atoms in place of hydrogen. Furans are considered dioxin-like compounds for their similar structure, origin, and effects.

picogram: 1 x 10-12 gram, or one one-trillionth of a gram. pg/kg/day: picograms per kilogram of body weight per day. A measurement of the rate of intake of a pollutant (usually dioxins) relative to a person's body weight.

POPs (Persistent Organic Pollutants): synthetic chemicals which display the following properties: they are organic (composed of hydrocarbons); persist long times in the environment; are capable of long-distance transport; and are toxic to humans. Subject to regulation under the Stockholm Convention.

Precautionary Principle: the principle that, in cases of scientific uncertainty regarding the safety of an activity, the burden of proof should rest with the proponent of the activity rather than with the persons to be affected; and that action should be taken to prevent harm whenever there is credible evidence that harm is occurring or is likely to occur, even when the exact nature and magnitude of the harm is not proven.

Preventive Principle: the principle that prevention of harm is always preferable to amelioration or compensation after the fact.

process wastes: byproducts of production processes such as manufacturing.

PVC (polyvinyl chloride): a common form of plastic, often referred to as vinyl, with chlorine as a major component.

pyrolysis: a form of incineration in which waste is treated in a depleted-oxygen environment, producing a gas, which is burned, and other byproducts, including slag. Legally classified as a form of incineration in the European Union and United States.

quench: a pollution control device in an incinerator which sprays water into the exhaust gases shortly after they leave the furnace chamber. The object is to quickly reduce the gases' temperature to less than 200°C, the minimum temperature for dioxin formation.

releases: all byproducts from a process (e.g. incineration) including emissions (to air), effluent (to water bodies) and solids (to land).

slag: a fused, solid byproduct of pyrolysis or incineration.

Southern: as used in this report, Southern refers to most of the countries of Africa, Asia, Latin America and island nations; also referred to as Third World, developing, or less-industrialized countries. It is not a strictly geographic term. Cf. Northern.

Stockholm Convention: The Stockholm Convention on Persistent Organic Pollutants. An international treaty which bans or regulates production and emissions of a class of synthetic chemicals.

TDI (tolerable daily intake): the maximum amount of a chemical which can theoretically be safely ingested. WHO and various governments set TDIs for some chemicals of concern.

TEF (toxic equivalency factor): a value that is empirically assigned to each congener (type) of dioxins and furans to represent their toxic potency relative to 2,3,7,8-TCDD (which has a TEF of 1).

TEQ (toxic equivalency): a calculated figure used to estimate the overall toxicity of multiple congeners (types) of dioxin-like chemicals at once. There are two primary TEQ systems, I-TEQ (International) and WHO, which yield slightly different results. The TEQ for a given sample is calculated by multiplying the quantity (mass) of each congener in the sample by that congener's TEF, then adding the results together.

tipping fee: the fee charged, usually by weight, for the privilege of depositing waste in a landfill or at an incinerator.

TNCs (transnational corporations): companies with operations in multiple countries. Also MNCs.

UN: the United Nations.

UNDP (United Nations Development Program): an agency of the United Nations whose primary mission is to reduce poverty worldwide.

UNEP (United Nations Environment Programme): an agency of the United Nations whose mission is to encourage sustainable development through sound environmental practices everywhere.

UNIDO (United Nations Industrial Development Organization): an agency of the United Nations dedicated to helping Southern countries' industrial bases develop.

USEPA (United States Environmental Protection Agency): an agency of the United States government.

vitrification: a rarely-used process of melting ash and allowing it to cool into glass-like balls. The intention is to destroy some organic compounds and make pollutants in the ash less available to the environment.

waste-to-energy (WTE): see energy-from-waste.

WHO (World Health Organization): an agency of the United Nations working to improve human health.

Zero Waste: a philosophy and a design principle that includes recycling but goes further by taking a "whole system" approach to the entire flow of resources and waste through human society. Zero Waste maximizes recycling, minimizes waste and ensures that products are made to be reused, repaired or recycled back into nature or the marketplace.

APPENDIX A:
Air Emissions from Incineration

From Municipal Waste Incinerators[221]

pentane
trichlorofluoromethane
acetonitrile
acetone
iodomethane
dichloromethane
2-methyl-2-propanol
2-methylpentane
chloroform
ethyl acetate
2,2-dimethyl-3-pentanol
cyclohexane
benzene
2-methylhexane
3-methylhexane
1,3-dimethylcyclopentane
1,2-dimethylcyclopentane
trichloroethene
heptane
methylcyclohexane
ethylcyclopentane
2-hexanone
toluene
1,2-dimethylcyclohexane
2-methylpropyl acetate
3-methyleneheptane
paraldehyde
octane
tetrachloroethylene
butanoic acid ethyl ester
butyl acetate
ethylcyclohexane
2-methyloctane
dimethyldioxane
2-furanecarboxaldehyde
chlorobenzene
methyl hexanol
trimethylcyclohexane
ethyl
benzene
formic acid
xylene
acetic acid
aliphatic carbonyl
ethylmethylcyclohexane
2-heptanone
2-butoxyethanol
nonane
isopropyl benzene
propylcyclohexane
dimethyloctane
pentanecarboxylic acid
propyl benzene
benzaldehyde
5-methyl-2-furane carboxaldehyde
1-ethyl-2-methylbenzene
1,3,5-trimethylbenzene
trimethylbenzene
benzonitrile
methylpropylcyclohexane
2-chlorophenol
1,2,4-trimethylbenzene
phenol
1,3-dichlorobenzene
1,4-dichlorobenzene
decane
hexanecarboxylic acid
1-ethyl-4-methylbenzene
2-methylisopropylbenzene
benzyl alcohol
trimethylbenzene
1-methyl-3-propylbenzene
2-ethyl-1,4-dimethylbenzene
2-methylbenzaldehyde
1-methyl-2-propylbenzene
methyl decane
4-methylbenzaldehyde
1-ethyl-3,5-dimethylbenzene
1-methyl-(1-pro-penyl)benzene
bromochlorobenzene
4-methylphenol
benzoic acid methyl ester
2-chloro-6-methylphenol
ethyldimethylbenzene
undecane
heptanecarboxylic acid
1-(chloromethyl)-4-methylbenzene
1,3-diethylbenzene
1,2,3-trichlorobenzene
4-methylbenzyl
alcohol
ethylhex anoic acid
ethyl benzaldehyde
2,4-dichlorophenol
1,2,4-trichlorobenzene
naphthalene
cyclopentasiloxanedecamethyl
methyl acetophenone
ethanol-1-(2-butoxyethoxy)
4-chlorophenol
benzothiazole
benzoic acid
octanoic acid
2-bromo-4-chlorophenol
1,2,5-trichlorobenzene
dodecane
bromochlorophenol
2,4-dichloro-6-methylphenol
dichloromethylphenol
hydroxybenzonitrile
tetrachlorobenzene
methylbenzoic acid
trichlorophenol
2-(hydroxymethyl) benzoic acid
2-ethylnaphthalene-1,2,3,4-tetrahydro
2,4,6-trichlorophenol
4-ethylacetophenone
2,3,5-trichlorophenol
4-chlorobenzoic acid
2,3,4-trichlorophenol
1,2,3,5-tetrachlorobenzene
1,1'biphenyl (2-ethenyl-naphthalene)
3,4,5-trichlorophenol
chlorobenzoic acid
2-hydroxy-3,5-dichlorobenzaldehyde
2-methylbiphenyl
2-nitrostyrene(2-nitroethenylbenzene)
decanecarboxylic acid
hydroxymethoxybenzaldehyde
hydroxychloroacetophenone
ethylbenzoic acid
2,6-dichloro-4-nitrophenol
sulphonic acid
m.w. 192
4-bromo-2,5-dichlorophenol
2-ethylbiphenyl
bromodichlorophenol
1(3H)-isobenzofuranone-5-methyl
dimethylphthalate
2,6-di-tertiary-butyl-p-benzoquinone
3,4,6-trichloro-1-methyl-phenol
2-tertiary-butyl-4-methoxyphenol
2,2'-dimethylbiphenyl
2,3'-dimethylbiphenyl
pentachlorobenzene
bibenzyl
2,4'-dimethylbiphenyl
1-methyl-2-phenylmethylbenzene
benzoic acid phenyl ester
2,3,4,6-tetrachlorophenol
tetrachlorobenzofurane
fluorene
phthalic ester
dodecanecarboxylic acid
3,3'-dimethylbiphenyl
3,4'-dimethylbiphenyl
hexadecane
benzophenone
tridecanoic acid
hexachlorobenzene
heptadecane

fluorenone
dibenzothiophene
pentachlorophenol
sulphonic acid m.w. 224
phenanthrene
tetradecanecarboxylic acid
octadecane
phthelic ester
tetradecanoic acid isopropyl ester
caffeine
12-methyltetradecacarboxylic acid
pentadecacarboxylic acid
methylphenanthrene
nonedecane
9-hexadecene carboxylic acid
anthraquinone
dibutylphthalate
hexadecanoic acid
eicosane
methylhexadecanoic acid
fluoroanthene
pentachlorobiphenyl
heptadecanecarboxylic acid
octadecadienal
pentachlorobiphenyl
aliphatic amide
octadecanecarboxylic acid
hexadecane amide
docosane
hexachlorobiphenyl
benzylbutylphthalate
aliphatic amide
diisooctylphthalate
hexadecanoic acid hexadecyl ester
cholesterol

From Hazardous Waste Incinerators[222]

acetone
acetonitrile
acetophenone
benzaldehyde
benzene
benzenedicarboxaldehyde
benzofuran
benzoic acid
bis(2-ethylhexyl)phthalate
1-bromodecane
bromofluorobenzene
bromoform
bromomethane
butylbenzylphthalate
C8H18
carbon tetrachloride
chlorobenzene
1-chlorobutane
chlorocyclohexanol
1-chlorodecane
chlorodibromomethane
2-chloroethyl vinyl ether
chloroform
1-chlorohexane
chloromethane
1-chlorononane
1-chloropentane
cyclohexane
cyclohexanol
cyclohexene
1-decene
dibutylphthalate
dichloroacetylene
dichlorobromomethane
1,2-dichlorobenzene
1,4-dichlorobenzene
1,1-dichloroethane
1,2-dichloroethane
1,1-dichloroethylene
dichlorodifluoromethane
dichloromethane
2,4-dichlorophenol
diethylphthalate
dimethyl ether
3,7-dimethyloctanol
dioctyl adipate
ethenylethylbenzene
ethylbenzaldehyde
ethylbenzene
ethylbenzoic acid
ethylphenol
(ethylphenyl) ethanone
ethynylbenzene
formaldehyde
heptane
hexachlorobenzene
hexachlorobutadiene
hexanal
1-hexene
methane
methylcyclohexane
methyl ethyl ketone
2-methyl hexane
3-methyleneheptane
3-methylhexane
5,7-methylundecane
naphthalene
nonane
nonanol
4-octene
pentachlorophenol
phenol
polychlorinated biphenyls (PCBs)
polychlorinated dibenzo-p-dioxins (dioxins)
polychlorinated dibenzofurans (furans)
pentanal
phenol
phenylacetylene
phenylbutenone
1,1'-(1,4-phenylene)bisethanone
bisethanone
phenylpropenol
propenylmethylbenzene
1,1,2,2-tetrachloroethane
tetrachloroethylene
tetradecane
tetramethyloxirane
toluene
1,2,4-trichlorobenzene
1,1,1-trichloroethane
1,1,2-trichloroethane
trichloroethylene
trichlorofluoromethane
trichlorotrifluoroethane
2,3,6-trimethyldecane
trimethylhexane
2,3,5-trichlorophenol
vinyl chloride

APPENDIX B:
Incinerator Bans and Moratoria

INTERNATIONAL:
1996: the Protocol to the London Convention banned incineration at sea globally.
1996: the Bamako Convention banned incineration at sea, on territorial or internal waters in Africa.
1992: the OSPAR Convention banned incineration at sea in the north-east Atlantic.

ARGENTINA:
2003: the city Council of Granadero Baigorria, Santa Fe province, outlawed medical waste incineration.
2002: the Buenos Aires City Council passed a law that bans incineration of medical waste. This includes medical waste generated in the city and sent outside for treatment.
2002: the City Council of Villa Constitución, Santa Fé province, banned the construction of incinerators.
2002: the City Council of Coronel Bogado, Santa Fé province, banned the construction of incinerators.
2002: the City Council of Marcos Juarez, Córdoba province, outlawed the construction of incinerators.
2002: the Municipal Council of Casilda, Santa Fe province, banned hazardous waste incineration for 180 days. The resolution was extended for another 180 days in November 2002.
2002: the City Council of Capitán Bermúdez outlawed all type of waste incineration.
2001: the province of San Juan banned crematoria in urban and semi-urban areas.

BRAZIL:
1995: the Municipality of Diadema, State of Sao Paulo, approved a law banning incinerators for municipal waste. The city council states that the waste problem should be tackled using reduce, reuse, and recycling policies.

CANADA:
2001: the Province of Ontario enacted a hazardous waste plan that includes the phaseout of all hospital medical waste incinerators.

CHILE:
1976: Resolución 07077 banned incineration in several metropolitan areas of the country.

CZECH REPUBLIC:
1997: Cepi, district Pardubice banned construction of new waste incinerators.

GERMANY:
1995: the largest, most populated and most industrialized state in Germany — North Rhine/Westfalia — bans municipal solid waste incinerators.

GREECE:
1994: the national government approved legislation declaring it illegal to burn hazardous waste in waste-to-energy plants. In 2001, the Minister for the Environment formally declared a policy of prohibiting municipal waste incineration.

INDIA:
1998: the central government banned incineration of chlorinated plastics nationally. The city of Hyderabad in the state of Andhra Pradesh banned on-site hospital waste incineration.

IRELAND:
1999: although no formal ban is in place, Ireland closed all of its medical waste incinerators.

JAPAN:
1998: the Ministry of Health and Welfare revised the laws to allow disposal of PCBs using chemical methods. Although there is no formal ban on incineration of PCBs, there is an informal proscription on PCB incineration.

MALTA:
2001: all public and private hospitals were to eliminate clinical waste incineration by 2001.

PHILIPPINES:
1999: the Clean Air Act was passed which bans all types of waste incineration. The law extends to municipal, medical and hazardous industrial wastes.

SLOVAKIA:
2001: banned waste importation for incineration.

SPAIN:
1995: the regional government of Aragón established autoclaving as the required form of treatment for medical waste, effectively eliminating medical waste incineration.

UNITED STATES:
STATES
Delaware, 2000: state prohibited new solid waste incinerators within three miles of a residential property, church, school, park, or hospital.

Iowa, 1993: state enacted a moratorium on commercial medical waste incinerators. Moratorium still in place. Moratorium does not extend to incinerators operated by a hospital or consortium of hospitals.

Louisiana, 2000: state revised its statute Title 33, which prohibits municipalities of more than 500,000 from owning, operating or contracting garbage incinerators in areas zoned for residential or commercial use.

Maryland, 1997: state prohibited construction of municipal waste incinerators within one mile of an elementary or secondary school.

Massachusetts, 1991: state enacted a moratorium on new construction or expansion of solid waste incinerators. Moratorium still in place.

Rhode Island, 1992: state banned the construction of new municipal solid waste incinerators. First U.S. state to enact such a ban.

West Virginia, 1994: state banned the construction of new municipal and commercial waste incinerators. Permits pilot tire incineration projects.

COUNTIES

Alameda County, California, 1990: voter initiative "Waste Reduction and Recycling Act" passed, banning waste incinerators in the county. A later court ruling limits the ban to the unincorporated areas of the county, however, there are no operating municipal waste incinerators in Alameda county.

Anne Arundel County, Maryland, 2001: county banned solid waste and medical waste incinerators.

CITIES

Brisbane, California, 1988: city banned new construction of waste incinerators.

Chicago, Illinois, 2000: city banned municipal waste incineration. The ban extends to burning waste in schools and apartment buildings.

San Diego, California, 1987: ordinance stipulates that waste incinerators cannot be sited within a certain radius of schools and daycare centers, which results in no eligible land being available for incinerators.

Ellenburg, New York, 1990: town banned waste incinerators.

New York City, 1989: Banned all apartment house incinerators by 1993. By 1993, all 2,200 apartment house incinerators that were in operation in 1989 were shut down.

MORATORIA:

Several states in the United States, including Arkansas, Wisconsin and Mississippi, have enacted moratoria on medical or municipal waste incinerators that have since expired or been lifted. The US EPA enacted a nationwide, 18-month freeze on new construction of hazardous waste incinerators in 1993. Two unsuccessful bills were introduced in the US Congress during the 1990s to enact a moratorium on new waste incinerators.

Other examples of incinerator moratoria worldwide include:

1982: Berkeley, California passes a ballot initiative banning garbage burning plants for five years. The moratorium allowed the city to develop recycling programs which became national models.

1985: Sweden implemented a 2-year moratorium on new incinerators.

1990: In the Flemish-speaking part of Belgium, public pressure resulted in a 5-year moratorium on new municipal waste incinerators.

1992: Ontario, Canada banned new municipal incinerators. In 1996 a new conservative government overturned the ban.

1992: Baltimore, Maryland passed 5-year moratorium on new municipal incinerators.

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ENDNOTES

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2. See the glossary for the use of the terms "Southern" and "Northern" in this report.
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9. Hardell and Sandstrom, 1979; and Erikkson et al., 1981.
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15. Luster et al., 1980.
16. Murray et al., 1979; Allen, 1979.
17. Kociba et al., 1976; and Schantz and Bowman, 1989.
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19. Egeland et al., 1994; Erickson et al., 1984; Wolfe et al., 1995.
20. DeVito and Birnbaum, 1995.
21. USEPA, 2000a.
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23. Because there are so many different chemicals that fall into the class of dioxins, furans, and PCBs, scientists have devised a metric to indicate the overall dioxin-like toxicity of all these chemicals combined. This is known as the toxic equivalency, or TEQ. It is calculated as follows: each congener (variant) of dioxin is assigned a toxic equivalency factor (TEF) depending on its potency, as established by research. The most powerful of the dioxin congeners, 2,3,7,8-TCDD, is assigned the TEF 1; the other congeners all have lesser values. For any given sample, the quantity of each congener is multiplied by that congener's TEF; these figures are then added to determine the overall TEQ for the sample. All references to dioxin quantities in this report are in terms of TEQ.
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30. French Ministry of the Environment, 1998.
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37. Giugliano, et al., 2002.
38. Eitzer and Hites, 1986.
39. Halogenated organics are those containing the elements fluorine, chlorine, bromine, or iodine, which share important chemical properties and tend to form similar compounds.
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69. Yasuhara, 1988; Huang, 1995.
70. Hunsinger, 1997.
71. Howard, 2000.
72. Chang and Lin, 2001.
73. Incinerators can also be run so as to produce a slag, rather than ash, residue.

74. The Bamako Convention specifically defines incinerator residues and pyrolysis wastes as hazardous wastes. The Basel Convention defines pyrolysis wastes as hazardous and incinerator residues as "Wastes Requiring Special Consideration," but also gives a long list of constituents, most of which are typically found in incinerator residues, and defines any waste containing one or more of those constituents to be hazardous waste.
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103. Observed by the author in Phuket, Thailand.
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105. For a comparison of various life-cycle assessments contrasting municipal waste incineration with landfilling and recycling, see Denison, 1996.
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121. Associated Press, 2000a.
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For lists of materials exchanges, see:
http://www.metrokc.gov/hazwaste/imex/exchanges.html
http://www.ciwmb.ca.gov/Reuse/Links/Exchange.htm
http://www.wastexchange.org/exchanges/top_list.cfm
and http://www.recycle.net/recycle/exch/index.html.
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National Institutes of Health
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Materials Exchanges:

Associação de Combate aos POPs
Associação de Consciência à Prevenção Ocupacional
http://acpo94.sites.uol.com.br (Portugese)

California Integrated Waste Management Board
http://www.ciwmb.ca.gov/Reuse/Links/Exchange.htm

Center for Health Environment and Justice
http://www.chej.org

Environmental Research Foundation
http://www.rachel.org

Essential Information
http://www.essential.org

Internet Resources on Waste and Chemicals
http://www.most.org.pl/otzo/en/web-p2w.htm

The Community Recycling Network
http://www.crn.org.uk

US EPA National Center for Environmental Assessment
http://cfpub.epa.gov/ncea/cfm/dioxin.cfm

Waste Age
http://www.wasteage.com

Waste News
http://www.wastenews.com

Work on Waste
http://www.workonwaste.org

Zero Emissions Research Initiatives
http://www.zeri.org

Waste-CAN.org

Waste - Citizen Advocacy Network

February 20, 2007

RE: Proposed Renewal of an Air Permit for Covanta Marion, Inc.

I am an average citizen who is concerned about what is happening in my community. I have no medical or scientific training. I first became interested in solid waste disposal issues over a decade ago when Marion County decided that the incinerator at Brooks was reaching capacity. They had proposed to withdraw yard debris and other natural materials for composting.

One of the surprising things that I learned from my experience with that effort was how hard it is to get complete and simple answers to basic questions about waste disposal in Marion County. My concern lead me to create a coalition of interested parties into a group called Waste-CAN.org (Citizen Action Network) through which information could be shared and examined by the public. Our purpose is to educate the public and to examine issues relating to waste disposal in Marion County.

Of particular interest in this permit process for me was to determine what the environmental impact might be on the general area as well as the people who reside therein.

I have tried to learn as much as possible about the actual emissions from the Covanta incinerator. Getting complete answers is not as easy, nor as clear as, a citizen might hope. Close examination reveals that the emissions testing data as reported to the state is not an actual amount of what is released from the burner, but rather an estimate based upon limited data gathering. When you examine how the data is collected and that the basic process is under question as to its scientific validity, it is even more worrisome.

While knowing the exact amount of emissions may not be a major concern from a regulatory point of view, it could be for the actual impacts on the community. Not knowing the actual amount of dioxin, for example, that is in our atmosphere, being distributed into our steams and is deposited on the soil where food and dairy cows graze can be essential for monitoring the health of the community. It was shocking to me to learn that **no agency actually tests our food supply** for mercury, lead, cadmium, or dioxin.

It is further a concern that other countries that do a better job of monitoring the emissions from garbage incinerators take great precautions to reduce all emissions and set more stringent emission standards than are being applied here. What factors do they know about from the incineration of garbage that we here in Oregon are ignoring?

I recognize that the emissions for elements such as dioxin are reported to be well below the limit set by this permit at the Covanta Marion burner. If this is the case in reality, it is not clear why the standard needs to be kept at this high level. A concern beyond the fact that the true emission numbers are not known and published data is only an estimate is that scientific and medical

studies have shown that any ingestion of dioxin is unhealthy. Lack of comprehensive information is worrisome since there is no testing of the soil, water or food produced in the vicinity of the garbage burner, let alone the knowledge about the accumulative amounts of these dangerous substances.

Looking for data on health problems in Marion County and in the Willamette Valley shows no correlation with the emissions from the Covanta facility or any other facility. This is not, because there is none, but rather because government agencies do not collect such data. Lack of data is not proof there is no harm.

I am aware that the emissions standards are not set based upon a desire to limit the impact on the health of the community, but rather on a standard of what the industry feels it can comply at an economical profit without causing direct damage to property or cause fatalities.

Essentially no one knows what the real impact of the incineration is on my health or the health of my community. Known as one of the world's most dangerous and persistent poisons, dioxin is not something that we should allow in our environment in any amounts.

Also, of concern to me is the knowledge that Marion County is actively seeking the importation of additional medical waste from out of the county and out of the state. With this limit on dioxin set at such a high level, there is a lot of potential for increased emissions of dioxin from the burning of more medical waste. Observations from staff that the rate of dioxin from burning medical waste is not significantly different from when 'regular' garbage is burned, is not reassuring. This is especially true when we learn that the data is collected in such a sparse manner and does not include periods when the burner is starting up or shutting down. There are no safe levels of dioxin in the human body.

The CO2 emissions from this facility are also of a concern. Standards for emission seem to be moving in the wrong direction in light of what we are learning about the impact of hydrocarbons on our environment.

It is true that there are many worse polluters in the Willamette Valley and the Salem/Keizer area. Our community needs to be aware of these sources of pollution and to be working on reducing those emissions as well. However, since it is the permit for the burner that is up for renewal that is the focus of this letter. Community members as well as state regulators need to be doing as much as possible to work for the reduction of all emissions in order to improve both air and water quality. The accumulative effect of all sources of pollution is reducing the livability of our community and will eventually have a negative impact on our economy.

The fact that state agencies do not track the accumulative impact of all the emissions, including the impact on our air and water and food, is disturbing. What we don't know hurts us just as surely as what we do know. Not knowing the real facts makes it harder for us as a community to address problems pollution creates.

I urge stronger regulations and more aggressive efforts to find alternatives for how we create and treat waste. Many other countries are doing a much better job at dealing with emissions than we

are here in Oregon. If we want to remain a vibrant community with healthy people we need to be working for stricter standards rather than relaxing rules, or allowing old standards to prevail.

Thank you for the opportunity to present testimony to this idea.

Susann Kaltwasser

Waste-CAN.org
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Salem, Oregon 97301

Good morning, my name is Nancy Hatch and I'm a resident of north east Portland, I want to thank the Chair and the Members of Environmental Quality Commission for holding this Public Forum.

Last summer I was riding my bike along the Willamette between, OMSI and the Selwood bridge, and feeling a sense of peace and contentment while watching the river flow by. However, those good feelings quickly came to an end when I started thinking about all the toxic chemicals and heavy metals being legally discharged into the Willamette every day. I began thinking of all the Oregonians who also feel drawn to the Willamette's natural beauty but who are unaware of the existence of toxic mixing zones or at least of their locations.

I believe that it is bad enough that DEQ continues to permit toxic mixing zones, in spite of the Clean Water Act but even worse that there is no way for the general public to know their locations or contents. I believe that Oregonians have the right to know of the existence and location of mixing zones through buoys in the water, signs on shore and maps on DEQ's webstie.

Also, it is imperative the DEQ begins thorough testing/monitoring of water, plants, fish and river sediment within and down stream of TMZ's. Doing so will definitively show the hazards of TMZ's. The DEQ already warns the public about air pollution. Why doesn't DEQ do so for water pollution, particularly point source pollution?

Thank you for your support of increased toxics monitoring. Please fully fund TMZ monitoring and please make sure that public knows where in our rivers chronic levels of toxic pollution exists.

Thank you for your consideration.

February 21, 2007

Honored Commissioners:

Good morning. My name is Heidi Dahlin. I am a resident of Oregon City, mother of two, soon to be grandmother of one and work as an educator for Oregon City School District in technology education. I have lived in the Oregon City for over 24 years and love my community and am concerned about the health of our town, and specifically our children due to toxic mixing zones, and I am here today to urge you to work to eliminate mixing zone permits in Oregon waterways.

For those of you who don't know of my city's proud history, we are at the end of the Oregon Trail. Our town is sited at Willamette Falls and we have always had a close identity with the Willamette River. We have a major community park at the juncture of the Willamette and Clackamas Rivers, a prime salmon fishing area just downstream of the falls, several public boat launches, marinas and public docks. Native Americans fish the native eel population living at the base of the falls. Children regularly swim at Clackamette Park and Meldrum Bar Park in nearby Gladstone in the summer. Our community lives near, works by and recreates in and on the Willamette River.

But also sited at Willamette Falls are two paper mills--Blue Heron and West Linn Paper--who together hold several permits to legally dump toxic materials, including mercury, lead, arsenic, chromium, aluminum and zinc, at levels far above DEQ standards, directly into the Willamette River. This is done via toxic mixing zones, with the premise being that the chemicals will be diluted and this will somehow make them 'safe'. These chemicals are dumped into the river less than a half a mile from Clackamette and Meldrum Parks--those same parks mentioned above where children swim, and people fish, kayak and water ski. And it is not just these two mills dumping effluent into the river. Rather, they are merely two of many, many mixing zones both up and downstream, which dump toxins into the river. I ask you, how many of you, if you were parents, would allow a stranger to come into your home and dump a small amount of mercury into your child's bath water? Would you feel safe if you were told that it was only a

small amount and the water would dilute it? I used to take my kids along the river all the time to view the falls, and I am outraged that the spray we felt on our faces was contained with heavy metals that are dangerous to our health.

So where does this mercury and other chemicals go? Does it disappear and cause no harm, as I have heard claimed? Ii you look on a can of tuna, it warns that pregnant and nursing women should not eat more than one can a week due to the mercury content. Children should be limited to 3 oz, or a half a can, per week (1). We know a lot about mercury we didn't know a few years ago. We know for example, that now one out of every three American women has so much mercury in her womb that her children are at risk for a grim inventory of diseases: autism, blindness, mental retardation, heart, liver and kidney disease. We have 630,000 children who are born in America every year who have been exposed to dangerous levels of mercury in their mother's wombs (2) We certainly know that mixing zones are not the only sources of these toxic chemicals, but if we know there is a problem with mercury entering the food chain, why would we legally allow companies to further add to the problem?

I have heard the argument that it will cost money for industry and municipalities to deal with waste responsibly. I have heard the complaint that it may cost too much. I think we are smarter than that. New technologies can be implemented and jobs can be created in green industries. For myself, I am half way through a Master's program, and at 46 this is my fourth career change. According to statistics, I have one more to go just to be average. Change is a part of life and it doesn't make sense to continue to do something wrong, just because we have done it for 100 years. And what is a healthy community worth in dollars? Why are we willing to sell our communities so cheaply?

Three years ago when I began volunteering for the Sierra Club's Building Environmental Communities program, I personally conducted a survey of friends, co-workers and people standing in line at the grocery store and asked what their greatest environmental concern was. The overwhelming response was "clean water". Average citizens, such as myself, want clean water to drink and to recreate in. We depend on government to protect our children. I do not

believe that industry and municipalities will voluntarily stop dumping toxins into the river. Face it; it is cheap and easy to do. When I moved to Oregon in the 1970's I remember the efforts by Oregonians to clean up the Willamette River and to leave a legacy of clean water and a healthy environment for future generations. Thirty years later, the Willamette is still one of the most polluted waterways in our country. I do not believe we have another 30 years to debate this issue without causing irreparable harm to the river , its inhabitants and our communities.

I close with the words of Robert Kennedy, Jr., as spoken at the Sierra Club Summit in 2005:

> "When we destroy nature, we diminish ourselves. We impoverish our children. What we need to understand is that protecting the environment is not about protecting the fish and the birds for their own sake. We're also protecting it for our own sake, because we recognize that nature enriches us. We recognize that nature is the infrastructure of our communities, and we must meet our obligation as a generation, as a civilization, as a nation, to create communities for our children that provide them with the same opportunities for dignity and enrichment and good health. We need to understand that we are part of something larger than ourselves. We are part of a continuum. We are part of a community."

Thank you.

Heidi Dahlin
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References:

1. 2004 EPA and FDA Advice For: Women Who Might Become Pregnant, Women Who are Pregnant, Nursing Mothers, Young Children (http://www.cfsan.fda.gov/~dms/admehg3.html)
2. International Indian Treaty Council. (http://www.treatycouncil.org/new_page_5211421311.htm)

State of Oregon

Department of Environmental Quality Memorandum

Date: February 9, 2007

To: Environmental Quality Commission

From: Stephanie Hallock, Director S. Hallock

Subject: Agenda Item F, Informational Item: Fish Consumption Update
February 22, 2007 EQC Meeting

Purpose of Item

On October 6th, 2006, the Department of Environmental Quality (DEQ), the Environmental Protection Agency (EPA), and the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) presented a plan to the Environmental Quality Commission (EQC) to begin a collaborative review of Oregon's fish consumption rate. The fish consumption rate is one variable used to establish water quality standards that will protect human health for Oregonians. The purpose of this item is to provide an update on the Oregon Fish Consumption Rate Project.

Background

The EQC expressed support for the process outlined in an October 2nd, 2006 EQC memo. There were two major follow up items from the October 6th EQC meeting in Astoria; 1) EQC Chair Hampton and DEQ Director Hallock wrote a letter to CTUIR expressing DEQ's commitment to this process and acknowledgement that the EQC expects that rate being recommended is expected to increase, and 2) DEQ took a hard look at options for shortening the proposed timeline.

Key Issues

Follow up Actions Completed

EQC Chair Hampton and Director Hallock wrote a letter to Chairman Minthorn of CTUIR on October 20th, 2006 (Attachment A). This letter recognized the human health concerns high fish consumers face, DEQ's commitment to protecting human health, and an acknowledgement that the fish consumption rate may increase once the EQC evaluates the factual and relevant information obtained through the public workshop process.

The fish consumption rate planning team, consisting of DEQ, EPA, and CTUIR staff evaluated the proposed timeline and determined that it could not be shortened at this time without jeopardizing the quality of the project. There are currently 8 facilitated workshops planned to gather critical information needed for EQC's decision making process.

The team felt that all of this information (and the associated time it takes to gather it) would be needed for the EQC to make an informed decision. However, doing a thorough job during the workshops should help expedite the formal rulemaking process, as outlined below.

There are many opportunities to address statutory rulemaking requirements prior to the start of a formal rulemaking. All of the information gathered during the workshop phase of this project will inform and expedite the rulemaking process. With a topic as complex as revising the fish consumption rate, entering a rulemaking without the necessary information needed to move the rule forward could stall and extend the rulemaking timeline. Some of the opportunities that will help expedite the formal rulemaking process include developing a fiscal impact statement, seeking significant stakeholder involvement, forming an internal review team, keeping EQC involved, and forming a rulemaking advisory team prior to the rulemaking.

Current Timeline

Task:	Projected Date:
Choose facilitator	September 18, 2006 (completed)
Planning meetings	October 23 – March 6 , 2007 (in progress)
Background and Scope (Portland)	March 13, 2007
Background and Scope (Coos Bay)	March 14, 2007
Review of Water Quality Standards and Fish Consumption Data	May 15, 2007
Human Health Risk	July 10, 2007
NPDES Permitting Impact	September 11, 2007
Economic Impact of Raising the Fish Consumption Rate	November 13, 2007
Implementation of a Raised Fish Consumption Rate	January 8, 2008
Open Q & A	March 11, 2008
Workshop summaries submitted to DEQ, EPA, and CTUIR	April 8, 2008
Draft Issue paper	June 3, 2008
Issue paper presented	June 17, 2008
Final Issue paper	July 8, 2008
Present Findings to EQC	September, 2008
Anticipated start of rulemaking	September, 2008

with direction from EQC	

Planning Team Status

The fish consumption rate planning team has held 8 meetings since October. The team has developed a detailed agenda for the first workshop on March 13 (Attachment B), which will be held in Portland and then repeated in Coos Bay on March 14th. Additionally, the team outlined the themes and topics for each of the remaining workshops, which are still subject to change (Attachment C). The planning team has also identified "focus groups" that will be comprised of experts on various topics. Thoroughly planning these workshops and focus groups is critical to the success of this project, as there are many complex issues to cover in order to provide the EQC sufficient information to make an informed decision.

The planning team has identified a "core team" of stakeholders that have been contacted prior to the 1st workshop. The members of the "core team" are either directly affected by the outcome of this process (e.g. permitted facilities, tribes) or groups of people that have expressed significant interest in this issue in the past (Attachment D). We contacted the core team so we could hear their interests and concerns prior to the first workshop. There will, of course, be opportunity in every workshop, and outside workshops, for all interested parties to communicate their opinions and concerns to the planning team. Additionally, DEQ is establishing a web page dedicated to the fish consumption project where we will post meeting agendas, minutes, presentations, and any other relevant documentation.

Additional Project Funding

DEQ and CTUIR sent a letter to EPA requesting additional funds for this project (Attachment E). We will use those funds, if acquired, to assess the types of technology available to bring both industrial and domestic permitted facilities into compliance with new criteria. The funds may also be used to calculate the cost of bringing those facilities into compliance, which would fulfill certain components of the fiscal impact statement required by state law for agency rulemakings.

EQC Involvement

EQC Chair, Lynn Hampton plans to attend the workshops scheduled for March 13th and 14th. DEQ invites all Commissioners to attend these public meetings if their schedules permit. DEQ is planning another update for the Commission in the Fall of 2007. The EQC may request an update from DEQ at any time.

Attachments

Attachment A: DEQ/EQC commitment letter to CTUIR
Attachment B: Agenda for Background and Scope Workshop
Attachment C: Future workshop themes and topics
Attachment D: List of Core Team members
Attachment E: DEQ/CTUIR additional funding request letter

Approved:

Section: _____

Division: _____

Report Prepared By: Jordan Palmeri

Phone: 503-229-6766

Oregon
Theodore R. Kulongoski, Governor

Department of Environmental Quality
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Portland, OR 97204-1390
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October 20, 2006

Antone Minthorn, Chairman
Confederated Tribes of the Umatilla Indian Reservation
Board of Trustees
PO Box 638
Pendleton, OR 97801

Dear Chairman Minthorn:

As Chair of the Environmental Quality Commission (EQC) and Director of the Oregon Department of Environmental Quality (DEQ), we want to thank you and Board member Armand Minthorn for speaking to the EQC last week in Astoria regarding the fish consumption rate.

The EQC recognizes that fish are important to the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) culture, tradition and religion, and that CTUIR members consume fish at higher rates than the general population. We want to thank the CTUIR Board and staff for your persistence and focus on this issue and for speaking so eloquently on the importance of protecting the health of tribes and all Oregonians.

When the EQC adopted the existing fish consumption rate in 2004, we directed DEQ staff to review the fish consumption rate in its triennial water quality standards review. We did so because we were concerned about whether the rate of 17.5 grams per day was appropriate for CTUIR and for Oregon. One of DEQ's strategic directions is to protect Oregonians and the environment from toxic pollutants. EQC and DEQ take seriously the fact that studies have shown fish in the Columbia River basin and other basins in Oregon carry contaminant loads that pose a risk to human health.

The EQC supports the DEQ/CTUIR/EPA-proposed review of the fish consumption rate and associated human health toxics criteria established in 2004. The EQC asks that DEQ gather and present the Commission with factual and relevant information obtained through the public workshop process that will inform the EQC and the public about risk exposure and public health, and the economic and regulated community impacts resulting from proposals to increase the fish consumption rate and decrease criteria to more protective levels.

The EQC asks DEQ to work closely with EPA and CTUIR in developing the public workshop process and a rulemaking proposal. The EQC understands that the DEQ Director, DEQ Water Quality Administrator and EPA's Region 10 Office have all stated that the fish consumption rate needs to increase. EPA's Region 10 Office has stated that the rate should be increased over 100 grams per day. The EQC expects that the

rulemaking will consider increasing the fish consumption rate and decreasing the water quality criteria to better protect members of the CTUIR and other Oregonians with fish consumption rates above the national minimum rate. The EQC supports the goal of reducing discharges of toxic pollutants into Oregon's rivers and recognizes that the protection of Tribes and other fish consumers is important.

The EQC has also directed DEQ staff to look hard at options for shortening the proposed timeline for the workshops and rulemaking, while making sure that the process provides for meaningful involvement of all interested parties and provides the information that EQC will need to consider during its rule adoption.

The EQC and DEQ are committed to our government-to-government relationship with CTUIR, as described by Senate Bill 770. We look forward to working with the CTUIR Board and staff to improve our relationship through this process.

Sincerely,

Lynn Hampton
Chair, Environmental Quality Commission

Stephanie Hallock
Director, Oregon DEQ

cc: Bill Blosser, Environmental Quality Commissioner, Vice Chair
Donalda Dodson, Environmental Quality Commissioner
Ken Williamson, Environmental Quality Commissioner
Judy Uherbelau, Environmental Quality Commissioner
Lauri Aunan, DEQ WQ Administrator
Robert Baumgartner, DEQ WQ Deputy Administrator
Mikell O'Mealy, DEQ Tribal Liaison
Michael Gearheard, EPA Region 10
Socorro Rodriguez, EPA Region 10 (Portland

Attachment B

EPA/CTUIR/DEQ
Fish Consumption Rates for Water Quality Standards Project
2007 Public Workshops

Workshop 1: Background and Scope
March 13—Portland (10:00am-4:00pm)
March 14 –Coos Bay (1:00pm-7:00pm)

Goal of Workshops: Engage the public, interested stakeholders, and tribal governments in an exchange of information and ideas about the fish consumption rate used in developing Oregon's human health criteria for water quality standards, the reasons to review it, and the potential effects of a higher rate state wide. These workshops will help to inform a DEQ staff recommendation to the Environmental Quality Commission regarding an increase in the fish consumption rate.

Outcomes for the Day:

- Ground participants in the background and scope of this project
- Make introductions to those who will be working on this effort from each of the three sovereigns
- Begin to meet those interested in this effort

10:00 Welcome and Introductions—*Socorro Rodriguez, EPA; _____, CTUIR; Lynn Hampton, EQC*

What are we Trying to Achieve and How? *(introductory Executive Comments)*

- Background will be provided about why EPA/DEQ/CTUIR are suggesting a revision to current fish consumption rate in Oregon. *(What is the problem we are asking the group to help solve? Why do we need to have these conversations? What is important?)*
- Where are we in the process? (Facilitator)
  - Describe ongoing process over the next 8 work sessions.

10:30 What are Water Quality Standards? What are they not? Why are they important?

- What function do water quality standards serve?
- What are human health criteria? How is the fish consumption rate used in calculating the human health criteria?
- What does the current fish consumption rate represent? Who is protected? Who is not?
- Clarifying Questions and Answers

11:30 Who do water quality standards affect? How?

- Clarifying questions and answers

12:00 Break for Lunch

1:00 Review of 2004 Toxics Criteria Triennial Review:

- Brief review of human health technical and policy advisory efforts to date: What Did the Advisory Committees recommend? What has been done thus far?
- Clarifying questions and answers

1:30 Where are we today with regards to fish consumption rates?

- Oregon's current rate at 17.5. No EPA approval (other states?)
- Reasons why we are reviewing the Fish Consumption Rate
  - *Clarify the problem stated during exec comments*
- Clarifying questions and answers

2:30 Scope and Overview of the Workshops:

- What are the expected workshop themes throughout this process?
- What are the roles / responsibilities of
  - EPA (Becky Lindgren),
  - DEQ (Jordan Palmeri),
  - CTUIR (Rick George)

3:00 How Can You Participate in this Effort? *(Facilitator)*

- Participants in today's work session will be informed about how they may continue to participate in this effort and will be invited to sign up for future workshops. They also will be informed about how they can get updates as the work continues.

3:30 Open Discussion

4:00 Adjourn

Attachment C

Oregon's Fish Consumption Rate Project
Workshop Outlines
1/22/07

Workshop #1 – Background and Scope

Detailed outline in Attachment A.

Workshop #2 – Review of Water Quality Standards and Fish Consumption Data

1) What are DEQ's current human health water quality standards?
    - Who are they intended to protect?
2) How do Oregon's water quality standards compare to other states water quality standards?
3) Review EPA Human Health methodology for establishing human health criteria
    - Review hierarchy of available data
4) How do we include salmon
    - Review EPA guidance
5) What might happen at the regional level if Oregon has a higher FCR?
6) Review of Columbia River Inter Tribal Fish Commission data
7) Where do people eat fish…usual and accustomed fishing spots
8) Review of any other studies/evidence of fish consumption data
9) Overview of where 17.5 g/day came from
10) Work out percentiles of the populations (tribal/general public) to provide an understanding of numbers like 63.5, 105, 113, 142.5, 389 g/day.

Focus Group – Human Health Risk

All focus groups will consist of hand selected members to discuss and prepare for questions that will be addressed in the next workshop. The focus group members will need to be recruited ASAP and they will need to convene at least once prior to the following workshop.

1) How do we define risk?
2) Focus group review relevant data on fish consumption rates in Oregon (e.g. the CRITFC fish consumption rate survey, other available data from Oregon Department of Human Services); also look at percentage of salmon within fish consumption rates.
3) In addition to the risks associated with the criteria, look at risk assessment studies that focus on risk for specific populations in eating fish (i.e. EPA Fish Contaminant Study for CRITFC tribes/ Mid Willamette Study/ Portland Harbor study).
4) Are there are a subset of chemicals of concern?
5) How do salmon play a part in these risk assessments?
6) Be able to speak about the risk to specific populations from the available studies

Workshop #3 – Human Health Risk

1) How do the current criteria protect the high fish consuming populations
    - Review risk equations
2) How does EPA calculate its CWA Section 304(a) guidance human health criteria values (carcinogens/noncarcinogens)?
3) Distinguish between process for risk assessment and criteria setting
    - Be clear that we are not talking about clean-up- were talking about setting standards, we're looking forward
4) A review of risk assessments of fish consumption in Oregon waters.
    - EPA Fish Contaminant Study, Mid-Willamette Study, etc…
5) What are the contaminants of concern from these studies?
6) Are the risk drivers being regulated?
7) 303(d) list of Human Health exceedances
8) How do fish advisories fit in?
9) Provide transition from giving background, knowing EPA guidance, understanding the available fish consumption data, and understanding the health risk according to past studies to now moving into managing that risk.

Notes:

- *It was discussed that this workshop may need to be split between 2 different sessions.*

Focus Group – NPDES Permitting Analysis

1) Convened group will review domestic and industrial data compared to Human Health water criteria.
2) Run hypothetical Reasonable Potential Analyses (RPA) scenarios with different Fish Consumption Rates to figure out potential contaminants of concern.
3) Are the risk driving chemicals present?
4) Discussion of Method Reporting Limits, Method Detection Limits, cost of analysis.

Workshop #4 – NPDES Permitting Impacts

1) Types of permitted facilities that can be affected.
2) Types of NPDES permits DEQ issues.
3) Explanation of the shift from technology based permits to water quality based permits.
4) Explanation of Reasonable Potential Analysis.
5) Using RPA and the results of the "focus group", which types of permitted sources have the potential to exceed the Human Health water quality criteria under various fish consumption rates?
6) What are the contaminants of potential concern?
7) Discussion of Method Detection Limits and Practical Quantification Limits.
8) Background concentration discussion.

Focus Group – Economic Impact of Permitting Analysis

1) Research the cost of technological treatment for end of pipe treatment.
2) Attempt to extrapolate this cost to different size facilities and possibly even to the utility payer.
3) #'s 2 and 3 pending funding, will be conducted by a contractor.
4) Results reviewed by the Permitting focus group.

Workshop #5 – Economic Impacts of raising the Fish Consumption Rate

1) Present the results of the economic impact of raising the fish consumption rate.
2) Cover as many aspects of the fiscal impact that are necessary to satisfy DEQ's requirements for the fiscal impact statement.
3) Economic benefits?

Focus Group – Legal Limitations and Implementation

1) What does the Clean Water Act require from states in choosing human health criteria?
2) What are the requirements of EPA in reviewing state and tribal WQS packages?
3) How would we treat an exceedance of the Reasonable Potential Analysis? Discussion of limits.
4) Discussion of compliance schedules
5) Discussion of source control or alternative pollutions control strategies.
6) Discuss numerous rates on different rivers – equity issues (regional perspective too)

Workshop #6 – Implementation of a raised Fish Consumption Rate

1) Where would a revised standard be implemented?
2) One number....multiple numbers?
3) 2 standards on one river? Review CWA requirements.
4) How would we treat an exceedance of the Reasonable Potential Analysis?
5) How might this be implemented for non-point sources?

Workshop #7 – Open Q & A forum

1) Answer any questions raised throughout the workshops.
2) Provide an open forum for questions and answers.

Workshop #8 – DEQ presents the Issue Paper

Presentation of the issue paper to the general public before the presentation to the EQC.

Attachment D

DRAFT

Fish Consumption Rate Core Team Contact List

State/Federal Agencies

Name	*Organization*
Kate Toepel	DHS
Don Essig	ID DEQ
Rick Kepler	ODFW
Ray Jaindl	OR DOA
Mike Caffereta	ODF
Cheryl Niemi	WA DOE
Robert Anderson	NMFS
Elizabeth Materna	USFWS
Trish Carroll	USFS
Rozy Mazaika	BLM

Environmental Organizations

Name	*Organization*
Brent Foster	Columbia Riverkeeper
Travis Williams	Willamette Riverkeeper
Nina Bell	NWEA
Mark Riskedahl	NW Env. Defense Center
Teresa Huntsinger	OEC
David Monk	OR Toxics Alliance

Harold Shephard	Center for Water Advocacy
Norma Grier	NW Coalition for Alternatives for Pesticides
Ralph Saperstein	OR WQ Coalition

Industry

Name	*Organization*
Kathryn VanNatta	NW Pulp and Paper
Doug Hunt	NW Steelheaders
Bruce Buckmaster	Bio-Oregon
David Leslie	Ecumenical Ministries
Jenny Holmes	Ecumenical Ministries
Terry Witt	Oregonians for Food and Shelter
Glen Spain	Pacific Coast Federation of Fishermen's Assoc
John Ledger	Assoc of Oregon Industries
Katie Fast	OR Farm Bureau
Craig Smith	NW Food Processors
Nancy Fitzpatrick	OR Salmon Commission

Municipalities

Name	*Organization*
Willie Tiffany	League of Oregon Cities
Anita Winkler	OR Water Resources Congress
Janet Gillaspie	ACWA

Tribes

Name	*Organization*
Glen Patterson	Burns Paiute Tribe
JR Herbst	Confederated Tribes of Coos, Lower Umpqua and

	Siuslaw Indians
Tim Vredenburg	Coquille Tribe
Craig Erickson/Amy Amoroso	Cow Creek Band of Umpqua Indians
Pete Wakeland	Confederated Tribes of Grand Ronde
Elwood Miller	Klamath Tribes
Tom Downey	Confederated Tribes of the Siletz Indians
Rick George/Kathleen Feehan	CTUIR
Bobby Brunoe	Confederated Tribes of Warm Springs
Erin Madden, attny	Nez Perce Tribe
Rebecca Hawk Elwood/Rose Longoria	The Confederated Tribes and Bands of the Yakama Nation

FCR Additional Contacts Suggestions

- NW Fisheries Commission – Fran Wilshinson?
- Oregon Metals Industries Council
- Liz Hamilton, NW Sportfishing Industry
- American Electronics Association – Jim Craven
- Nursery Association – Jeff Stone
- Special Districts – Amanda Stone, lobbyist
- Bass fishing clubs
- Idaho Bureau of Community and Environmental Health – Kara Stephens, Manager Environmental Health and Injury Prevention Section
- Local EPA in Idaho
- Shobane, Duck Valley, Cour de' Alene Tribes
- Environmental Justice Action Group – Jenny Sutherland
- WA Dept. of Health – Rob Duff, chair of Fish Advisory Group
- Oregon Salmon Commission
- Sportfishing lobbyis Trey Carskadon –
- St. James Family Center – Irene Martin, Skemokoway
- Oregon Center for Environmental Health
- Oregon Public Health Association
- Oregon Medical Association
- IRCO
- Stephanie Farquhar, PSU's School of Community Health,

Oregon
Theodore Kulongoski, Governor

Department of Environmental Quality
Headquarters
811 SW Sixth Avenue
Portland, OR 97204-1390
(503) 229-5696
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CONFEDERATED TRIBES
of the
Umatilla Indian Reservation
Department of Natural Resources
ADMINISTRATION
P.O. Box 638
73239 Confederated Way
Pendleton, Oregon 97801
Area code 541 Phone 276-3447 FAX 276-3317

January 10, 2007

Mr. Ephraim King, Director
Office of Science and Technology
USEPA Headquarters
Ariel Rios Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 4301T
Washington, DC 20460

Re: Request for EPA support of Oregon's process to revise to the Fish Consumption Rate and Human Health water quality criteria.

Dear Mr. King:

The Confederated Tribes of the Umatilla Indian Reservation (CTUIR) and the Oregon Department of Environmental Quality (DEQ) write this letter to request your formal assistance in our joint efforts to revise Oregon's human health water quality criteria for toxics and the fish consumption rate so they better protect known fish consumers, including tribal members, and better protect all Oregonians.

Together with U.S. EPA Region 10, we have developed a work-plan to conduct a public workshop process prior to initiating rule making. Our intent is to use the workshops to inform the public of the need for this change in Oregon's criteria and to gather input from industry, municipalities and the general public about the potential impacts of an increase in the fish consumption rate. It is our hope that we can collaborate with the interests represented at the workshops to better develop and implement a higher fish consumption rate and more protective criteria that will work for Oregon. More protective toxics criteria will ultimately reduce the amount of toxics reaching Oregon's waters, including the Columbia River, which has been identified as a critical ecosystem in Goal 4 of the 2006-2011 EPA Strategic Plan.

We very much appreciate EPA's assistance on this project thus far. We believe that for this cooperative effort to be successful we will need specialized, independent engineering and economic expertise to inform and contribute to our dialogue with potentially affected parties and the public. With this letter we formally request assistance with providing technical expertise to this process in the areas of engineering, economics and database development. Specifically, we have the following needs:

1. Subcontracted engineering and economic analysis of either individual or groups of municipal waste water treatment facilities, depending on the amount of water quality data available.

   Objectives:
   a) consider current and potential discharge scenarios and the associated toxic chemical constituents by using DEQ's Reasonable Potential Analysis for toxic pollutants,
   b) identify and evaluate options for meeting more protective toxic criteria,
   c) estimate costs and financing scenarios, as appropriate to address any necessary limits on toxic chemical discharge from an increase in the Oregon fish consumption rate and related more stringent criteria,
   d) consider potential re-engineering or process/input change options in addition to treatment of wastewater.

   Product: Report with background information, data, scenarios, results and quantitative conclusions plus lay-person oriented report and PowerPoint presentation.
   Estimated Cost: $80,000.

2. Subcontracted engineering and economic analysis of representative industry sources of toxic chemical discharges. Industrial sources may be analyzed as individual facilities or grouped for a more comprehensive but less detailed analysis.

   Objectives:
   a) consider current and potential discharge scenarios and the associated toxic chemical constituents by using DEQ's Reasonable Potential Analysis for toxic pollutants,
   b) identify and evaluate options for meeting more protective toxic criteria,
   c) estimate costs and financing scenarios, as appropriate to address any necessary limits on toxic chemical discharge from an increase in the Oregon fish consumption rate and related more stringent criteria,
   d) consider potential re-engineering or process change options in addition to treatment of wastewater.

   Product: Report with background information, data, scenarios, results and quantitative conclusions, plus lay-person oriented report and Power Point

presentation.
Estimated Cost: $80,000.

3. Subcontracted engineering and economic analysis of work products developed by industry and other stakeholders that estimate financial and technical/engineering impacts/opportunities resulting from implementation of more protective toxic chemical criteria and a higher fish consumption rate. DEQ and the CTUIR will attempt to be proactive and work with principal stakeholders in development of their financial impacts and engineering/technology changes in addition to reviewing/commenting on third party work products. DEQ and CTUIR will direct the subcontractor to engage in technical dialogue with potentially effected parties about options for reducing toxic pollution in municipal and industrial effluent.

   Product: Coordinated development, with industry, municipalities and other affected parties, of financial and technical impacts and opportunities and review of third party assessments of financial and technical reports that result from an increase in the Oregon fish consumption rate and related more stringent toxic chemical criteria.
   Estimated Cost: $40,000.

4. Participation in 2007 by subcontractor responsible for #1-3 above, at two public workshops to present results of number 1 – 3 above and participation in 2008 at one EQC hearing to present results and offer recommendations.

   Product: participation in three meetings, concise written report to DEQ and CTUIR with recommendations based upon meeting outcomes and/or requests for more information/analysis.
   Estimated Cost: $5,000

5. Development support for a public web-based DEQ toxic pollutant database, which includes discharge source permit information and the associated monitoring data. The Governor's Recommended Budget for 2007-2009 includes funding for the bulk of this project. Pending legislative approval, the database will include information on mixing zone locations (GIS enabled), the permit details of dischargers, monitoring information, and links to other DEQ databases. This complementary funding request will assist in making the Reasonable Potential Analysis (RPA) data more accessible and useful. Outfall locations can be assessed, an interim method of data entry can be executed while DEQ explores ways to accommodate electronic data submittal, and the basic infrastructure for housing RPA data can be constructed more efficiently. Currently, DEQ's NPDES permitted effluent database does not include data on the pollutants that are not assigned limits in the permits. The new database will provide the data on pollutants without limits. A comprehensive database will enhance DEQ's abilities to consider the effects of toxic pollutants in Oregon waters and easily provide that information to the public.

Product: Enhanced NPDES toxic pollutant source database with expanded access to RPA data for permitted facilities.
Estimated Cost: $50,000.

6. Provide for 0.5 FTE CTUIR staff for calendar year 2007 to participate in public work shop process, coordinate with Oregon tribes, and coordinate with industry and municipalities and assist subcontractor identified in #1-4 above/ODEQ/EPA in development of coordinated assessments of impacts to and opportunities for industry and municipalities.

   Product: Half time 2007 participation and CTUIR representation in ODEQ work shops and preparation for 2008 Oregon rule making.
   Estimated Cost: $50,000.

Total estimated cost for the above identified work is $305,000 during the period January, 2007 through December, 2008.

The Confederated Tribes of the Umatilla Indian Reservation and the Oregon Department of Environmental Quality consider this partnership effort to revise Oregon's fish consumption rate an outstanding example of state-tribal cooperation that will benefit Oregon fish consumers and will assist in the protection and restoration of "fishable, swimable" waters in Oregon. We also believe that this work will serve as an important national template for state, tribal and federal cooperation that will benefit people and water quality in our region and potentially nation-wide. We appreciate your consideration of this request and your support of this collaborative effort. We look forward to a quick response and more detailed discussion with you about the project, the work involved and the role of EPA.

Sincerely,

Eric Quaempts, Department of Natural Resources Director
Confederated Tribes of the Umatilla Indian Reservation

Stephanie Hallock

Stephanie Hallock, Director
Oregon Department of Environmental Quality

cc: Elin D. Miller, Administrator EPA Region 10
Mike Gearheard, EPA Region 10 Office of Water
Denise Keehner, EPA Headquarters Office of Water
Mike Carrier – Natural Resources Policy Director, Governor Ted Kulongoski
Carol Jorgensen, AIEO
Antone Minthorn, Chairman of the Board of Trustees, CTUIR.
Rick George, EPRP Manager, CTUIR.

State of Oregon

Department of Environmental Quality Memorandum

To: **Environmental Quality Commissioners** **Date: February 8, 2007**

From: **Helen Lottridge**

Subject: **Agenda Item G, Revision of Oregon Temperature and Mixing Zone Rules to Align with EPA Action; and Agenda Item H, Error Corrections and Clarifications to 2003 and 2004 Water Quality Standards Rules.**

Agenda Items G and H were originally in one rulemaking package, but we split them up to avoid confusion. They both deal with the same set of rules, but are not the same issue. Both agenda items have exactly the same attachments. To save paper, we have provided you with just one set of attachments, contained under Agenda Item G, and you can refer to those same attachments for Agenda Item H. In the "redline" rule document, we have used one color to show the changes associated with Item G and a different color for those changes associated with Item H.

State of Oregon
Department of Environmental Quality Memorandum

Date: February 5, 2007

To: Environmental Quality Commission

From: Stephanie Hallock, Director S. Hallock

Subject: Agenda Item G, Rule Adoption: Revision of Oregon Temperature and Mixing Zone Rules to Align with EPA Action.
February 22, 2007 EQC Meeting

Why this is Important

Under the federal Clean Water Act, States adopt water quality standards to protect public health, fish and the environment. Water quality standards identify the levels of chemical substances and the physical characteristics of water bodies needed to protect the uses of the State's waters. It is important to DEQ and the public that water quality standards protect human health and the environment and may be implemented practically.

Purpose of Rulemaking

The purpose of this rulemaking is to align Oregon's water quality standards rules (OAR Chapter 340, Division 41) with EPA action.

Department Recommendation

The Department of Environmental Quality (DEQ) recommends that the Environmental Quality Commission (EQC) adopt the proposed rule revisions, shown in Attachment A-2, to do the following:

1) Revise Oregon's temperature criteria for oceans and bays, natural lakes, Borax Lake chub and cool water species, which were disapproved by EPA in 2006 because EPA could not conclude that the criteria would protect aquatic life. See OAR 340-041-0028(6), (7), (9) and (10).

2) Repeal provisions of the mixing zone rule that established less stringent mixing zone requirements in certain circumstances; e.g. a receiving stream with low summer stream flow that would benefit from the added water provided by the treated effluent. These provisions were disapproved by EPA in 2004. See OAR 340-041-0053(2) (h).

When DEQ requested public comment on the proposed rules, the rulemaking package also included corrections and clarifications to December 2003 and May 2004 rulemakings. The rule corrections and clarifications are proposed for EQC adoption under agenda item H on February 22, 2007.

Additionally, the rulemaking package released for public comment included revisions to the turbidity criteria. DEQ is not proposing changes to the turbidity criteria at this time. DEQ decided to do further work on the turbidity standard, including obtaining review from the Independent Multi-Disciplinary Science Team and additional public review.

Background – General

The federal Clean Water Act (CWA) requires that states adopt water quality standards to protect fish and aquatic life, human health and other beneficial uses of the state's waters. Oregon law gives the EQC the authority to adopt water quality standards by administrative rule in order to fulfill this federal requirement.

The Environmental Protection Agency (EPA) is required to review standards adopted by the state. EPA has the authority to disapprove state standards if EPA concludes the standards do not adequately protect the uses of the state's waters. If EPA does not approve a water quality standard, the state is given the opportunity to amend it. If the state chooses to not amend the disapproved rule, EPA must adopt a standard for the state that they determine will protect the use. DEQ and EPA discussed amendments that would be satisfactory to both agencies. DEQ recommends that the EQC amend the disapproved standards rather than wait for EPA to impose standards on Oregon.

DEQ uses water quality standards to:

1. Limit pollution in State waters by requiring cities and businesses to obtain a permit when it is necessary to release pollutants into the environment;
2. Certify that certain activities, such as dredge and fill activities and hydroelectric dams and diversions, will be done in a manner that protects water quality;
3. Assess the quality of the State's waters; and
4. Develop plans for restoring impaired waters (Total Maximum Daily Loads, TMDLs).

Background – Temperature Criteria

<u>DEQ's 2003 Revisions to the Temperature Standards</u>

In December, 2003, the EQC adopted temperature standards that included criteria for oceans and bays, natural lakes, Borax Lake chub and cool water species. These criteria allow a biologically insignificant (0.3°C) increase (decrease for Borax Lake chub) from the "ambient" water temperature due to human activity. "Ambient" temperature refers to the current water temperature measured upstream of or prior to the proposed discharge or activity. Prior to 2003, the criterion for ocean and bay (marine) waters prohibited "a significant increase above natural background temperatures." The pre-2003 criterion for natural lakes was "no measurable surface water temperature increase resulting from human activities." There were no

criteria for warm water (Borax Lake chub) or cool water species prior to 2003.

With the 2003 revisions, DEQ attempted to make the criteria more clear and consistent, simplify implementation, add criteria for cool and warm water species, and provide reasonable protection for these water bodies. The Department thought the 2003 criteria were appropriate because:

1. Ambient temperature can be measured and, therefore, the criteria would be relatively easy to implement. A criterion based on "natural condition" presents the difficulty of estimating and debating the "natural" condition.
2. It is unlikely that human activity has significantly altered the temperature of natural lakes, ocean waters or bays.
3. Cool water species (e.g. chub, suckers) are more tolerant of varied temperature conditions than cold water species (i.e. salmon and trout).
4. There are few stream reaches in Oregon designated for cool water use (9 cool water reaches in river basins and additional streams in the State's two interior lakes basins). Most streams contain cold-water fish, such as trout. By protecting cold water fish, the criteria for these cold water streams also protect cool water species.

DEQ submitted revised temperature standards to EPA in December 2003. EPA approved most of the new temperature standards in March of 2004, but did not act on the criteria for natural lakes, oceans and bays, Borax Lake chub and cool water species. EPA indicated in 2005 that they would likely disapprove these four criteria and DEQ began discussions with them about revisions to address their concerns.

EPA Disapproval of DEQ's Revised Temperature Criteria

On November 28, 2006, EPA disapproved the State's temperature criteria for oceans and bays, natural lakes, Borax Lake chub and cool-water species [OAR 340-041-0028(6) (7), (9) and (10)]. EPA concluded that these criteria do not ensure that aquatic life uses will be protected because the criteria rely on the "ambient" condition. Ambient water temperature may have been affected by human activity and may change over time. EPA prefers that the criteria be based on "natural condition."

DEQ's discussions with EPA, which began in 2005, led to the revisions now being proposed. DEQ considers the proposed revisions a compromise that addresses EPA concerns and partially addresses DEQ concerns about implementation.

Effect of Proposed Rules – Temperature Criteria

The proposed rule amendments, shown on pages 21-22 of Attachment A-2 [OAR 340-041-0028(6) (7), (9) and (10)], do the following:

1. Revise the temperature criteria for natural lakes, oceans and bays and Borax Lake chub to allow a 0.3°C increase in temperature from the "natural condition" rather than the "ambient" temperature. The rule language states that DEQ will assume the ambient and natural conditions are the same for these water bodies unless there has been some human modification or activity that would reasonably be expected to alter the temperature of the water body.
2. Revise the temperature criterion for cool water species from a limited human-caused increase above the ambient temperature, to a general narrative that prohibits an increase in temperature that would impair cool water species.
3. Add a site specific temperature criterion for the cool water reach of the Klamath River that allows a 0.3°C increase above the "natural background." The rule defines the "natural background" condition in this discrete case as the temperature of the water as it exits Klamath Lake plus any natural warming or cooling that occurs downstream.

The site specific criterion was added for the cool water reach of the Klamath River because there are four facilities that directly discharge wastewater to this reach and the site specific criterion, which will protect the cool water use, will be easier to implement than the proposed narrative cool water criterion. In addition, because the Klamath River originates at Klamath Lake, DEQ can use the temperature of the water exiting the lake as a basis for the "natural background" temperature of this reach.

DEQ has worked with EPA on the proposed revisions and followed the guidance provided in its disapproval letter. EPA Region 10 has indicated that it will be able to approve the proposed revisions.

Background – Alternate Mixing Zones

<u>1997 Alternate Mixing Zone Rules</u>

In 1997, EQC adopted rules allowing DEQ to approve larger mixing zones for permitted discharges in certain circumstances [OAR 340-041-0053(h) shown on pages 30-33 of Attachment A-2]. One circumstance was when a city could demonstrate that the discharge created an overall environmental benefit, even though the city would need to use a larger area of the receiving stream for mixing before water quality standards would be met.

The alternate mixing zone provisions also applied to constructed or man-made water courses, such as canals or ditches. In such cases, the rules allowed a larger mixing zone in the ditch or canal, with conditions, as long as water quality standards were met when the flow reached the natural stream.

EPA Disapproval of Alternate Mixing Zone Rules

Because regulatory mixing zone rules are part of the water quality standards rules, they are subject to EPA approval. EPA disapproved the alternate mixing zone provisions in October, 2004. EPA concluded that the alternate mixing zones would not assure that designated uses are protected in the water body as a whole, which is a requirement for allowing a mixing zone. EPA will not adopt an alternate mixing zone rule for the state. Oregon's remaining mixing zone rules describe DEQ's procedures for establishing mixing zones.

Effect of Proposed Rules – Alternate Mixing Zones

The proposed repeal of the 1997 alternate mixing zone provisions is needed to align the rule language with EPA action. These provisions were disapproved by EPA in October, 2004. Therefore, they are no longer effective rules under the Clean Water Act and are not being implemented.

The effect of EPA's disapproval was limited as the rule had been used for only a few sources. The potential impact of not having an alternate mixing zone option is higher wastewater treatment and disposal costs for businesses and communities that discharge to small streams. DEQ does not plan to develop new alternate mixing zone rules. The remaining mixing zone rules apply (OAR 340-41-0053).

Commission Authority

The EQC has authority to take this action under ORS 468.020, 468B.010, 468B.015, 468B.030, 468B.035, and 468B.048.

Stakeholder Involvement

DEQ did not assemble an advisory committee to assist in developing the proposed rule amendments. Given the Department's limited resources for water quality standards work and the narrow scope of this rulemaking – to respond to EPA's disapproval of 5 specific provisions - DEQ provided stakeholder involvement through an opportunity for public comment.

Public Comment

A public comment period extended from October 17, 2005 to February 6, 2006 and included 6 public hearings, located in Portland, Eugene, North Bend, Bend, Grants Pass and Baker City. A summary of public comment and the agency responses are provided in Attachment B. Hearing officer reports are provided in Attachment C. These documents contain comments about rule corrections, which are addressed separately in Agenda Item H for this same EQC meeting, February 22, 2007. You will also see comments about turbidity in Attachment C, which do not relate to this rulemaking.

DEQ released several proposed revisions to the water quality standards rules (Division 41) for public comment at this time, including the revised temperature criteria, mixing zone rule, turbidity criteria and numerous corrections and clarifications.

Eleven people provided approximately 28 comments on the temperature and mixing zone rule revisions. Most of the public comment pertained to the proposed turbidity criteria revisions, which are not part of this rulemaking.

Next Steps

Rule Effective Dates

The repeal of the alternative mixing zone requirements [OAR 340-041-0053(h)] will be effective on the date the revised rule is filed with the Secretary of State. We expect to file the rule in March, 2007 if the EQC adopts the amendments on February 22, 2007.

The temperature criteria revisions will be effective upon approval by EPA.

DEQ has already stopped implementing the alternate requirements in the mixing zone rule.

Implementing the Rule

In cases where DEQ must estimate and possibly debate the "natural condition" of the water body, implementation of the revised temperature criteria for natural lakes, ocean waters and bays will be more difficult and resource intensive to implement than the 2003 criteria. However, for the following reasons, DEQ expects this extra effort will be required in very few cases:

1. There are relatively few permitted sources discharging into oceans, bays or natural lakes at this time, and

Water body type	Discharge permits
Ocean and bays	about 29
Natural Lakes	1
Borax Lake	0

2. For many ocean waters, bays and natural lakes, there have been no human modifications or discharges that would be expected to have altered the natural temperature of the water body. For these water bodies, the Department will presume the current condition is the natural condition and will not undertake to model or otherwise estimate a natural condition different from the current ambient temperatures.

The pre-2003 criteria for oceans and bays (marine waters) also limited increases in temperature from natural conditions. Therefore, implementation of the revised criterion for ocean and bay waters will be consistent with prior practice.

The revised cool water species criterion will be more difficult and time consuming to implement than the 2003 criterion, because it requires site

specific information and professional judgment. Again, however, we expect this additional effort will be required in only a few cases. There are currently 5 permitted sources (1 major and 4 minor) that discharge into cool water streams other than the Klamath River. There are 4 permitted sources (3 major and 1 minor) that discharge to the cool water reach of the Klamath River, which has a more specific criterion.

A rule implementation plan is available upon request.

Attachments

A. Proposed Rule Revisions
   1. Summary of Proposed Corrections and Clarifications to OAR 340-041, Water Quality Standards: Beneficial Uses, Policies and Criteria for Oregon (Applicable to Agenda Item H only)
   2. Proposed Rule Revisions (redlined version)
      Note: Revisions for this agenda item and also Agenda Item H are contained in this same attachment because of the overlap. Revisions for temperature and mixing zone standards are in blue.

B. Summary of Public Comments and Agency Responses
C. Presiding Officer's Reports on 6 Public Hearings
D. Relationship to Federal Requirements
E. Statement of Need and Fiscal and Economic Impact
F. Land Use Evaluation Statement
G. Water Quality Standards Fact Sheet

Available Upon Request

1. Legal Notice of Hearing
2. Cover Memorandum from Public Notice
3. Written Comment Received
4. Rule Implementation Plan
5. EPA letter to DEQ disapproving alternate mixing zone requirements (October, 2004).
6. EPA letter to DEQ disapproving temperature criteria for natural lakes, oceans & bays, Borax Lake chub and cool water species (November 28, 2006).

Approved:

Section: _____

Division: _____

Report Prepared by: Debra Sturdevant
Phone: 503-229-6691

Attachment A-1

Summary of Proposed Corrections and Clarifications to OAR 340-041, Water Quality Standards: Beneficial Uses, Policies and Criteria for Oregon

DEQ is recommending a series of rule revisions to correct errors and clarify language in the Division 41 water quality standards rules. This attachment summarizes the proposed changes and provides additional explanation. A redline/strikeout version of the proposed rule language is shown in Attachment A-2 (revisions shown in red).

In December 2003 and May 2004 the Environmental Quality Commission revised the temperature standard, intergravel dissolved oxygen (IGDO) criterion, fish use subcategories, antidegradation policy and toxic pollutants criteria. The Commission also made major formatting changes to Division 41 (Chapter 340), organizing the water quality criteria by parameter, rather than repeating every criterion under each basin rule. This greatly reduced the size of Division 41 and made the rules easier for staff and the public to use by placing definitions and basin rules in alphabetical order and reducing redundancy.

The large scope of the December, 2003 rulemaking combined with a short time period to conduct the rulemaking led to a number of errors. The short time frame, 7 months, was the result of a court order in the case of Northwest Environmental Advocates v. the Environmental Protection Agency. The proposed changes described below correct these errors. In addition, the proposed revisions clarify meaning and inconsistencies.

Error Corrections:

1. Definitions

The definitions for "Estuarine Waters," "Marine Waters" and "Warm-water Aquatic Life" (in 340-401-0002) were mistakenly removed and are proposed to be restored with no change to the previous definitions. While these terms are not use in the temperature standards (the focus of the December 2003 rulemaking), they are used in other Division 41 rules and should not have been omitted.

2. Cross-references to Figures and Tables

Fish uses are designated under each basin rule (rules for each of the State's basins that contains policies specific to that basin). While the references to Tables and Figures in the basin rules are correct, the Tables and Figures are also cross-referenced in other rules, such as definitions and the temperature and dissolved oxygen criteria. In several instances, these cross-references were not updated prior to the final rulemaking. The proposed rule revisions correct the incorrect cross-references.

3. Cross-reference to Rules

Several errors in cross references to other rules or sections of rules are proposed to be corrected. During the December 2003 rulemaking many rules were relocated and/or

renumbered. Not all the cross-references were found and updated prior to the final rulemaking.

4. Intergravel Dissolved Oxygen Value in Table 21.
In the December 2003 rulemaking, the intergravel dissolved oxygen (IGDO) criterion (340-401-0016) was changed from 6.0 mg/l to 8.0 mg/l. Table 21, which summarizes the dissolved oxygen criteria, was not revised accordingly. The proposed revisions update Table 21 to show the current IGDO criterion.

5. Toxic Substances Criteria Effective Dates
In May, 2004, EQC updated Oregon's toxic substances criteria [OAR 340-041-0033(2)]. Table 33A listed the criteria DEQ expected to be effective beginning February, 2005 and Table 33B included criteria that would become effective at a later date, following Endangered Species Act consultation and EPA approval. However, EPA has not yet approved the criteria in Table 33A. Tables 33A and 33B are revised to correctly show which criteria may currently be used by the State for NPDES permitting, and which are not yet effective. DEQ does not know when EPA will approve or disapprove these criteria.

6. Water Quality Limited Waters
Section (6) of the water quality limited waters rule (340-041-0046) is removed. Section (6) repeats the language already contained in section (1) of the same rule and therefore, is redundant and not needed.

7. Mixing Zones
The mixing zone rules contain special provisions for thermal discharges called thermal plume limitations. The thermal plume limitation for spawning [340-041-0053 (2) (d) (A)] contains an error and is revised to read: "This adverse affect is prevented or minimized by limiting potential fish exposure to temperatures of 13 degrees Celsius (55.4 Fahrenheit) or *more*..." It currently reads 13°C "or *less*." The intent is to prevent or limit the exposure of spawning fish and incubating eggs to warm temperatures.

8. Basin Specific Design Criteria
Each basin rule contains minimum design criteria for the treatment and control of sewage wastes. The design criteria for three basins, which were mistakenly left out of the rules during the reformatting process, are restored with no changes to the prior language. The three basins are the John Day [OAR 340-041-0175(3)], the North Coast [OAR 340-041-0235(3)], and the Umatilla [OAR 340-041-0315(2)].

9. Columbia River Total Dissolved Solids Criterion
The proposed rule revisions correct an error in the river miles of the Columbia River subject to a total dissolved solids criterion of 200 mg/l (rather than 500 mg/l) [340-041-0104 (2) (a)].

10. Location of the "Three Basin Rule"

In the December, 2003 reformatting of Division 41, the Willamette Basin "Special Policies and Guidelines" rule was separated into 2 rules: "Water Quality Standards and Policies for this Basin" and "The Three Basin Rule: Clackamas, McKenzie (above river mile 15) & the North Santiam." Provisions related to the Yamhill TMDL were mistakenly included in the "Three Basin Rule," OAR 340-041-0350(10). These provisions are being moved to the "Water Quality Standards and Policies" rule, OAR 340-041-0345 (5). There are no language changes.

11. Beneficial Use Designations

Beneficial uses designations are the legitimate uses of State waters designated by the State for protection under the Clean Water Act. Beneficial uses include fish and aquatic life, domestic and industrial water supply and others. Water quality criteria are established to protect the beneficial uses.

For all the tables and figures revised by this rulemaking, the date of the revision is shown on the map or table.

a. Several footnote cross references are corrected.

b. Figure 300A is revised to correct the use in a small lower reach of the Coquille River. This reach was incorrectly mapped as "out of state waters." The reach should have been mapped as a migration corridor based on the data and methodology used to develop the December, 2003 Fish Use Designations maps.

c. Figure 320B is corrected to show salmon and steelhead spawning use in the lower portions of Calapooya Creek and Elk Creek (Umpqua River sub-Basin). Spawning use should have been designated for these reaches based on the Oregon Department of Fish and Wildlife (ODFW) fish distribution data and the methods used to develop the December, 2003 spawning use maps.

d. Figure 340B is revised to show that the Willamette River from Newberg to the Yamhill River is not spawning habitat. According to the ODFW fish distribution database and the methods used to develop the December, 2003 spawning use maps, this reach should not have been identified as spawning habitat.

e. Figure 340B is revised to show that salmon and steelhead spawning does not occur in two reservoirs on the Clackamas River shown on the map as spawning habitat. DEQ requested clarification in early 2004, during a hydropower project re-licensing process and ODFW confirmed that the reservoirs are not spawning habitat. One of these reservoirs was mistakenly identified as spawning by DEQ. According to ODFW, the other reservoir was incorrectly identified as spawning habitat in their database and they said they would correct that error. The GIS layer used by DEQ to develop the spawning use maps did not show these 2 small

segments as reservoirs rather than flowing river reaches. For this combination of reasons, DEQ mistakenly identified the reservoirs as spawning habitat.

f. Figure 201A is corrected to show that the cool water species use in the Malheur River extends from the mouth upstream to Namorf. DEQ carried over the prior "no salmonid use" designation as "cool water" use in the 2003 rulemaking. However, the map for the Malheur River mistakenly shows the upper extent of the cool water reach slightly downstream of the prior designation.

g. The legend for Figure 271B, the Rogue Basin Salmon & Steelhead Spawning Use Designation map, is corrected to read "no spawning use" rather than "no salmonid use" for reaches that do not support spawning. The correction is consistent with the spawning use maps for other basins.

h. Figure 151A is revised to show "salmon and trout rearing and migration use" for a small segment of Catherine Cr. and a small tributary to Pyles Cr. that were mistakenly designated "core cold water habitat use." The revision is consistent with the methods and data used to develop the December, 2003 fish use maps.

Clarifications of Division 41 Rule Language:

1. Antidegradation (-0004)

When the EQC revised the antidegradation policy in December 2003, Section (9) of the rule was written to allow either the Department or the Commission to authorize exceptions to the antidegradation review if required findings are made. There is now an inconsistency in Section (5) (c) of the rule, which refers to exceptions authorized by the Commission under Section (9). The proposed rule revises Section (5) (c) to be consistent with Section (9).

2. Statewide Narrative Criteria (-0007)

Section (3) is deleted. This section specified which other sections of the rules apply to point sources and to nonpoint sources. It is unnecessary language because the rules speak for themselves. The meaning of the language is confusing and misleading because additional criteria apply to point and/or nonpoint sources that are not identified in section (3).

3. Dissolved Oxygen (-0016)

a. In the first paragraph, for consistency and clarity, the language is revised from "…no activities **must** be conducted…" to "…no activities **may** be conducted…."

b. The rule language in Section (1) is revised to clearly state that the spawning criterion for dissolved oxygen applies to resident trout spawning through fry emergence. The current language is confusing.

4. pH (-0021)

In the reformatting to simplify Division 41, the criteria for pH were put into a single rule, as were other statewide water quality criteria. However, the pH criteria vary by basin and this section of the rule fails to alert the reader that they need to look at the basin rules for basin specific criteria. Revised language clarifies that the pH criteria vary by basin and/or water body and that the reader must check the basin rules to find the criteria applicable to a particular water body.

5. Temperature Rule - Unidentified Tributaries [-0028(5)]

"Unidentified tributaries" refer to tributary streams that are too small to appear on the 1:100,000 scale fish use designation maps. The "unidentified tributaries" policy states that streams not identified on the fish use maps and tables have the same designation as the water body they flow into. The rule should have referred to the "Fish Use Designation" maps and tables, specifically referring to the year round fish use maps, which show rearing and migration uses. The revised rule language clarifies that the "unidentified tributaries" policy applies only to the "Fish Use Designations" maps and does not apply to the "Salmon and Steelhead Spawning Use" maps.

This clarification is consistent with the methodology used to develop the maps in 2003. The spawning use maps were developed based on the specific salmon and steelhead spawning habitat and time periods identified by the Oregon Department of Fish and Wildlife database on fish life stage distribution and timing. Many streams and tributaries that are large enough to appear on the 1:100,000 scale spawning map are not designated for spawning use. Designating all tributaries too small to show on the maps for spawning would not be consistent with this methodology or logical.

The "Fish Use Designations" maps and tables identify salmon and trout rearing and migration habitat. Rearing and migration habitat is more expansive than spawning habitat because rearing is more ubiquitous and fish will move upstream when conditions allow it. In addition, these maps include resident trout use. The spawning maps designate only salmon and steelhead spawning to emergence time periods and locations. In developing the "Fish Use Designation" maps, DEQ and EPA used an approach we referred to as the "upstream rule." The use designation based on the ODFW database was carried up stream to the headwaters or until a more stringent use was designated. The concept of applying the use to unidentified tributaries is essentially the application of the "upstream rule" concept to streams that do not show on the maps. This "upstream rule" was not, however, applied to the spawning use designations.

6. Total Dissolved Solids (TDS) (-0032)

The December, 2003 rule for total dissolved solids mistakenly states that a criterion of 100 mg/l applies to "all freshwater streams and tributaries." The basin specific criteria show, however, that the TDS criteria actually vary by basin and some waters have no criterion (i.e. the Umatilla River and its tributaries). The TDS criteria were not being reviewed and substance of the criteria should not have been altered. The purpose of the reformatting exercise was only to consolidate the criteria into their own rules. The

revised rule language corrects this error by referring the reader to the basin specific criteria.

For more information on these proposed revisions, contact Debra Sturdevant, Water Quality Standards Coordinator, by calling 503-229-6691 or sending an email to sturdevant.debra@deq.state.or.us.

Note: The rule revisions proposed to correct and clarify water quality standards rules adopted in 2003 and 2004 (Agenda Item H) are shown in red. The rule revisions proposed to align the temperature and mixing zone rules with EPA disapproval actions (Agenda Item G) are shown in blue.

DEPARTMENT OF ENVIRONMENTAL QUALITY

WATER POLLUTION

DIVISION 41

WATER QUALITY STANDARDS: BENEFICIAL USES, POLICIES, AND CRITERIA FOR OREGON

340-041-0002

Definitions

Definitions in this rule apply to all basins unless context requires otherwise.

(1) "401 Water Quality Certification" means a determination made by DEQ that a dredge and fill activity, private hydropower facility, or other federally licensed or permitted activity that may result in a discharge to waters of the state has adequate terms and conditions to prevent an exceedance of water quality criteria. The federal permit in question may not be issued without this state determination in accordance with the Federal Clean Water Act, section 401 (33 USC 1341).

(2) "Ambient Stream Temperature" means the stream temperature measured at a specific time and place. The selected location for measuring stream temperature must be representative of the stream in the vicinity of the point being measured.

(3) "Anthropogenic," when used to describe "sources" or "warming," means that which results from human activity;

(4) "Applicable Criteria" means the biologically based temperature criteria in OAR 340-041-0028(4), the superseding cold water protection criteria in OAR 340-041-0028(11), or the superseding natural condition criteria as described in OAR 340-041-0028(8). The applicable criteria may also be site-specific criteria approved by U.S. EPA. A subbasin may have a combination of applicable temperature criteria derived from some or all of these numeric and narrative criteria.

(5) "Appropriate Reference Site or Region" means a site on the same water body or within the same basin or ecoregion that has similar habitat conditions and represents the water quality and biological community attainable within the areas of concern.

(6) "Aquatic Species" means plants or animals that live at least part of their life cycle in waters of the state.

(7) "Basin" means a third-field hydrologic unit as identified by the U.S. Geological Survey.

(8) "BOD" means 5-day, 20°C Biochemical Oxygen Demand.

(9) "Cold-Water Aquatic Life" means aquatic organisms that are physiologically restricted to cold water, including but not limited to native salmon, steelhead, mountain whitefish, char (including bull trout), and trout.

(10) "Cold Water Refugia" means those portions of a water body where or times during the diel temperature cycle when the water temperature is at least 2 degrees Celsius colder than the daily maximum temperature of the adjacent well-mixed flow of the water body.

(11) "Commission" means the Oregon Environmental Quality Commission.

(12) "Cool-Water Aquatic Life" means aquatic organisms that are physiologically restricted to cool waters, including but not limited to native sturgeon, Pacific lamprey, suckers, chub, sculpins, and certain species of cyprinids (minnows).

(13) "Core Cold-Water Habitat Use" means waters that are expected to maintain temperatures within the range generally considered optimal for salmon and steelhead rearing, or that are suitable for bull trout migration, foraging, and sub-adult rearing that occurs during the summer. These uses are designated on the following subbasin maps set out at OAR 340-041-0101 to 340-041-0340: Figures 130A, 151A, 160A, 170A, 180A, 201A, 220A, 230A, 271A, 286A, 300A, 310A, 320A, and 340A.

(14) "Critical Habitat" means those areas that support rare, threatened, or endangered species or serve as sensitive spawning and rearing areas for aquatic life as designated by the U.S. Fish and Wildlife Service or National Oceanic and Atmospheric Administration-Fisheries pursuant to the Endangered Species Act (16 USC 1531).

(15) "Daily Mean" for dissolved oxygen means the numeric average of an adequate number of data to describe the variation in dissolved oxygen concentration throughout a day, including daily maximums and minimums. For the purpose of calculating the mean, concentrations in excess of 100 percent of saturation are valued at the saturation concentration.

(16) "Department" or "DEQ" means the Oregon State Department of Environmental Quality.

(17) "Designated Beneficial Use" means the purpose or benefit to be derived from a water body as designated by the Water Resources Department or the Water Resources Commission.

(18) "DO" means dissolved oxygen.

(19) "Ecological Integrity" means the summation of chemical, physical, and biological integrity capable of supporting and maintaining a balanced, integrated, adaptive community of organisms having a species composition, diversity, and functional organization comparable to that of the natural habitat of the region.

(20) "Epilimnion" means the seasonally stratified layer of a lake or reservoir above the metalimnion; the surface layer.

(21) "Erosion Control Plan" means a plan containing a list of best management practices to be applied during construction to control and limit soil erosion.

(22) "Estuarine Waters" means all mixed fresh and oceanic waters in estuaries or bays from the point of oceanic water intrusion inland to a line connecting the outermost points of the headlands or protective jetties.

(~~22~~23) "High Quality Waters" means those waters that meet or exceed levels that are necessary to support the propagation of fish, shellfish, and wildlife; recreation in and on the water; and other designated beneficial uses.

(~~23~~24) "Hypolimnion" means the seasonally stratified layer of a lake or reservoir below the metalimnion; the bottom layer.

(~~24~~25) "Industrial Waste" means any liquid, gaseous, radioactive, or solid waste substance or a combination thereof resulting from any process of industry, manufacturing, trade, or business or from the development or recovery of any natural resources.

(~~25~~26) "In Lieu Fee" means a fee collected by a jurisdiction in lieu of requiring construction of onsite stormwater quality control facilities.

(~~26~~27) "Intergravel Dissolved Oxygen" (IGDO) means the concentration of oxygen measured in the water within the stream bed gravels. Measurements should be taken within a limited time period before emergence of fry.

(~~27~~28) "Jurisdiction" means any city or county agency in the Tualatin River and Oswego Lake subbasin that regulates land development activities within its boundaries by approving plats or site plans or issuing permits for land development.

(~~28~~29) "Land Development" means any human-induced change to improved or unimproved real estate, including but not limited to construction, installation or expansion of a building or other structure; land division; drilling; and site alteration such as land surface mining, dredging, grading, construction of earthen berms, paving, improvements for use as parking or storage, excavation, or clearing.

(~~29~~30) "Load Allocation (LA)" means the portion of a receiving water's loading capacity that is attributed either to one of its existing or future nonpoint sources of pollution or to natural background sources. Load allocations are best estimates of the loading that may range from reasonably accurate estimates to gross allotments, depending on the availability of data and appropriate techniques for predicting loading. Whenever possible, natural and nonpoint source loads should be distinguished.

(~~30~~31) "Loading Capacity (LC)" means the greatest amount of loading that a water body can receive without violating water quality standards.

(~~31~~32) "Low Flow Period" means the flows in a stream resulting primarily from groundwater discharge or base flows augmented from lakes and storage projects during the driest period of the year. The dry weather period varies across the state according to climate and topography. Wherever the low flow period is indicated in Water Quality Management Plans, this period has been approximated by the inclusive months. Where applicable in a waste discharge permit, the low flow period may be further defined.

(~~32~~33) "Managed Lakes" refers to lakes in which hydrology is managed by controlling the rate or timing of inflow or outflow,

(34) "Marine Waters" means all oceanic, offshore waters outside of estuaries or bays and within the territorial limits of the State of Oregon.

(~~33~~35) "mg/l" or "mg/L" means milligrams per liter.

(~~34~~36) "Metalimnion" means the seasonal, thermally stratified layer of a lake or reservoir that is characterized by a rapid change in temperature with depth and that effectively isolates the waters of the epilimnion from those of the hypolimnion during the period of stratification; the middle layer.

(~~35~~37) "Migration Corridors" mean those waters that are predominantly used for salmon and steelhead migration during the summer and have little or no anadromous salmonid rearing in the months of July and August. These uses are designated on the following subbasin maps set out at OAR 340-041-0101 to 340-041-0340: Tables 101B, and 121B, and Figures 151A, 170A, 300A and 340A.

(~~36~~38) "Minimum" for dissolved oxygen means the minimum recorded concentration including seasonal and diurnal minimums.

(~~37~~39) "Monthly (30-day) Mean Minimum" for dissolved oxygen means the minimum of the 30 consecutive-day floating averages of the calculated daily mean dissolved oxygen concentration.

(~~38~~40) "Natural Conditions" means conditions or circumstances affecting the physical, chemical, or biological integrity of a water of the state that are not influenced by past or present anthropogenic activities. Disturbances from wildfire, floods, earthquakes,

volcanic or geothermal activity, wind, insect infestation, and diseased vegetation are considered natural conditions.

(~~39~~41) "Natural Thermal Potential" means the determination of the thermal profile of a water body using best available methods of analysis and the best available information on the site-potential riparian vegetation, stream geomorphology, stream flows, and other measures to reflect natural conditions.

(~~40~~42) "Nonpoint Sources" means any source of water pollution other than a point source. Generally, a nonpoint source is a diffuse or unconfined source of pollution where wastes can either enter into or be conveyed by the movement of water to waters of the state.

(~~41~~43) "Ocean Waters" means all oceanic, offshore waters outside of estuaries or bays and within the territorial limits of Oregon.

(~~42~~44) "Outstanding Resource Waters" means those waters designated by the commission where existing high quality waters constitute an outstanding state or national resource based on their extraordinary water quality or ecological values or where special water quality protection is needed to maintain critical habitat areas.

(~~43~~45) "Pollution" means such contamination or other alteration of the physical, chemical, or biological properties of any waters of the state, including change in temperature, taste, color, turbidity, silt, or odor of the waters, or such discharge of any liquid, gaseous, solid, radioactive, or other substance into any water of the state that either by itself or in connection with any other substance present can reasonably be expected to create a public nuisance or render such waters harmful, detrimental, or injurious to public health, safety, or welfare; to domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses; or to livestock, wildlife, fish, other aquatic life or the habitat thereof.

(~~44~~46) "Point Source" means a discernable, confined, and discrete conveyance, including but not limited to a pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, vessel or other floating craft, or leachate collection system from which pollutants are or may be discharged. Point source does not include agricultural storm water discharges and return flows from irrigated agriculture.

(~~45~~47) "Public Water" means the same as "waters of the state".

(~~46~~48) "Public Works Project" means any land development conducted or financed by a local, state, or federal governmental body.

(~~47~~49) "Reserve Capacity" means that portion of a receiving stream's loading capacity that has not been allocated to point sources or to nonpoint sources and natural background as waste load allocations or load allocations, respectively. The reserve

capacity includes that loading capacity that has been set aside for a safety margin and is otherwise unallocated.

(~~48~~50) "Resident Biological Community" means aquatic life expected to exist in a particular habitat when water quality standards for a specific ecoregion, basin, or water body are met. This must be established by accepted biomonitoring techniques.

(~~49~~51) "Salmon" means chinook, chum, coho, sockeye, and pink salmon.

(~~50~~52) "Salmon and Steelhead Spawning Use" means waters that are or could be used for salmon and steelhead spawning, egg incubation, and fry emergence. These uses are designated on the following subbasin maps set out at OAR 340-041-0101 to 340-041-0340: Tables 101B, and 121B, and Figures 130B, 151B, 160B, 170B, 220B, 230B, 271B, 286B, 300B, 310B, 320B, and 340B.

(~~51~~53) "Salmon and Trout Rearing and Migration Use" means thermally suitable rearing habitat for salmon, steelhead, rainbow trout, and cutthroat trout as designated on subbasin maps set out at OAR 340-041-0101 to 340-041-0340: Figures 130A, 151A, 160A, 170A, 220A, 230A, 271A, 286A, 300A, 310A, 320A, and 340A.

(~~52~~54) "Salmonid or Salmonids" means native salmon, trout, mountain whitefish, and char (including bull trout). For purposes of Oregon water quality standards, salmonid does not include brook or brown trout since they are introduced species.

(~~53~~55) "Secondary Treatment" means the following depending on the context:~~.~~

(a) For "sewage wastes," secondary treatment means the minimum level of treatment mandated by EPA regulations pursuant to Public Law 92-500.

(b) For "industrial and other waste sources," secondary treatment means control equivalent to best practicable treatment (BPT).

(~~54~~56) "Seven-Day Average Maximum Temperature" means a calculation of the average of the daily maximum temperatures from seven consecutive days made on a rolling basis.

(~~55~~57) "Sewage" means the water-carried human or animal waste from residences, buildings, industrial establishments, or other places together with such groundwater infiltration and surface water as may be present. The admixture with sewage of industrial wastes or wastes, as defined in this rule, may also be considered "sewage" within the meaning of this division.

(~~56~~58) "Short-Term Disturbance" means a temporary disturbance of six months or less when water quality standards may be violated briefly but not of sufficient duration to cause acute or chronic effects on beneficial uses.

(~~57~~59) "Spatial Median" means the value that falls in the middle of a data set of multiple intergravel dissolved oxygen (IGDO) measurements taken within a spawning area. Half the samples should be greater than and half the samples should be less than the spatial median.

(~~58~~60) "SS" means suspended solids.

(~~59~~61) "Stormwater Quality Control Facility" means any structure or drainage way that is designed, constructed, and maintained to collect and filter, retain, or detain surface water runoff during and after a storm event for the purpose of water quality improvement. It may also include but is not be limited to existing features such as wetlands, water quality swales, and ponds that are maintained as stormwater quality control facilities.

(~~60~~62) "Subbasin" means a fourth-field hydrologic unit as identified by the U.S. Geological Survey.

(~~61~~63) "Summer" means June 1 through September 30 of each calendar year.

(~~62~~64) "Threatened or Endangered Species" means aquatic species listed as either threatened or endangered under the federal Endangered Species Act (16 USC 1531 et seq. and Title 50 of the Code of Federal Regulations).

(~~63~~65) "Total Maximum Daily Load (TMDL)" means the sum of the individual waste load allocations (WLAs) for point sources and load allocations (LAs) for nonpoint sources and background. If receiving water has only one point source discharger, the TMDL is the sum of that point source WLA plus the LAs for any nonpoint sources of pollution and natural background sources, tributaries, or adjacent segments. TMDLs can be expressed in terms of either mass per time, toxicity, or other appropriate measure. If Best Management Practices (BMPs) or other nonpoint source pollution controls make more stringent load allocations practicable, then wasteload allocations can be made less stringent. Thus, the TMDL process provides for nonpoint source control tradeoffs.

(~~64~~66) "Toxic Substance" means those pollutants or combinations of pollutants, including disease-causing agents, that after introduction to waters of the state and upon exposure, ingestion, inhalation, or assimilation either directly from the environment or indirectly by ingestion through food chains will cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunctions in reproduction), or physical deformations in any organism or its offspring.

(~~65~~67) "Wasteload Allocation (WLA)" means the portion of receiving water's loading capacity that is allocated to one of its existing or future point sources of pollution. WLAs constitute a type of water quality-based effluent limitation.

(68) "Warm-Water Aquatic Life" means the aquatic communities that are adapted to warm-water conditions and do not contain either cold- or cool-water species.

(~~66~~69) "Wastes" means sewage, industrial wastes, and all other liquid, gaseous, solid, radioactive, or other substances that may cause or tend to cause pollution of any water of the state.

(~~67~~70) "Water Quality Limited" means one of the following:

(a) A receiving stream that does not meet narrative or numeric water quality criteria during the entire year or defined season even after the implementation of standard technology;

(b) A receiving stream that achieves and is expected to continue to achieve narrative or numeric water quality criteria but uses higher than standard technology to protect beneficial uses;

(c) A receiving stream for which there is insufficient information to determine whether water quality criteria are being met with higher-than-standard treatment technology or a receiving stream that would not be expected to meet water quality criteria during the entire year or defined season without higher than standard technology.

(~~68~~71) "Water Quality Swale" means a natural depression or wide, shallow ditch that is used to temporarily store, route, or filter runoff for the purpose of improving water quality.

(~~69~~72) "Waters of the ~~state~~State" means lakes, bays, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Pacific Ocean within the territorial limits of the State of Oregon, and all other bodies of surface or underground waters, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface or underground waters) that are located wholly or partially within or bordering the state or within its jurisdiction.

(~~70~~73) "Weekly (seven-day) Mean Minimum" for dissolved oxygen means the minimum of the seven consecutive-day floating average of the calculated daily mean dissolved oxygen concentration.

(~~71~~74) "Weekly (seven-day) Minimum Mean" for dissolved oxygen means the minimum of the seven consecutive-day floating average of the daily minimum concentration. For purposes of application of the criteria, this value will be used as the reference for diurnal minimums.

(~~72~~75) "Without Detrimental Changes in the Resident Biological Community" means no loss of ecological integrity when compared to natural conditions at an appropriate reference site or region.

Stat. Auth.: ORS 468.020, 468B.010, 468B.015, 468B.035 & 468B.048
Stats. Implemented: ORS 468B.035 & 468B.048
Hist.: DEQ 17-2003, f. & cert. ef. 12-9-03; DEQ 3-2004, f. & cert. ef. 5-28-04

340-041-0004

Antidegradation

(1) Purpose. The purpose of the Antidegradation Policy is to guide decisions that affect water quality such that unnecessary further degradation from new or increased point and nonpoint sources of pollution is prevented, and to protect, maintain, and enhance existing surface water quality to ensure the full protection of all existing beneficial uses. The standards and policies set forth in OAR 340-041-0007 through 340-041-0350 are intended to supplement the Antidegradation Policy.

(2) Growth Policy. In order to maintain the quality of waters in the State of Oregon, it is the general policy of the Commission to require that growth and development be accommodated by increased efficiency and effectiveness of waste treatment and control such that measurable future discharged waste loads from existing sources do not exceed presently allowed discharged loads except as provided in section (3) through (9) of this rule.

(3) Nondegradation Discharges. The following new or increased discharges are subject to this Division. However, because they are not considered degradation of water quality, they are not required to undergo an antidegradation review under this rule:

(a) Discharges Into Existing Mixing Zones. Pollutants discharged into the portion of a water body that has been included in a previous mixing zone for a permitted source, including the zones of initial dilution, are not considered a reduction in water quality, so long as the mixing zone is established in accordance with OAR 340-041-0053, there are no other overlapping mixing zones from other point sources, and the discharger complies with all effluent limits set out in its NPDES permit.~~;~~

(b) Water Conservation Activities. An increase in a pollutant concentration is not considered a reduction in water quality so long as the increase occurs as the result of a water conservation activity, the total mass load of the pollutant is not increased, and the concentration increase has no adverse effect on either beneficial uses or threatened or endangered species in the water body.~~; and~~

(c) Temperature. Insignificant temperature increases authorized under OAR 340-041-0028(11) and (12) are not considered a reduction in water quality.

(d) Dissolved Oxygen. Up to a 0.1 mg/l decrease in dissolved oxygen from the upstream end of a stream reach to the downstream end of the reach is not considered a reduction in water quality so long as it has no adverse effects on threatened and endangered species.

(4) Recurring Activities. Since the baseline for applying the antidegradation policy to an individual source is the water quality resulting from the source's currently authorized discharge, and since regularly-scheduled, recurring activities remain subject to water quality standards and the terms and conditions in any applicable federal and state permits, certifications and licenses, the following activities will not be considered new or increasing discharges and will therefore not trigger an antidegradation review under this rule so long as they do not increase in frequency, intensity, duration or geographical extent:

(a) Rotating grazing pastures,

(b) Agricultural crop rotations, and

(c) Maintenance dredging.

(5) Exemptions to the Antidegradation Requirement. Some activities may, on a short term basis, cause temporary water quality degradation. However, these same activities may also have substantial and desirable environmental benefits. The following activities and situations fall into this category. Such activities and situations remain subject to water quality standards, and must demonstrate that they have minimized adverse affects to threatened and endangered species in order to be exempt from the antidegradation review under this rule:

(a) Riparian Restoration Activities. Activities that are intended to restore the geomorphology or riparian vegetation of a water body, or control invasive species need not undergo an antidegradation review so long as the Department determines that there is a net ecological benefit to the restoration activity. Reasonable measures that are consistent with the restoration objectives for the water body must be used to minimize the degradation;

(b) Emergency Situations. The Director or a designee may, for a period of time no greater than 6 months, allow lower water quality without an antidegradation review under this rule in order to respond to public health and welfare emergencies (~~i.e.~~for example, a significant threat of loss of life, personal injury or severe property damage); and

(c) Exceptions. Exceptions authorized by the Commission or Department under (9) of this rule.

(6) High Quality Waters Policy: Where the existing water quality meets or exceeds those levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, and other designated beneficial uses, that level of water quality must be maintained and protected. However, the Environmental Quality Commission, after full satisfaction of the intergovernmental coordination and public participation provisions of the continuing planning process, and with full consideration of sections (2) and (9) of this rule, and 340-041-0007(~~5~~4), may allow a lowering of water quality in these high quality waters if it finds:

(a) No other reasonable alternatives exist except to lower water quality; and

(b) The action is necessary and benefits of the lowered water quality outweigh the environmental costs of the reduced water quality. This evaluation will be conducted in accordance with DEQ's "Antidegradation Policy Implementation Internal Management Directive for NPDES Permits and section 401 water quality certifications," pages 27, and 33-39 (March 2001) incorporated herein by reference;

(c) All water quality standards will be met and beneficial uses protected; and

(d) Federal threatened and endangered aquatic species will not be adversely affected.

(7) Water Quality Limited Waters Policy: Water quality limited waters may not be further degraded except in accordance with section (9)(a)(B), (C) and (D) of this rule.

(8) Outstanding Resource Waters Policy. Where existing high quality waters constitute an outstanding State or national resource such as those waters designated as extraordinary resource waters, or as critical habitat areas, the existing water quality and water quality values must be maintained and protected, and classified as "Outstanding Resource Waters of Oregon."

(a) The Commission may specially designate high quality water bodies to be classified as Outstanding Resource Waters in order to protect the water quality parameters that affect ecological integrity of critical habitat or special water quality values that are vital to the unique character of those water bodies. The Department will develop a screening process and establish a list of nominated water bodies for Outstanding Resource Waters designation in the Biennial Water Quality Status Assessment Report (305(b) Report). The priority water bodies for nomination include:

(A) Those in State and National Parks;

(B) National Wild and Scenic Rivers;

(C) State Scenic Waterways;

(D) Those in State and National Wildlife Refuges; and

(E) Those in federally designated wilderness areas.

(b) The Department will bring to the Commission a list of water bodies that are proposed for designation as Outstanding Resource Waters at the time of each triennial Water Quality Standards Review; and

(c) When designating Outstanding Resource Waters, the Commission may establish the water quality values to be protected and provide a process for determining what activities are allowed that would not affect the outstanding resource values. After the designation,

the Commission may not allow activities that may lower water quality below the level established except on a short term basis to respond to public health and welfare emergencies, or to obtain long-term water quality improvements.

(9) Exceptions. The Commission or Department may grant exceptions to this rule so long as the following procedures are met:

(a) In allowing new or increased discharged loads, the Commission or Department must make the following findings:

(A) The new or increased discharged load will not cause water quality standards to be violated;

(B) The action is necessary and benefits of the lowered water quality outweigh the environmental costs of the reduced water quality. This evaluation will be conducted in accordance with DEQ's "Antidegradation Policy Implementation Internal Management Directive for NPDES Permits and section 401 water quality certifications," pages 27, and 33-39 (March 2001) incorporated herein by reference; and

(C) The new or increased discharged load will not unacceptably threaten or impair any recognized beneficial uses or adversely affect threatened or endangered species. In making this determination, the Commission or Department may rely upon the presumption that if the numeric criteria established to protect specific uses are met the beneficial uses they were designed to protect are protected. In making this determination the Commission or Department may also evaluate other State and federal agency data that would provide information on potential impacts to beneficial uses for which the numeric criteria have not been set;

(D) The new or increased discharged load may not be granted if the receiving stream is classified as being water quality limited under sub-section (a) of the definition of "Water Quality Limited" in OAR 340-041-0002~~(62)(a)~~, unless:

(i) The pollutant parameters associated with the proposed discharge are unrelated either directly or indirectly to the parameter(s) causing the receiving stream to violate water quality standards and being designated water quality limited; or

(ii) Total maximum daily loads (TMDLs), waste load allocations (WLAs) load allocations (LAs), and the reserve capacity have been established for the water quality limited receiving stream; and compliance plans under which enforcement action can be taken have been established; and there will be sufficient reserve capacity to assimilate the increased load under the established TMDL at the time of discharge; or

(iii) Effective July 1, 1996, in water bodies designated water-quality limited for dissolved oxygen, when establishing WLAs under a TMDL for water bodies meeting the conditions defined in this rule, the Department may at its discretion provide an allowance for WLAs calculated to result in no measurable reduction of dissolved oxygen (DO). For this

purpose, "no measurable reduction" is defined as no more than 0.10 mg/L for a single source and no more than 0.20 mg/L for all anthropogenic activities that influence the water quality limited segment. The allowance applies for surface water DO criteria and for Intergravel dissolved oxygen (IGDO) if a determination is made that the conditions are natural. The allowance for WLAs applies only to surface water 30-day and seven-day means; or

(iv) Under extraordinary circumstances to solve an existing, immediate and critical environmental problem, the Commission or Department may, after the completion of a TMDL but before the water body has achieved compliance with standards, consider a waste load increase for an existing source on a receiving stream designated water quality limited under sub-section (a) of the definition of "Water Quality Limited" in OAR 340-041-0002~~(62)(a)~~. This action must be based on the following conditions:

(I) That TMDLs, WLAs and LAs have been set; and

(II) That a compliance plan under which enforcement actions can be taken has been established and is being implemented on schedule; and

(III) That an evaluation of the requested increased load shows that this increment of load will not have an unacceptable temporary or permanent adverse effect on beneficial uses or adversely affect threatened or endangered species; and

(IV) That any waste load increase granted under subparagraph (iv) of this paragraph is temporary and does not extend beyond the TMDL compliance deadline established for the water body. If this action will result in a permanent load increase, the action has to comply with sub-paragraphs (i) or (ii) of this paragraph.

(b) The activity, expansion, or growth necessitating a new or increased discharge load is consistent with the acknowledged local land use plans as evidenced by a statement of land use compatibility from the appropriate local planning agency.

(c) Oregon's water quality management policies and programs recognize that Oregon's water bodies have a finite capacity to assimilate waste. Unused assimilative capacity is an exceedingly valuable resource that enhances in-stream values and environmental quality in general. Allocation of any unused assimilative capacity should be based on explicit criteria. In addition to the conditions in subsection (a) of this section, the Commission or Department may consider the following:

(A) Environmental Effects Criteria:

(i) Adverse Out-of-Stream Effects. There may be instances where the non-discharge or limited discharge alternatives may cause greater adverse environmental effects than the increased discharge alternative. An example may be the potential degradation of groundwater from land application of wastes;

(ii) Instream Effects. Total stream loading may be reduced through elimination or reduction of other source discharges or through a reduction in seasonal discharge. A source that replaces other sources, accepts additional waste from less efficient treatment units or systems, or reduces discharge loadings during periods of low stream flow may be permitted an increased discharge load year-round or during seasons of high flow, so long as the loading has no adverse affect on threatened and endangered species;

(iii) Beneficial Effects. Land application, upland wetlands application, or other non-discharge alternatives for appropriately treated wastewater may replenish groundwater levels and increase streamflow and assimilative capacity during otherwise low streamflow periods.

(B) Economic Effects Criteria. When assimilative capacity exists in a stream, and when it is judged that increased loadings will not have significantly greater adverse environmental effects than other alternatives to increased discharge, the economic effect of increased loading will be considered. Economic effects will be of two general types:

(i) Value of Assimilative Capacity. The assimilative capacity of Oregon's streams is finite, but the potential uses of this capacity are virtually unlimited. Thus it is important that priority be given to those beneficial uses that promise the greatest return (beneficial use) relative to the unused assimilative capacity that might be utilized. In-stream uses that will benefit from reserve assimilative capacity, as well as potential future beneficial use, will be weighed against the economic benefit associated with increased loading;

(ii) Cost of Treatment Technology. The cost of improved treatment technology, non-discharge and limited discharge alternatives may be evaluated.

Stat. Auth.: ORS 468.020, 468B.030, 468B.035, 468B.048
Stats. Implemented: ORS 468B.030, 468B.035, 468B.048
Hist.: DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0007

Statewide Narrative Criteria

(1) Notwithstanding the water quality standards contained in this Division, the highest and best practicable treatment and/or control of wastes, activities, and flows must in every case be provided so as to maintain dissolved oxygen and overall water quality at the highest possible levels and water temperatures, coliform bacteria concentrations, dissolved chemical substances, toxic materials, radioactivity, turbidities, color, odor, and other deleterious factors at the lowest possible levels.

(2) Where a less stringent natural condition of a water of the State exceeds the numeric criteria set out in this Division, the natural condition supersedes the numeric criteria and becomes the standard for that water body. However, there are special restrictions,

described in OAR 340-041-0004(9) (a) (~~C~~D) (iii), that may apply to discharges that affect dissolved oxygen.

~~(3) Point source discharges must follow policies and guidelines in OAR 340-041-0004, and nonpoint source activities must follow guidelines in sections (6), (8), (9), (10), (11), and (12) of this rule.~~

(43) For any new waste sources, alternatives that utilize reuse or disposal with no discharge to public waters must be given highest priority for use wherever practicable. New source discharges may be approved subject to the criteria in OAR 340-041-0004(9).

(45) No discharges of wastes to lakes or reservoirs may be allowed except as provided in section OAR 340-041-0004(9).

(56) Logging and forest management activities must be conducted in accordance with the Oregon Forest Practices Act to minimize adverse effects on water quality.

(67) Log handling in public waters must conform to current Commission policies and guidelines.

(78) Sand and gravel removal operations must be conducted pursuant to a permit from the Division of State Lands and separated from the active flowing stream by a watertight berm wherever physically practicable. Recirculation and reuse of process water must be required wherever practicable. Discharges or seepage or leakage losses to public waters may not cause a violation of water quality standards or adversely affect legitimate beneficial uses.

(89) Road building and maintenance activities must be conducted in a manner so as to keep waste materials out of public waters and minimize erosion of cut banks, fills, and road surfaces.

(~~10~~9) In order to improve controls over nonpoint sources of pollution, federal, State, and local resource management agencies will be encouraged and assisted to coordinate planning and implementation of programs to regulate or control runoff, erosion, turbidity, stream temperature, stream flow, and the withdrawal and use of irrigation water on a basin-wide approach so as to protect the quality and beneficial uses of water and related resources. Such programs may include, but not be limited to, the following:

(a) Development of projects for storage and release of suitable quality waters to augment low stream flow;

(b) Urban runoff control to reduce erosion;

(c) Possible modification of irrigation practices to reduce or minimize adverse impacts from irrigation return flows;

(d) Stream bank erosion reduction projects; and

(e) Federal water quality restoration plans.

(1~~1~~0) The development of fungi or other growths having a deleterious effect on stream bottoms, fish or other aquatic life, or that are injurious to health, recreation, or industry may not be allowed;

(11~~2~~) The creation of tastes or odors or toxic or other conditions that are deleterious to fish or other aquatic life or affect the potability of drinking water or the palatability of fish or shellfish may not be allowed;

(12~~3~~) The formation of appreciable bottom or sludge deposits or the formation of any organic or inorganic deposits deleterious to fish or other aquatic life or injurious to public health, recreation, or industry may not be allowed;

(13~~4~~) Objectionable discoloration, scum, oily sheens, or floating solids, or coating of aquatic life with oil films may not be allowed;

(14~~5~~) Aesthetic conditions offensive to the human senses of sight, taste, smell, or touch may not be allowed;

(15~~6~~) Radioisotope concentrations may not exceed maximum permissible concentrations (MPC's) in drinking water, edible fishes or shellfishes, wildlife, irrigated crops, livestock and dairy products, or pose an external radiation hazard;

(16~~7~~) Minimum Design Criteria for Treatment and Control of Wastes. Except as provided in OAR 340-041-0101 through 340-041-0350, and subject to the implementation requirements set forth in OAR 340-041-0061, prior to discharge of any wastes from any new or modified facility to any waters of the State, such wastes must be treated and controlled in facilities designed in accordance with the following minimum criteria.

(a) In designing treatment facilities, average conditions and a normal range of variability are generally used in establishing design criteria. A facility once completed and placed in operation should operate at or near the design limit most of the time but may operate below the design criteria limit at times due to variables which are unpredictable or uncontrollable. This is particularly true for biological treatment facilities. The actual operating limits are intended to be established by permit pursuant to ORS 468.740 and recognize that the actual performance level may at times be less than the design criteria.

(A) Sewage wastes:

(i) Effluent BOD concentrations in mg/l, divided by the dilution factor (ratio of receiving stream flow to effluent flow) may not exceed one unless otherwise approved by the Commission;

(ii) Sewage wastes must be disinfected, after treatment, equivalent to thorough mixing with sufficient chlorine to provide a residual of at least 1 part per million after 60 minutes of contact time unless otherwise specifically authorized by permit;

(iii) Positive protection must be provided to prevent bypassing raw or inadequately treated sewage to public waters unless otherwise approved by the Department where elimination of inflow and infiltration would be necessary but not presently practicable; and

(iv) More stringent waste treatment and control requirements may be imposed where special conditions make such action appropriate.

(B) Industrial wastes:

(i) After maximum practicable in-plant control, a minimum of secondary treatment or equivalent control (reduction of suspended solids and organic material where present in significant quantities, effective disinfection where bacterial organisms of public health significance are present, and control of toxic or other deleterious substances);

(ii) Specific industrial waste treatment requirements may be determined on an individual basis in accordance with the provisions of this plan, applicable federal requirements, and the following:

(I) The uses that are or may likely be made of the receiving stream;

(II) The size and nature of flow of the receiving stream;

(III) The quantity and quality of wastes to be treated; and

(IV) The presence or absence of other sources of pollution on the same watershed.

(iii) Where industrial, commercial, or agricultural effluents contain significant quantities of potentially toxic elements, treatment requirements may be determined utilizing appropriate bioassays;

(iv) Industrial cooling waters containing significant heat loads must be subjected to off-stream cooling or heat recovery prior to discharge to public waters;

(v) Positive protection must be provided to prevent bypassing of raw or inadequately treated industrial wastes to any public waters;

(vi) Facilities must be provided to prevent and contain spills of potentially toxic or hazardous materials.

Stat. Auth.: ORS 468.020, 468B.030, 468B.035, 468B.048
Stats. Implemented: ORS 468B.030, 468B.035, 468B.048
Hist.: DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0016

Dissolved Oxygen

Dissolved oxygen (DO): No wastes may be discharged and no activities ~~must~~ may be conducted that either alone or in combination with other wastes or activities will cause violation of the following standards: The changes adopted by the Commission on January 11, 1996, become effective July 1, 1996. Until that time, the requirements of this rule that were in effect on January 10, 1996, apply:

(1) For water bodies identified as active spawning areas in the places and times indicated on the following Tables and Figures set out in OAR 340-041-0101 to 340-041-0340: Tables 101B, 121B, ~~180B, 201B and 260B~~and 190B, and Figures 130B, 151B, 160B, 170B, 180A, 201A, 220B, 230B, 260A, 271B, 286B, 300B, 310B, 320B, and 340B, (as well as any active spawning area used by resident trout species), the following criteria apply during the applicable spawning through fry emergence periods set forth in the tables and figures and, where resident trout spawning occurs, during the time trout spawning through fry emergence occurs:

(a) The dissolved oxygen may not be less than 11.0 mg/l. However, if the minimum intergravel dissolved oxygen, measured as a spatial median, is 8.0 mg/l or greater, then the DO criterion is 9.0 mg/l;

(b) Where conditions of barometric pressure, altitude, and temperature preclude attainment of the 11.0 mg/l or 9.0 mg/l criteria, dissolved oxygen levels must not be less than 95 percent of saturation;

(c) The spatial median intergravel dissolved oxygen concentration must not fall below 8.0 mg/l.

(2) For water bodies identified by the Department as providing cold-water aquatic life, the dissolved oxygen may not be less than 8.0 mg/l as an absolute minimum. Where conditions of barometric pressure, altitude, and temperature preclude attainment of the 8.0 mg/l, dissolved oxygen may not be less than 90 percent of saturation. At the discretion of the Department, when the Department determines that adequate information exists, the dissolved oxygen may not fall below 8.0 mg/l as a 30-day mean minimum, 6.5 mg/l as a seven-day minimum mean, and may not fall below 6.0 mg/l as an absolute minimum (Table 21);

(3) For water bodies identified by the Department as providing cool-water aquatic life, the dissolved oxygen may not be less than 6.5 mg/l as an absolute minimum. At the discretion of the Department, when the Department determines that adequate information

exists, the dissolved oxygen may not fall below 6.5 mg/l as a 30-day mean minimum, 5.0 mg/l as a seven-day minimum mean, and may not fall below 4.0 mg/l as an absolute minimum (Table 21);

(4) For water bodies identified by the Department as providing warm-water aquatic life, the dissolved oxygen may not be less than 5.5 mg/l as an absolute minimum. At the discretion of the Department, when the Department determines that adequate information exists, the dissolved oxygen may not fall below 5.5 mg/l as a 30-day mean minimum, and may not fall below 4.0 mg/l as an absolute minimum (Table 21);

(5) For estuarine water, the dissolved oxygen concentrations may not be less than 6.5 mg/l (for coastal water bodies);

(6) For ocean waters, no measurable reduction in dissolved oxygen concentration may be allowed.

[Tables: Tables referenced are available from the agency.]

Stat. Auth.: ORS 468.020, 468B.030, 468B.035, 468B.048
Stats. Implemented: ORS 468B.030, 468B.035, 468B.048
Hist.: DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0021

pH

(1) Unless otherwise specified in OAR 340-041-0101 through 340-041-0350, pH values (Hydrogen ion concentrations) may not fall outside the following ranges:

(a) Marine waters: 7.0-8.5;

(b) Estuarine and fresh waters: ~~6.5-8.5~~ See basin specific criteria (OAR 340-041-0101 through OAR 340-041-0350).

(2) Waters impounded by dams existing on January 1, 1996, which have pHs that exceed the criteria are not in violation of the standard, if the Department determines that the exceedance would not occur without the impoundment and that all practicable measures have been taken to bring the pH in the impounded waters into compliance with the criteria.

Stat. Auth.: ORS 468.020, 468B.030, 468B.035, 468B.048
Stats. Implemented: ORS 468B.030, 468B.035, 468B.048
Hist.: DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0028

Temperature

(1) Background. Water temperatures affect the biological cycles of aquatic species and are a critical factor in maintaining and restoring healthy salmonid populations throughout the State. Water temperatures are influenced by solar radiation, stream shade, ambient air temperatures, channel morphology, groundwater inflows, and stream velocity, volume, and flow. Surface water temperatures may also be warmed by anthropogenic activities such as discharging heated water, changing stream width or depth, reducing stream shading, and water withdrawals.

(2) Policy. It is the policy of the Commission to protect aquatic ecosystems from adverse warming and cooling caused by anthropogenic activities. The Commission intends to minimize the risk to cold-water aquatic ecosystems from anthropogenic warming, to encourage the restoration and protection of critical aquatic habitat, and to control extremes in temperature fluctuations due to anthropogenic activities. The Commission recognizes that some of the State's waters will, in their natural condition, not provide optimal thermal conditions at all places and at all times that salmonid use occurs. Therefore, it is especially important to minimize additional warming due to anthropogenic sources. In addition, the Commission acknowledges that control technologies, best management practices and other measures to reduce anthropogenic warming are evolving and that the implementation to meet these criteria will be an iterative process. Finally, the Commission notes that it will reconsider beneficial use designations in the event that man-made obstructions or barriers to anadromous fish passage are removed and may justify a change to the beneficial use for that water body.

(3) Purpose. The purpose of the temperature criteria in this rule is to protect designated temperature-sensitive, beneficial uses, including specific salmonid life cycle stages in waters of the State.

(4) Biologically Based Numeric Criteria. Unless superseded by the natural conditions criteria described in section (8) of this rule, or by subsequently adopted site-specific criteria approved by EPA, the temperature criteria for State waters supporting salmonid fishes are as follows:

(a) The seven-day-average maximum temperature of a stream identified as having salmon and steelhead spawning use on subbasin maps and tables set out in OAR 340-041-0101 to 340-041-0340: Tables 101B, and 121B, and Figures 130B, 151B, 160B, 170B, 220B, 230B, 271B, 286B, 300B, 310B, 320B, and 340B, may not exceed 13.0 degrees Celsius (55.4 degrees Fahrenheit) at the times indicated on these maps and tables;

(b) The seven-day-average maximum temperature of a stream identified as having core cold water habitat use on subbasin maps set out in OAR 340-041-101 to 340-041-340: Figures 130A, 151A, 160A, 170A, 180A, 201A, 220A, 230A, 271A, 286A, 300A, 310A, 320A, and 340A, may not exceed 16.0 degrees Celsius (60.8 degrees Fahrenheit);

(c) The seven-day-average maximum temperature of a stream identified as having salmon and trout rearing and migration use on subbasin maps set out at OAR 340-041-0101 to 340-041-0340: Figures 130A, 151A, 160A, 170A, 220A, 230A, 271A, 286A, 300A, 310A, 320A, and 340A, may not exceed 18.0 degrees Celsius (64.4 degrees Fahrenheit);

(d) The seven-day-average maximum temperature of a stream identified as having a migration corridor use on subbasin maps and tables OAR 340-041-0101 to 340-041-0340: Tables 101B, and 121B, and Figures 151A, 170A, 300A, and 340A, may not exceed 20.0 degrees Celsius (68.0 degrees Fahrenheit). In addition, these water bodies must have coldwater refugia that~~'s~~ are sufficiently distributed so as to allow salmon and steelhead migration without significant adverse effects from higher water temperatures elsewhere in the water body. Finally, the seasonal thermal pattern in Columbia and Snake Rivers must reflect the natural seasonal thermal pattern;

(e) The seven-day-average maximum temperature of a stream identified as having Lahontan cutthroat trout or redband trout use on subbasin maps and tables set out in OAR 340-041-0101 to 340-041-0340: Tables 12~~0~~1B, 140B, 190B, and 250B, and Figures 180A, 201A, ~~and~~ 260A and 310A may not exceed 20.0 degrees Celsius (68.0 degrees Fahrenheit);

(f) The seven-day-average maximum temperature of a stream identified as having bull trout spawning and juvenile rearing use on subbasin maps set out at OAR 340-041-0101 to 340-041-0340: Figures 130B, 151B, 160B, 170B, 180A, 201A, 260A, 310B, and 340B, may not exceed 12.0 degrees Celsius (53.6 degrees Fahrenheit). From August 15 through May 15, in bull trout spawning waters below Clear Creek and Mehlhorn reservoirs on Upper Clear Creek (Pine Subbasin), below Laurance Lake on the Middle Fork Hood River, and below Carmen reservoir on the Upper McKenzie River, there may be no more than a 0.3 degrees Celsius (0.5 Fahrenheit) increase between the water temperature immediately upstream of the reservoir and the water temperature immediately downstream of the spillway when the ambient seven-day-average maximum stream temperature is 9.0 degrees Celsius (48 degrees Fahrenheit) or greater, and no more than a 1.0 degree Celsius (1.8 degrees Fahrenheit) increase when the seven-day-average stream temperature is less than 9 degrees Celsius.

(5) Unidentified Tributaries. For waters that are not identified on the "~~f~~Fish ~~u~~Use Designations" maps ~~and tables~~ referenced in section (4) of this rule, the applicable criteria for these waters are the same criteria as is applicable to the nearest downstream water body depicted on the applicable map. This section (5) does not apply to the "Salmon and Steelhead Spawning Use Designations" maps.

(6) Natural Lakes. Natural lakes may not be warmed by more than 0.3 degrees Celsius (0.5 degrees Fahrenheit) above the ~~ambient~~ natural condition unless a greater increase would not reasonably be expected to adversely affect fish or other aquatic life. Absent a discharge or human modification that would reasonably be expected to increase temperature, DEQ will presume that the ambient temperature of a natural lake is the same as its natural thermal condition.

(7) Oceans and Bays. Except for the Columbia River above river mile 7, ocean and bay waters may not be warmed by more than 0.3 degrees Celsius (0.5 degrees Fahrenheit) above the ~~ambient~~ natural condition unless a greater increase would not reasonably be expected to adversely affect fish or other aquatic life. Absent a discharge or human modification that would reasonably be expected to increase temperature, DEQ will presume that the ambient temperature of the ocean or a bay is the same as its natural thermal condition.

(8) Natural Conditions Criteria. Where the department determines that the natural thermal potential of all or a portion of a water body exceeds the biologically-based criteria in section (4) of this rule, the natural thermal potential temperatures supersede the biologically-based criteria, and are deemed to be the applicable temperature criteria for that water body.

(9) Cool Water Species. ~~Waters that support cool water species may not be warmed by more than 0.3 degrees Celsius (0.5 degrees Fahrenheit) above the ambient condition unless a greater increase would not reasonably be expected to adversely affect fish or other aquatic life. Cool waters of the State are described on subbasin tables set out in OAR 340-041-0101 to 340-041-0340: Tables 140B, 180B, 201B, and 250B.~~

(a) No increase in temperature is allowed that would reasonably be expected to impair cool water species. Waters of the State that support cool water species are identified on subbasin tables and figures set out in OAR 340-041-0101 to 340-041-0340: Tables 140B, 190B and 250B, and Figures 180A, 201A and 340A.

(b) See OAR 340-041-0185 for a basin specific criterion for the Klamath River.

(10) Borax Lake Chub. State waters in the Malheur Lake Basin supporting the ~~b~~Borax ~~l~~Lake chub may not be cooled more than 0.3 degrees Celsius (0.5 degrees Fahrenheit) below the ~~ambient~~ natural condition.

(11) Protecting Cold Water.

(a) Except as described in subsection (c) of this rule, waters of the State that have summer seven-day-average maximum ambient temperatures that are colder than the biologically based criteria in section (4) of this rule, may not be warmed by more than 0.3 degrees Celsius (0.5 degrees Fahrenheit) above the colder water ambient temperature. This provision applies to all sources taken together at the point of maximum impact where salmon, steelhead or bull trout are present.

(b) A point source that discharges into or above salmon & steelhead spawning waters that are colder than the spawning criterion, may not cause the water temperature in the spawning reach where the physical habitat for spawning exists during the time spawning through emergence use occurs, to increase more than the following amounts after complete mixing of the effluent with the river:

(A) If the rolling 60 day average maximum ambient water temperature, between the dates of spawning use as designated under subsection (4)(a) of this rule, is 10 to 12.8 degrees Celsius, the allowable increase is 0.5 Celsius above the 60 day average; or

(B) If the rolling 60 day average maximum ambient water temperature, between the dates of spawning use as designated under subsection (4) (a) of this rule, is less than 10 degrees Celsius, the allowable increase is 1.0 Celsius above the 60 day average, unless the source provides analysis showing that a greater increase will not significantly impact the survival of salmon or steelhead eggs or the timing of salmon or steelhead fry emergence from the gravels in downstream spawning reach.

(c) The cold water protection narrative criteria in subsection (a) do not apply if:

(A) There are no threatened or endangered salmonids currently inhabiting the water body;

(B) The water body has not been designated as critical habitat; and

(C) The colder water is not necessary to ensure that downstream temperatures achieve and maintain compliance with the applicable temperature criteria.

(12) Implementation of the Temperature Criteria.

(a) Minimum Duties. There is no duty for anthropogenic sources to reduce heating of the waters of the State below their natural condition. Similarly, each anthropogenic point and nonpoint source is responsible only for controlling the thermal effects of its own discharge or activity in accordance with its overall heat contribution. In no case may a source cause more warming than that allowed by the human use allowance provided in subsection (b) of this rule.

(b) Human Use Allowance. Insignificant additions of heat are authorized in waters that exceed the applicable temperature criteria as follows:

(A) Prior to the completion of a temperature TMDL or other cumulative effects analysis, no single NPDES point source that discharges into a temperature water quality limited water may cause the temperature of the water body to increase more than 0.3 degrees Celsius (0.5 Fahrenheit) above the applicable criteria after mixing with either twenty five (25) percent of the stream flow, or the temperature mixing zone, whichever is more restrictive; or

(B) Following a temperature TMDL or other cumulative effects analysis, waste load and load allocations will restrict all NPDES point sources and nonpoint sources to a cumulative increase of no greater than 0.3 degrees Celsius (0.5 Fahrenheit) above the applicable criteria after complete mixing in the water body, and at the point of maximum impact.

(C) Point sources must be in compliance with the additional mixing zone requirements set out in OAR 340-041-0053(2) (d).

(D) A point source in compliance with the temperature conditions of its NPDES permit is deemed in compliance with the applicable criteria.

(c) Air Temperature Exclusion. A water body that only exceeds the criteria set out in this rule when the exceedance is attributed to daily maximum air temperatures that exceed the 90th percentile value of annual maximum seven-day average maximum air temperatures calculated using at least 10 years of air temperature data, will not be listed on the section 303(d) list of impaired waters and sources will not be considered in violation of this rule.

(d) Low Flow Conditions. An exceedance of the biologically-based numeric criteria in section (4) of this rule, or an exceedance of the natural condition criteria in section (8) of this rule will not be considered a permit violation during stream flows that are less than the 7Q10 low flow condition for that water body.

(e) Forestry on State and Private Lands. For forest operations on State or private lands, water quality standards are intended to be attained and are implemented through best management practices and other control mechanisms established under the Forest Practices Act (ORS 527.610 to 527.992) and rules thereunder, administered by the Oregon Department of Forestry. Therefore, forest operations that are in compliance with the Forest Practices Act requirements are (except for the limits set out in ORS 527.770) deemed in compliance with this rule. DEQ will work with the Oregon Department of Forestry to revise the Forest Practices program to attain water quality standards.

(f) Agriculture on State and Private Lands. For farming or ranching operations on State or private lands, water quality standards are intended to be attained and are implemented through the Agricultural Water Quality Management Act (ORS 568.900 to 568.933) and rules thereunder, administered by the Oregon Department of Agriculture. Therefore, farming and ranching operations that are in compliance with the Agricultural Water Quality Management Act requirements will not be subject to DEQ enforcement under this rule. DEQ will work with the Oregon Department of Agriculture to revise the Agricultural Water Quality Management program to attain water quality standards.

(g) Agriculture and Forestry on Federal Lands. Agriculture and forestry activities conducted on federal land must meet the requirements of this rule and are subject to the department's jurisdiction. Pursuant to Memoranda of Agreement with the U.S. Forest Service and the Bureau of Land Management, water quality standards are expected to be met through the development and implementation of water quality restoration plans, best management practices and aquatic conservation strategies. Where a Federal Agency is a Designated Management Agency by the Department, implementation of these plans, practices and strategies is deemed compliance with this rule.

(h) Other Nonpoint Sources. The department may, on a case-by-case basis, require nonpoint sources (other than forestry and agriculture), including private hydropower

facilities regulated by a 401 water quality certification, that may contribute to warming of State waters beyond 0.3 degrees Celsius (0.5 degrees Fahrenheit), and are therefore designated as water-quality limited, to develop and implement a temperature management plan to achieve compliance with applicable temperature criteria or an applicable load allocation in a TMDL pursuant to OAR 340-042-0080.

(A) Each plan must ensure that the nonpoint source controls its heat load contribution to water temperatures such that the water body experiences no more than a 0.3 degrees Celsius (0.5 degree Fahrenheit) increase above the applicable criteria from all sources taken together at the maximum point of impact.

(B) Each plan must include a description of best management practices, measures, effluent trading, and control technologies (including eliminating the heat impact on the stream) that the nonpoint source intends to use to reduce its temperature effect, a monitoring plan, and a compliance schedule for undertaking each measure.

(C) The Department may periodically require a nonpoint source to revise its temperature management plan to ensure that all practical steps have been taken to mitigate or eliminate the temperature effect of the source on the water body.

(D) Once approved, a nonpoint source complying with its temperature management plan is deemed in compliance with this rule.

(i) Compliance Methods. Anthropogenic sources may engage in thermal water quality trading in whole or in part to offset its temperature discharge, so long as the trade results in at least a net thermal loading decrease in anthropogenic warming of the water body, and does not adversely affect a threatened or endangered species. Sources may also achieve compliance, in whole or in part, by flow augmentation, hyporheic exchange flows, outfall relocation, or other measures that reduce the temperature increase caused by the discharge.

(~~ii~~j) Release of Stored Water. Stored cold water may be released from reservoirs to cool downstream waters in order to achieve compliance with the applicable numeric criteria. However, there can be no significant adverse impact to downstream designated beneficial uses as a result of the releases of this cold water, and the release may not contribute to violations of other water quality criteria. Where the Department determines that the release of cold water is resulting in a significant adverse impact, the Department may require the elimination or mitigation of the adverse impact.

(13) Site-Specific Criteria. The Department may establish, by separate rulemaking, alternative site-specific criteria for all or a portion of a water body that fully protects the designated use.

(a) These site-specific criteria may be set on a seasonal basis as appropriate.

(b) The Department may use, but is not limited by the following considerations when calculating site-specific criteria:

(A) Stream flow;

(B) Riparian vegetation potential;

(C) Channel morphology modifications;

(D) Cold water tributaries and groundwater;

(E) Natural physical features and geology influencing stream temperatures; and

(F) Other relevant technical data.

(c) DEQ may consider the thermal benefit of increased flow when calculating the site-specific criteria.

(d) Once established and approved by EPA, the site-specific criteria will be the applicable criteria for the water bodies affected.

Stat. Auth.: ORS 468.020, 468B.030, 468B.035, 468B.048
Stats. Implemented: ORS 468B.030, 468B.035, 468B.048
Hist.: DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0032

Total Dissolved Solids (TDS)

Total Dissolved Solids: Total Dissolved Solids: The concentrations listed ~~below~~ in the basin specific criteria found in OAR 340-041-0101 through OAR 340-041-0350, may not be exceeded unless otherwise specifically authorized by DEQ upon such conditions as it may deem necessary.: ~~All Fresh Water Streams and Tributaries -- 100.0 mg/l.~~

Stat. Auth.: ORS 468.020, 468B.030, 468B.035, 468B.048
Stats. Implemented: ORS 468B.030, 468B.035, 468B.048
Hist.: DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0046

Water Quality Limited Waters

(1) A receiving stream may be designated as water quality limited through the biennial water quality status assessment report prepared to meet the requirements of section 305(b) of the Federal Clean Water Act. Appendix A of the Status Assessment report will identify: what water bodies are water quality limited, the time of year the water quality

standards violations occur, the segment of stream or area of water body limited, the parameter(s) of concern, and whether it is water quality limited under the definition of "Water Quality Limited" in OAR 340-041-0002~~(62)(a), (b) or (c)~~. Appendix B and C of the Status Assessment report will identify the specific evaluation process for designating water bodies limited;

(2) The water quality limited list contained in Appendix A of the Status Assessment report will be placed on public notice and reviewed through the public hearing process. At the conclusion of the hearing process and the evaluation of the testimony, Appendix A will become the official water quality limited list. The Department may add a water body to the water quality limited list between status assessment reports after placing that action out on public notice and conducting a public hearing;

(3) For interstate water bodies, the State is responsible for completing the requirements of OAR 340-041-0004(9) of this rule for that portion of the interstate water body within the boundary of the State;

(4) For water bodies designated as water quality limited under sub-section (c) of the definition of "Water Quality Limited" in OAR 340-041-0002~~(62)(c)~~, the Department will establish a priority list and schedule for future water quality monitoring activities to determine: if the water body should be designated as water quality limited under sub-sections (a) or (b) of the definition of "Water Quality Limited" in OAR 340-041-0002~~(62)(a) or (b)~~, if estimated TMDLs need to be prepared, and if an implementation plan needs to be developed and implemented;

(5) For water bodies designated as water quality limited under sub-section (b) of the definition of "Water Quality Limited" in OAR 340-041-0002~~(62)(b)~~, requests for load increases may be considered using the process set out in OAR 340-041-0004(9)(b) of this rule.

~~(6) Appendix B and C of the Status Assessment report will identify the specific evaluation process for designating water bodies limited.~~

Stat. Auth.: ORS 468.020, 468B.030, 468B.035, 468B.048
Stats. Implemented: ORS 468B.030, 468B.035, 468B.048
Hist.: DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0053

Mixing Zones

(1) The Department may allow a designated portion of a receiving water to serve as a zone of dilution for wastewaters and receiving waters to mix thoroughly and this zone will be defined as a mixing zone;

(2) The Department may suspend all or part of the water quality standards, or set less restrictive standards in the defined mixing zone, provided that the following conditions are met:

(a) A point source for which the mixing zone is established may not cause or significantly contribute to any of the following:

(A) Materials in concentrations that will cause acute toxicity to aquatic life as measured by a Department approved bioassay method. Acute toxicity is lethal to aquatic life as measured by a significant difference in lethal concentration between the control and 100 percent effluent in an acute bioassay test. Lethality in 100 percent effluent may be allowed due to ammonia and chlorine only when it is demonstrated on a case-by-case basis that immediate dilution of the effluent within the mixing zone reduces toxicity below lethal concentrations. The Department may on a case-by-case basis establish a zone of immediate dilution if appropriate for other parameters;

(B) Materials that will settle to form objectionable deposits;

(C) Floating debris, oil, scum, or other materials that cause nuisance conditions; and

(D) Substances in concentrations that produce deleterious amounts of fungal or bacterial growths.

(b) A point source for which the mixing zone is established may not cause or significantly contribute to any of the following conditions outside the boundary of the mixing zone:

(A) Materials in concentrations that will cause chronic (sublethal) toxicity. Chronic toxicity is measured as the concentration that causes long-term sublethal effects, such as significantly impaired growth or reproduction in aquatic organisms, during a testing period based on test species life cycle. Procedures and end points will be specified by the Department in wastewater discharge permits;

(B) Exceedances of any other water quality standards under normal annual low flow conditions.

(c) The limits of the mixing zone must be described in the wastewater discharge permit. In determining the location, surface area, and volume of a mixing zone area, the Department may use appropriate mixing zone guidelines to assess the biological, physical, and chemical character of receiving waters, effluent, and the most appropriate placement of the outfall, to protect instream water quality, public health, and other beneficial uses. Based on receiving water and effluent characteristics, the Department will define a mixing zone in the immediate area of a wastewater discharge to:

(A) Be as small as feasible;

(B) Avoid overlap with any other mixing zones to the extent possible and be less than the total stream width as necessary to allow passage of fish and other aquatic organisms;

(C) Minimize adverse effects on the indigenous biological community, especially when species are present that warrant special protection for their economic importance, tribal significance, ecological uniqueness, or other similar reasons determined by the Department and does not block the free passage of aquatic life;

(D) Not threaten public health;

(E) Minimize adverse effects on other designated beneficial uses outside the mixing zone.

(d) Temperature Thermal Plume Limitations. Temperature mixing zones and effluent limits authorized under 340-041-0028(12) (b) will be established to prevent or minimize the following adverse effects to salmonids inside the mixing zone:

(A) Impairment of an active salmonid spawning area where spawning redds are located or likely to be located. This adverse effect is prevented or minimized by limiting potential fish exposure to temperatures of 13 degrees Celsius (55.4 Fahrenheit) or ~~less~~ more for salmon and steelhead, and 9 degrees Celsius (48 degrees Fahrenheit) or more for bull trout;

(B) Acute impairment or instantaneous lethality is prevented or minimized by limiting potential fish exposure to temperatures of 32.0 degrees Celsius (89.6 degrees Fahrenheit) or more to less than 2 seconds);

(C) Thermal shock caused by a sudden increase in water temperature is prevented or minimized by limiting potential fish exposure to temperatures of 25.0 degrees Celsius (77.0 degrees Fahrenheit) or more to less than 5 percent of the cross section of 100 percent of the 7Q10 low flow of the water body; the Department may develop additional exposure timing restrictions to prevent thermal shock; and

(D) Unless the ambient temperature is 21.0 degrees of greater, migration blockage is prevented or minimized by limiting potential fish exposure to temperatures of 21.0 degrees Celsius (69.8 degrees Fahrenheit) or more to less than 25 percent of the cross section of 100 percent of the 7Q10 low flow of the water body.

(e) The Department may request the applicant of a permitted discharge for which a mixing zone is required, to submit all information necessary to define a mixing zone, such as:

(A) Type of operation to be conducted;

(B) Characteristics of effluent flow rates and composition;

(C) Characteristics of low flows of receiving waters;

(D) Description of potential environmental effects;

(E) Proposed design for outfall structures.

(f) The Department may, as necessary, require mixing zone monitoring studies and/or bioassays to be conducted to evaluate water quality or biological status within and outside the mixing zone boundary;

(g) The Department may change mixing zone limits or require the relocation of an outfall, if it determines that the water quality within the mixing zone adversely affects any existing beneficial uses in the receiving waters.

~~(h) Alternate requirements for mixing zones: For some existing or proposed discharges to some receiving streams, it may not be practical to treat wastewater to meet instream water quality standards at the point of discharge or within a short distance from the point of discharge. Some of these discharges could be allowed without impairing the overall ecological integrity of the receiving streams, or may provide an overall benefit to the receiving stream. This section specifies the conditions and circumstances under which a mixing zone may be allowed by the Department that extends beyond the immediate area around a discharge point, or that extends across a stream width. An alternate mixing zone may be approved if the applicant demonstrates to the Department's satisfaction that the discharge (A) creates an overall environmental benefit, or (B) is to a constructed water course, or (C) is insignificant. The three circumstances under which alternate mixing zones may be established are described further below.~~

~~(A) Overall environmental benefit.~~

~~(i) Qualifying for alternate mixing zone based on overall environmental benefit: In order to qualify for an alternate mixing zone based on a finding of overall environmental benefit, the discharger must demonstrate to the Department's satisfaction the following:~~

~~(I) All practical strategies have been, or will be, implemented to minimize the pollutant loads in the effluent; and~~

~~(II) For proposed increased discharges, the current actual discharge and mixing zone does not meet the requirements of a standard mixing zone; and~~

~~(III) Either that, on balance, an environmental benefit would be lost if the discharge did not occur, or that the discharger is prepared to undertake other actions that will mitigate the effect of the discharge to an extent resulting in a net environmental benefit to the receiving stream.~~

~~(IV) For the purposes of this rule, the term "practical" must include environmental impact, availability of alternatives, cost of alternatives and other relevant factors.~~

~~(ii) Studies required and evaluation of studies: In order to demonstrate that, on balance, an environmental benefit will result from the discharge, the following information must be provided by the applicant:~~

~~(I) The effluent flow and pollutant loads that are detected or expected in the effluent, by month, both average and expected worst case discharges: The parameters to be evaluated include at a minimum: temperature, biochemical oxygen demand, total suspended solids, total dissolved solids, pH, settleable solids, *E. coli* bacteria, oil and grease, any pollutants listed in Table 20 of this rule division, and any pollutant for which the receiving stream has been designated by the Department as water quality limited; and~~

~~(II) Receiving stream flow, by month; and~~

~~(III) The expected impact of the discharge, by month, on the receiving stream for the entire proposed mixing zone area for all of the pollutants listed above. Included in this analysis must be a comparison of the receiving stream water quality with the discharge and without the discharge; and~~

~~(IV) A description of fish, other vertebrate populations, and macroinvertebrates that reside in, or are likely to pass through, the proposed mixing zone, including expected location (if known), species identification, stage of development, and time of year when their presence is expected. For existing discharges, the applicant must provide the same information for similar nearby streams that are unaffected by wastewater discharges. In addition, any threatened or endangered species in the immediate vicinity of the receiving stream must be identified; and~~

~~(V) The expected impact of the discharge on aquatic organisms and/or fish passage, including any expected negative impacts from the effluent attracting fish, where that is not desirable; and~~

~~(VI) A description of the expected environmental benefits to be derived from the discharge or other mitigation measures proposed by the applicant, including but not limited to improvements in water quality, improvements in fish passage, and improvements in aquatic habitat. If the applicant proposes to undertake mitigation measures designed to provide environmental benefits (e.g., purchasing water or water conservation rights to increase stream flows or establishing stream cover to decrease temperature), the applicant must describe the mitigation measures in detail, including a description of the steps it will take to ensure that the benefits of the mitigation measures are attained and are not lost or diminished over time.~~

~~(VII) Some or all of the above study requirements may be waived by the Department, if the Department determines that the information is not needed. In the event that the Department does waive some or all of the above study requirements, the basis for waiving the requirements will be included in the permit evaluation report upon the next permit renewal or modification relating to the mixing zone.~~

~~(VIII) Upon request of the Department, the applicant must conduct additional studies to further evaluate the impact of the discharge, which may include whole effluent toxicity testing, stream surveys for water quality, stream surveys for fish and other aquatic organisms, or other studies as specified by the Department.~~

~~(IX) In evaluating whether an existing or proposed increase in an existing discharge would result in a net environmental benefit, the applicant must use the native biological community in a nearby, similar stream that is unaffected by wastewater discharges. The Department will consider all information generated as required in this rule and other relevant information. The evaluation will only consider benefits to the native aquatic biological community.~~

~~(iii) Permit conditions: Upon determination by the Department that the discharge and mitigation measures (if any) will likely result in an overall environmental benefit, the Department will include appropriate permit conditions to ensure that the environmental benefits are attained and continue. Such permit conditions may include, but not be limited to:~~

~~(I) Maximum allowed effluent flows and pollutant loads;~~

~~(II) Requirements to maintain land ownership, easements, contracts, or other legally binding measures necessary to assure that mitigation measures, if any, remain in place and effective;~~

~~(III) Special operating conditions;~~

~~(IV) Monitoring and reporting requirements; and~~

~~(V) Studies to evaluate the effectiveness of mitigation measures.~~

~~(B) Constructed water course: A mixing zone may be extended through a constructed water course and into a natural water course. For the purposes of this rule, a constructed water course is one that was constructed for irrigation, site drainage, or wastewater conveyance, and has the following characteristics:~~

~~(i) Irrigation flows, stormwater runoff, or wastewater flows have replaced natural streamflow regimes;~~

~~(ii) The channel form is greatly simplified in lengthwise and cross sectional profiles;~~

~~(iii) Physical and biological characteristics that differ significantly from nearby natural streams;~~

~~(iv) A much lower diversity of aquatic species than the diversity found in nearby natural streams; and~~

~~(v) Effective fish screens if the constructed water course is an irrigation canal.~~

~~(C) Insignificant discharges: Insignificant discharges are those that either by volume, pollutant characteristics, and/or temporary nature are expected to have little if any impact on beneficial uses in the receiving stream, and for which the extensive evaluations required for discharges to smaller streams are not warranted. For the purposes of this rule, only filter backwash discharges and underground storage tank cleanups are considered insignificant discharges.~~

~~(D) Other requirements for alternate mixing zones: The following are additional requirements for dischargers requesting an alternate mixing zone:~~

~~(i) Most discharges that qualify for an alternate mixing zone will extend through the receiving stream until a larger stream is reached, where thorough mixing of the effluent can occur and where the edge of the allowed mixing zone will be located. The portion of the mixing zone in the larger stream must meet all of the requirements of the standard mixing zone, including not blocking aquatic life passage; and~~

~~(ii) An alternate mixing zone may not be granted if a municipal drinking water intake is located within the proposed mixing zone, and the discharge has a significant adverse impact on the drinking water source; and~~

~~(iii) The discharge will not pose an unreasonable hazard to the environment or pose a significant health risk, considering the likely pathways of exposure; and~~

~~(iv) The discharge may not be acutely toxic to organisms passing through the mixing zone; and~~

~~(v) An alternate mixing zone may not be granted if the substances discharged may accumulate in the sediments or bioaccumulate in aquatic life or wildlife to levels that adversely affect public health, safety or welfare, aquatic life, wildlife, or other designated beneficial uses; and~~

~~(vi) In the event that the receiving stream is water quality limited, the requirements for discharges to water quality limited streams supersede this rule.~~

Stat. Auth.: ORS 468.020, 468B.030, 468B.035, 468B.048
Stats. Implemented: ORS 468B.030, 468B.035, 468B.048
Hist.: DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0104

Water Quality Standards and Policies Specific to the Main Stem Columbia River

(1) pH (hydrogen ion concentration). pH values may not fall outside the following range: main stem Columbia River (mouth to river mile 309): 7.0 -- 8.5.

(2) Total Dissolved Solids. Guide concentrations listed below must not be exceeded unless otherwise specifically authorized by DEQ upon such conditions as it may deem necessary to carry out the general intent of this plan and to protect the beneficial uses set forth in OAR 340-04l-0101:

(a) Main stem Columbia River (river miles 120 to 147 and 21~~0~~8-309) -- 200.0 mg/l;

(b) All other river miles of main stem Columbia River -- 500.0 mg/l.

(3) Total Dissolved Gas. The Commission may modify the total dissolved gas criteria in the Columbia River for the purpose of allowing increased spill for salmonid migration. The Commission must find that:

(a) Failure to act would result in greater harm to salmonid stock survival through in-river migration than would occur by increased spill;

(b) The modified total dissolved gas criteria associated with the increased spill provides a reasonable balance of the risk of impairment due to elevated total dissolved gas to both resident biological communities and other migrating fish and to migrating adult and juvenile salmonids when compared to other options for in-river migration of salmon;

(c) Adequate data will exist to determine compliance with the standards; and

(d) Biological monitoring is occurring to document that the migratory salmonid and resident biological communities are being protected.

(e) The Commission will give public notice and notify all known interested parties and will make provision for opportunity to be heard and comment on the evidence presented by others, except that the Director may modify the total dissolved gas criteria for emergencies for a period not exceeding 48 hours;

(f) The Commission may, at its discretion, consider alternative modes of migration.

(4) Minimum Design Criteria for Treatment and Control of Sewage Wastes:

(a) During periods of low stream flows (see ~~subsections~~ paragraphs 4(a) (A) and 4(a) (B) ~~below~~of this rule): Treatment resulting in monthly average effluent concentrations not to exceed 20 mg/l of BOD and 20 mg/l of SS or equivalent control. Periods of low stream flow vary throughout the main stem Columbia River. Low stream flow periods, ~~are listed below,~~ by river mile, are:

(A) River miles 120 to 147: Approximately July 1 to January 31;

(B) River miles 147 to 218: Approximately May 1 to October 31.

(b) During periods of high stream flows (see ~~subsections~~ paragraphs 4(b)(A) and 4(b)(B) below): A minimum of secondary treatment or equivalent control and unless otherwise specifically authorized by the Department, operation of all waste treatment and control facilities at maximum practicable efficiency and effectiveness so as to minimize waste discharges to public waters.

(A) River miles 120 to 147: Approximately February 1 to June 30;

(B) River miles 147 to 218: Approximately November 1 to April 30.

Stat. Auth.: ORS 468.020, 468B.030, 468B.035, 468B.048
Stats. Implemented: ORS 468B.030, 468B.035, 468B.048
Hist.: DEQ 17-2003, f. & cert. ef. 12-9-03

Basin-Specific Criteria
(Main Stem Snake River)

340-041-0121

Beneficial Uses to Be Protected in the Main Stem Snake River

(1) Water quality in the main stem Snake River (see Figure 1) must be managed to protect the designated beneficial uses shown in Table 121A (~~November 2003~~August 2005).

(2) Designated fish uses to be protected in the main stem Snake River are shown in Table 121B (November 2003).

[Ed. Note: Figures and Tables are available from the agency.]

Stat. Auth.: ORS 468.020, 468B.030, 468B.035, 468B.048
Stats. Implemented: ORS 468B.030, 468B.035, 468B.048
Hist.: DEQ 17-2003, f. & cert. ef. 12-9-03

Basin-Specific Criteria
(John Day)

340-041-0175
Water Quality Standards and Policies for this Basin

(1) pH (hydrogen ion concentration). pH values may not fall outside the following range: all Basin streams (other than the main stem Colombia River): 6.5-9.0. When greater than 25 percent of ambient measurements taken between June and September are greater than pH 8.7, and as resources are available according to priorities set by the Department, the Department will determine whether the values higher than 8.7 are anthropogenic or natural in origin.

(2) Total Dissolved Solids. Guide concentrations listed below may not be exceeded unless otherwise specifically authorized by DEQ upon such conditions as it may deem necessary to carry out the general intent of this plan and to protect the beneficial uses set forth in OAR 340-041-0170: John Day River and Tributaries -- 500.0 mg/l.

(3) Minimum Design Criteria for Treatment and control of Sewage Wastes in this Basin:

(a) During periods of low stream flows (approximately April 1 to October 31): Treatment resulting in monthly average effluent concentrations not to exceed 20 mg/l of BOD and 20 mg/l of SS or equivalent control;

(b) During the period of high stream flows (approximately November 1 to April 30): A minimum of secondary treatment or equivalent control and unless otherwise specifically authorized by the Department, operation of all waste treatment and control facilities at maximum practicable efficiency and effectiveness so as to minimize waste discharges to public waters.

Stat. Auth.: ORS 468.020, 468B.030, 468B.035, 468B.048
Stats. Implemented: ORS 468B.030, 468B.035, 468B.048
Hist.: DEQ 17-2003, f. & cert. ef. 12-9-03

Basin-Specific Criteria
(Klamath)

340-041-0180

Beneficial Uses to Be Protected in the Klamath Basin

(1) Water quality in the Klamath Basin (see Figure 1) must be managed to protect the designated beneficial uses shown in Table 180A (~~November 2003~~August 2005).

(2) Designated fish uses to be protected in the Klamath Basin are shown in Figure 180A (November 2003).

Stat. Auth.: ORS 468.020, 468B.030, 468B.035, 468B.048
Stats. Implemented: ORS 468B.030, 468B.035, 468B.048
Hist.: DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0185

Water Quality Standards and Policies for this Basin

(1) pH (hydrogen ion concentration). pH values may not fall outside the following ranges:

(a) Fresh waters except Cascade lakes: pH values may not fall outside the range of 6.5-9.0. When greater than 25 percent of ambient measurements taken between June and September are greater than pH 8.7, and as resources are available according to priorities set by the Department, the Department will determine whether the values higher than 8.7 are anthropogenic or natural in origin;

(b) Cascade lakes above 5,000 feet altitude: pH values may not fall outside the range of 6.0 to 8.5.

(2) Temperature. From June 1 to September 30, no NPDES point source that discharges to the portion of the Klamath River designated for cool water species may cause the temperature of the water body to increase more than 0.3°C above the natural background after mixing with 25% of the stream flow. Natural background for the Klamath River means the temperature of the Klamath River at the outflow from Upper Klamath Lake plus any natural warming or cooling that occurs downstream. This criterion supersedes OAR 340-041-0028(9) (a) during the specified time period for NPDES permitted point sources.

(~~2~~3) Total Dissolved Solids. Guide concentrations listed below may not be exceeded unless otherwise specifically authorized by DEQ upon such conditions as it may deem necessary to carry out the general intent of this plan and to protect the beneficial uses set forth in OAR 340-041-0180: main stem Klamath River from Klamath Lake to the Oregon-California Border (river miles 255 to 208.5): The specific conductance may not exceed 400 micro-ohms at 77°F when measured at the Oregon-California Border (river mile 208.5).

(~~3~~4) Minimum Design Criteria for Treatment and Control of Sewage Wastes:

(a) During periods of low streams flows (approximately May 1 to October 31): Treatment resulting in monthly average effluent concentrations not to exceed 20 mg/l of BOD and 20 of suspended solids or equivalent control;

(b) During the period of high stream flows (approximately November 1 to April 30): A minimum of secondary treatment or equivalent control and unless otherwise specifically authorized by the Department, operation of all waste treatment and control facilities to maximum practicable efficient and effectiveness so as to minimize waste discharge to public waters.

Stat. Auth.: ORS 468.020, 468B.030, 468B.035, 468B.048
Stats. Implemented: ORS 468B.030, 468B.035, 468B.048
Hist.: DEQ 17-2003, f. & cert. ef. 12-9-03

Basin-Specific Criteria
(Malheur Lake)

340-041-0195

Water Quality Standards and Policies for this Basin

(1) pH (hydrogen ion concentration). pH values may not fall outside the range of 7.0 to 9.0. When greater than 25 percent of ambient measurements taken between June and September are greater than pH 8.7, and as resources are available according to priorities set by the Department, the Department will determine whether the values higher than 8.7 are anthropogenic or natural in origin.

(2) Temperature. State waters in the Malheur Lake Basin supporting the Borax Lake chub may not be cooled more than 0.3 degrees Celsius (0.5 degrees Fahrenheit) below the natural condition.

(~~2~~3) Total Dissolved Solids. Guide concentrations listed below may not be exceeded unless otherwise specifically authorized by DEQ upon such conditions as it may deem necessary to carry out the general intent of this plan and to protect the beneficial uses set forth in OAR 340-041-0190: None.

(~~3~~4) Minimum Design Criteria for Treatment and Control of Sewage wastes: a minimum of secondary treatment or equivalent control and unless otherwise specifically authorized by the Department, operation of all waste treatment and control facilities at maximum practicable efficiency and effectiveness so as to minimize waste discharges to public waters.

Stat. Auth.: ORS 468.020, 468B.030, 468B.035, 468B.048
Stats. Implemented: ORS 468B.030, 468B.035, 468B.048
Hist.: DEQ 17-2003, f. & cert. ef. 12-9-03

Basin-Specific Criteria
(Malheur River)

340-041-0201

Beneficial Uses to Be Protected in the Malheur River Basin

(1) Water quality in the Malheur River Basin (see Figure 1) must be managed to protect the designated beneficial uses shown in Table 201A (~~November 2003~~August 2005).

(2) Designated fish uses to be protected in the Malheur River Basin are shown in Figure 201A (~~November 2003~~August 2005).

Stat. Auth.: ORS 468.020, 468B.030, 468B.035, 468B.048
Stats. Implemented: ORS 468B.030, 468B.035, 468B.048
Hist.: DEQ 17-2003, f. & cert. ef. 12-9-03

Basin-Specific Criteria
(North Coast)

340-041-0235
Water Quality Standards and Policies for this Basin

(1) pH (hydrogen ion concentration). pH values may not fall outside the following ranges:
(a) Marine waters: 7.0-8.5;
(b) Estuarine and fresh waters: 6.5-8.5.

(2) Total Dissolved Solids. Guide concentrations may not be exceeded unless otherwise specifically authorized by DEQ upon such conditions as it may deem necessary to carry out the general intent of this plan and to protect the beneficial uses set forth in OAR 340-041-0230: All Fresh Water Streams and Tributaries (other than the main stem Columbia River) -- 100.0 mg/l.

(3) Minimum Design Criteria for Treatment and control of Sewage Wastes in this Basin:

(a) During periods of low stream flows (approximately April 1 to October 31): Treatment resulting in monthly average effluent concentrations not to exceed 20 mg/l of BOD and 20 mg/l of SS or equivalent control;

(b) During the period of high stream flows (approximately November 1 to April 30): A minimum of secondary treatment or equivalent control and unless otherwise specifically authorized by the Department, operation of all waste treatment and control facilities at maximum practicable efficiency and effectiveness so as to minimize waste discharges to public waters.

Stat. Auth.: ORS 468.020, 468B.030, 468B.035, 468B.048
Stats. Implemented: ORS 468B.030, 468B.035, 468B.048
Hist.: DEQ 17-2003, f. & cert. ef. 12-9-03

Basin-Specific Criteria
(Powder/Burnt)

340-041-0260

Beneficial Uses to Be Protected in the Powder/Burnt Basins

(1) Water quality in the Powder/Burnt Basins (see Figure 1) must be managed to protect the designated beneficial uses shown in Table 260A (~~November 2003~~August 2005).

(2) Designated fish uses to be protected in the Powder/Burnt Basins are shown in Figure 260A (November 2003).

Stat. Auth.: ORS 468.020, 468B.030, 468B.035, 468B.048
Stats. Implemented: ORS 468B.030, 468B.035, 468B.048
Hist.: DEQ 17-2003, f. & cert. ef. 12-9-03

Basin-Specific Criteria
(Rogue)

340-041-0271

Beneficial Uses to Be Protected in the Rogue Basin

(1) Water quality in the Rogue Basin (see Figure 1) must be managed to protect the designated beneficial uses shown in Table 271A (November 2003).

(2) Designated fish uses to be protected in the Rogue Basin are shown in Figures 271A (November 2003) and 271B (August 2005 ~~(November 2003)~~).

Stat. Auth.: ORS 468.020, 468B.030, 468B.035, 468B.048
Stats. Implemented: ORS 468B.030, 468B.035, 468B.048
Hist.: DEQ 17-2003, f. & cert. ef. 12-9-03

Basin-Specific Criteria
(South Coast)

340-041-0300

Beneficial Uses to Be Protected in the South Coast Basin

(1) Water quality in the South Coast Basin (see Figure 1) must be managed to protect the designated beneficial uses shown in Table 300A (November 2003).

(2) Designated fish uses to be protected in the South Coast Basin are shown in Figures 300A (August 2005) and 300B (November 2003).

Stat. Auth.: ORS 468.020, 468B.030, 468B.035, 468B.048
Stats. Implemented: ORS 468B.030, 468B.035, 468B.048
Hist.: DEQ 17-2003, f. & cert. ef. 12-9-03

Basin-Specific Criteria
(Umatilla)

340-041-0315

Water Quality Standards and Policies for this Basin

(1) pH (hydrogen ion concentration). pH values may not fall outside the following range: all Basin streams (other than main stem Columbia River): 6.5-9.0. When greater than 25 percent of ambient measurements taken between June and September are greater than pH 8.7, and as resources are available according to priorities set by the Department, the Department will determine whether the values higher than 8.7 are anthropogenic or natural in origin.

(2) Minimum Design Criteria for Treatment and control of Sewage Wastes in this Basin:

(a) During periods of low stream flows (approximately April 1 to October 31): Treatment resulting in monthly average effluent concentrations not to exceed 20 mg/l of BOD and 20 mg/l of SS or equivalent control;

(b) During the period of high stream flows (approximately November 1 to April 30): A minimum of secondary treatment or equivalent control and unless otherwise specifically authorized by the Department, operation of all waste treatment and control facilities at maximum practicable efficiency and effectiveness so as to minimize waste discharges to public waters.

Stat. Auth.: ORS 468.020, 468B.030, 468B.035, 468B.048
Stats. Implemented: ORS 468B.030, 468B.035, 468B.048
Hist.: DEQ 17-2003, f. & cert. ef. 12-9-03

Basin-Specific Criteria
(Umpqua Basin)

340-041-0320

Beneficial Uses to Be Protected in the Umpqua Basin

(1) Water quality in the Umpqua Basin (see Figure 1) must be managed to protect the designated beneficial uses shown in Table 320A (November 2003).

(2) Designated fish uses to be protected in the Umpqua Basin are shown in Figures 320A (November 2003) and 320B (~~November 2003~~August 2005).

Stat. Auth.: ORS 468.020, 468B.030, 468B.035, 468B.048
Stats. Implemented: ORS 468B.030, 468B.035, 468B.048
Hist.: DEQ 17-2003, f. & cert. ef. 12-9-03

Basin-Specific Criteria
(Willamette)

340-041-0340

Beneficial Uses to Be Protected in the Willamette Basin

(1) Water quality in the Willamette Basin (see Figure 1) must be managed to protect the designated beneficial uses shown in Table 340A (~~November 2003~~August 2005).

(2) Designated fish uses to be protected in the Willamette Basin are shown in Figures 340A (November 2003) and 340B (~~November 2003~~August 2005).

Stat. Auth.: ORS 468.020, 468B.030, 468B.035, 468B.048
Stats. Implemented: ORS 468B.030, 468B.035, 468B.048
Hist.: DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0345
Water Quality Standards and Policies for this Basin

(1) pH (hydrogen ion concentration). pH values may not fall outside the following ranges:

(a) All basin waters (except main stem Columbia River and Cascade lakes): 6.5 to 8.5;

(b) Cascade lakes above 3,000 feet altitude: 6.0 to 8.5.

(2) Total Dissolved Solids. Guide concentrations listed may not be exceeded unless otherwise specifically authorized by DEQ upon such conditions as it may deem necessary to carry out the general intent of this plan and to protect the beneficial uses set forth in OAR 340-041-0340: Willamette River and Tributaries --100.0 mg/l.

(3) Minimum Design Criteria for Treatment and Control of Sewage Wastes:

(a) Willamette River and tributaries except Tualatin River Subbasin:

(A) During periods of low stream flows (approximately May 1 to October 31): Treatment resulting in monthly average effluent concentrations not to exceed 10 mg/l of BOD and 10 mg/l of SS or equivalent control;

(B) During the period of high stream flows (approximately November 1 to April 30): A minimum of secondary treatment or equivalent control and unless otherwise specifically authorized by the Department, operation of all waste treatment and control facilities at maximum practical efficiency and effectiveness so as to minimize waste discharges to public waters.

(b) Main stem Tualatin River from mouth to Gaston (river mile 0 to 65):

(A) During periods of low stream flows (approximately May 1 to October 31): Treatment resulting in monthly average effluent concentrations not to exceed 10 mg/l of BOD and 10 mg/l of SS or equivalent control;

(B) During the period of high stream flows (approximately November 1 to April 30): Treatment resulting in monthly average effluent concentrations not to exceed 20 mg/l of BOD and 20 mg/l of SS or equivalent control.

(c) Main stem Tualatin River above Gaston (river mile 65) and all tributaries to the Tualatin River: Treatment resulting in monthly average effluent concentrations not to exceed 5 mg/l of BOD and 5 mg/l of SS or equivalent control;

(d) Tualatin River Subbasin: The dissolved oxygen level in the discharged effluents may not be less than 6 mg/l;

(4) Nonpoint source pollution control in the Tualatin River subbasin and lands draining to Oswego Lake:

(a) Subsection (5)(b) of this rule applies to any new land development within the Tualatin River and Oswego Lake subbasins, except those developments with application dates prior to January 1, 1990. The application date is the date on which a complete application for development approval is received by the local jurisdiction in accordance with the regulations of the local jurisdiction;

(b) For land development, no preliminary plat, site plan, permit or public works project may be approved by any jurisdiction in these subbasins unless the conditions of the plat permit or plan approval include an erosion control plan containing methods and/or interim facilities to be constructed or used concurrently with land development and to be operated during construction to control the discharge of sediment in the stormwater runoff. The erosion control plan must include the following elements:

(A) Protection techniques to control soil erosion and sediment transport to less than one ton per acre per year, as calculated using the Natural Resources Conservation Service's Universal Soil Loss Equation or other equivalent methods (see Figures 1 to 6 in Appendix 1 for examples). The erosion control plan must include temporary sedimentation basins or other sediment control devices when, because of steep slopes or other site specific considerations, other on-site sediment control methods will not likely keep the sediment transport to less than one ton per acre per year. The local jurisdictions may establish additional requirements for meeting an equivalent degree of control. Any sediment basin constructed must be sized using 1.5 feet minimum sediment storage depth plus 2.0 feet storage depth above for a settlement zone. The storage capacity of the basin must be sized to store all of the sediment that is likely to be transported and collected during construction while the erosion potential exists. When the erosion potential has been removed, the sediment basin, or other sediment control facilities, can be removed and the site restored as per the final site plan. All sediment basins must be constructed with an emergency overflow to prevent erosion or failure of the containment dike; or

(B) A soil erosion control matrix derived from and consistent with the universal soil equation approved by the jurisdiction or the Department.

(c) The Director may modify Appendix 1 as necessary without approval from the Environmental Quality Commission. The Director may modify Appendix 1 to simplify it and to make it easier for people to apply;

(d) Subsection (5)(e) of this rule applies to any new land development within the Tualatin River and Oswego Lake subbasins, except:

(A) Those developments with application dates prior to June 1, 1990. The application date is the date on which a complete application for development approval is received by the local jurisdiction in accordance with the regulations of the local jurisdiction;

(B) One and two family dwellings on existing lots of record;

(C) Sewer lines, water lines, utilities or other land development that will not directly increase nonpoint source pollution once construction has been completed and the site is either restored to or not altered from its approximate original condition;

(D) If the Environmental Quality Commission determines that a jurisdiction does not need to require stormwater quality control facilities for new development;

(E) When a jurisdiction adopts ordinances that provide for a stormwater quality program equivalent to subsection (e) of this section. Ordinances adopted to implement equivalent programs must:

(i) Encourage on-site retention of stormwater, require phosphorus removal equivalent to the removal efficiency required by subsection (e) of this section, provide for adequate operation and maintenance of stormwater quality control facilities, and require financial assurance, or equivalent security that assures construction of the stormwater quality control facilities required by the ordinance;

(ii) If the ordinances provide for exemptions other than those allowed for by paragraphs (B) and (C) of this subsection, the ordinances must provide for collection of in-lieu fees or other equivalent mechanisms that assure financing for, and construction of, associated, off-site stormwater quality control facilities. No exemption may be allowed if the jurisdiction is not meeting an approved schedule for identifying location of the off-site stormwater quality control facility to serve the development requesting an exemption.

(e) For new development, no plat, site plan, building permit or public works project may be approved by any jurisdiction in these subbasins unless the conditions of the plat, permit or plan approval require permanent stormwater quality control facilities to control phosphorus loadings associated with stormwater runoff from the development site. Jurisdictions must encourage and provide preference to techniques and methods that prevent and minimize pollutants from entering the storm and surface water systems. Permanent stormwater quality control facilities for phosphorus must meet the following requirements:

(A) The stormwater quality control facilities must be designed to achieve a phosphorus removal efficiency as calculated from the following equation:
Rp = 100 - 24.5/Rv
Where:
Rp = Required phosphorus removal efficiency
Rv = Average site runoff coefficient
The average site runoff coefficient can be calculated from the following equation:
Rv = (0.7 x A1) + (0.3 x A2) + (0.7 x A3) +
(0.05 x A4) + (A5 x 0.0)
Where:
A1 = fraction of total area that is paved streets with curbs and that drain to storm sewers or open ditches.
A2 = fraction of total area that is paved streets that drain to water quality swales located on site.
A3 = fraction of total area that is building roof and paved parking that drains to storm sewers.
A4 = fraction of total area that is grass, trees and marsh areas.
A5 = fraction of total area for which runoff will be collected and retained on site with no direct discharge to surface waters.

(B) A jurisdiction may modify the equation for Rv to allow the application of additional runoff coefficients associated with land surfaces not identified in this subsection. The Department must be notified in writing whenever an additional runoff coefficient is used. The use of additional runoff coefficients must be based on scientific data. The jurisdiction must discontinue use of an additional runoff coefficient if the Department objects to its use in writing within ten days of receiving notification;

(C) The stormwater quality control facilities must be designed to meet the removal efficiency specified in paragraph (A) of this subsection for a mean summertime storm event totaling 0.36 inches of precipitation with an average return period of 96 hours;

(D) The removal efficiency specified in paragraph (A) of this subsection specify only design requirements and are not intended to be used as a basis for performance evaluation or compliance determination of the stormwater quality control facility installed or constructed pursuant to this subsection;

(E) Stormwater quality control facilities required by this subsection may be approved by a jurisdiction only if the following are met:

(i) For developments larger than one acre, the plat or site plan must include plans and a certification prepared by an Oregon registered, professional engineer that the proposed stormwater control facilities have been designed in accordance with criteria expected to achieve removal efficiencies for total phosphorus required by paragraph (A) of this subsection;

(ii) The plat or site plan must be consistent with the area and associated runoff coefficients used to determine the removal efficiency required in paragraph (A) of this subsection;

(iii) A financial assurance, or equivalent security acceptable to the jurisdiction, must be provided by the developer with the jurisdiction that assures that the stormwater control facilities are constructed according to the plans established in the plat or site plan approval. Where practicable, the jurisdiction must combine the financial assurance required by this rule with other financial assurance requirements imposed by the jurisdiction;

(iv) Each jurisdiction that constructs or authorizes construction of permanent stormwater quality control facilities must file with the Department, an operation and maintenance plan for the stormwater quality control facilities within its jurisdiction. The operation and maintenance plan must allow for public or private ownership, operation, and maintenance of individual permanent stormwater quality control facilities. The jurisdiction or private operator must operate and maintain the permanent stormwater control facilities in accordance with the operation and maintenance plan.

(f) Except as required by paragraph (D) of this subsection, the jurisdiction may grant an exception to subsection (e) of this section if the jurisdiction chooses to adopt and, on a case-by-case basis, impose a one time in-lieu fee. The fee will be an option where, because of the size of the development, topography, or other factors, the jurisdiction determines that the construction of on-site permanent stormwater treatment systems is impracticable or undesirable:

(A) The in-lieu fee will be based upon a reasonable estimate of the current, prorated cost for the jurisdiction to provide stormwater quality control facilities for the land development being assessed the fee. Estimated costs include costs associated with off-site land and rights-of-way acquisition, design, construction and construction inspection;

(B) The jurisdiction must deposit any in-lieu fees collected pursuant to this paragraph in an account dedicated only to reimbursing the jurisdiction for expenses related to off-site land and rights-of-way acquisition, design, construction and construction inspection of stormwater quality control facilities;

(C) The ordinance establishing the in-lieu fee must include provisions that reduce the fee in proportion to the ratio of the site's average runoff coefficient (Rv), as established according to the equation in paragraph (6)(e)(A) of this rule;

(D) No new development may be granted an exemption if the jurisdiction is not meeting an approved time schedule for identifying the location for the off-site stormwater quality control facilities that would serve that development.

(g) The Department may approve other mechanisms that allow jurisdictions to grant exemptions to new development. The Department may only approve those mechanisms

that assure financing for off-site stormwater quality control facilities and that encourage or require on-site retention where feasible;

(h) Subsection (b) of this section apply until a jurisdiction adopts ordinances that provide for a program equivalent to subsection (b) of this section, or the Environmental Quality Commission determines such a program is not necessary when it approves the jurisdiction's program plan required by OAR 340-041-0470(2)(g).

(5) In order to improve water quality within the Yamhill River subbasin to meet the existing water quality standard for pH, the following special rules for total maximum daily loads, waste load allocations, load allocations and program plans are established:

(a) After completion of wastewater control facilities and program plans approved by the Commission under this rule and no later than June 30, 1994, no activities may be allowed and no wastewater may be discharged to the Yamhill River or its tributaries without the authorization of the Commission that cause the monthly median concentration of total phosphorus to exceed 70 ug/1 as measured during the low flow period between approximately May 1 and October 31*** of each year;

(b) Within 90 days of adoption of these rules, the Cities of McMinnville and Lafayette must submit a program plan and time schedule to the Department describing how and when they will modify their sewerage facility to comply with this rule;

(c) Final program plans will be reviewed and approved by the Commission. The Commission may define alternative compliance dates as program plans are approved. All proposed final program plans must be subject to public hearing prior to consideration for approval by the Commission;

(d) The Department will within 60 days of adoption of these rules distribute initial waste load allocations and load allocations to the point and nonpoint sources in the basin. These allocations are considered interim and may be redistributed based upon the conclusions of the approved program plans. ***Precise dates for complying with this rule may be conditioned on physical conditions (i.e., flow, temperature) of the receiving water and may be specified in individual permits or memorandums of understanding issued by the Department. The Department may consider system design flows, river travel times, and other relevant information when establishing the specific conditions to be inserted in the permits or memorandums of understanding.

Stat. Auth.: ORS 468.020, 468B.030, 468B.035, 468B.048
Stats. Implemented: ORS 468B.030, 468B.035, 468B.048
Hist.: DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0350
The Three Basin Rule: Clackamas, McKenzie (above RM 15) & the North Santiam

(1) In order to preserve or improve the existing high quality water for municipal water supplies, recreation, and preservation of aquatic life, new or increased waste discharges must be prohibited, except as provided by this rule, to the waters of:

(a) The Clackamas River Subbasin;

(b) The McKenzie River Subbasin above the Hayden Bridge (river mile 15);

(c) The North Santiam River Subbasin.

(2) Except as otherwise provided for in this rule, this rule becomes effective and applies to all permits pending or applied for after the date of filing with the Secretary of State.

(3) Special Definitions. The following special definitions apply to this rule:

(a) "Waste Discharges" are defined to mean any discharge that requires and NPDES permit, WPCF permit, or 401 Certification. Individual on-site sewage disposal systems subject to issuance of a construction-installation permit; domestic sewage facilities that discharge less than 5,000 gallons per day under WPCF permit; biosolids land applied within agronomic loading rates pursuant to OAR chapter 340, division 50; and reclaimed domestic waste water land applied at agronomic rates pursuant to OAR chapter 340, division 55 are excluded from this definition.

(b) "Existing Discharges" are defined as those discharges from point sources which existed prior to January 28, 1994;

(c) "Existing Facilities" are defined as those for which construction started prior to January 28, 1994. Where existing facilities are exempted from requirements placed on new facilities, the exemption applies only to the specific permit(s) addressed in the subsection which allows the exemption;

(d) "New" NPDES and WPCF permits are defined to include permits for potential or existing discharges which did not previously have a permit, and existing discharges which have a permit, but request an increased load limitation;

(e) "Agronomic Loading Rate" means the application of biosolids or reclaimed effluent to the land at a rate which is designed to:

(A) Provide the quantity of plant nutrients, usually nitrogen, needed by a food crop, feed crop, fiber crop, cover crop or other vegetation grown on the land; and

(B) Minimize the quantity of nitrogen or other nutrients from land applied materials that pass below the root zone of the crop or vegetation grown on the land to groundwater.

(f) "Biosolids" means solids derived from primary, secondary, or advanced treatment of domestic wastewater which have been treated through one or more controlled processes

that significantly reduce pathogens and reduce volatile solids or chemical stabilize solids to the extent that they do not attract vectors. This term refers to domestic wastewater treatment facility solids that have undergone adequate treatment to permit their land application;

(g) "Reclaimed Wastewater" means treated effluent from a domestic wastewater treatment system which, as a result of treatment, is suitable for a direct beneficial purpose or a controlled use that could not otherwise occur.

(4) To respond to emergencies or to otherwise avoid imminent serious danger to public health or welfare, the Director or designee may allow lower water quality on a short-term basis.

(5) The Director or a designee may renew or transfer NPDES and WPCF permits for existing facilities. Existing facilities with NPDES permits may not be granted increases in their permitted mass load limitations. The following restrictions and exceptions apply:

(a) The Department may conduct an inspection prior to permit renewal. Existing sources with general permits that are found not to qualify for a general permit, and who wish to continue discharging, must apply for an individual permit;

(b) Fish hatcheries (General Permit 300) and log ponds (General Permit 400) are required to apply for an individual permit at the time of permit renewal;

(c) Additional industrial, confined animal feeding operations, or domestic waste loads that are irrigated on land at agronomic rates or that otherwise meet the conditions of section (7) of this rule is not be considered to be an increase in the permitted wasteload.

(6) The Director or a designee may issue the following General Permits or Certifications subject to the conditions of the Permit or Certification:

(a) Stormwater construction activities (General Permits 1200C and 1200CA);

(b) Underground storage tank cleanups using best available treatment technology (General Permit 1500);

(c) Non-contact cooling water (General Permit 100);

(d) Filter backwash (General Permit 200);

(e) Boiler blowdown water (General Permit 500);

(f) Suction dredging (General Permit 700) only in portions of the basins that are not designated as Scenic Waterways under ORS 390.805 to 390.925;

(g) Federal Clean Water Act Section 401 water quality certifications.

(7) Long-term general and individual stormwater permits may be allowed as required by State and/or Federal law. The following requirements apply:

(a) New stormwater discharge permit holders must maintain a monitoring and water quality evaluation program that is effective in evaluation of the in-stream water quality impacts of the discharge; and

(b) When sufficient data is available to do so, the Department will assess the water quality impacts of stormwater discharges. Within a subbasin, if the proportion of total degradation that is contributed by the stormwater is determined to be significant compared to that of other permitted sources, or if the Department determines that reducing degradation due to stormwater is cost- effective when compared to other available pollution control options, the Department may institute regulatory mechanisms or modify permit conditions to require control technologies and/or practices that result in protection that is greater than that required Statewide.

(8) Industrial waste discharge sources, confined animal feeding operations, and domestic sewage treatment facilities must meet the following conditions:

(a) No NPDES permits for new industrial or new confined animal feeding operation waste discharges, or new domestic sewage treatment facilities may be issued, except as allowed under sections (3), (4), (5), and (6) of this rule;

(b) The Department may issue WPCF permits for new industrial or confined animal feeding operation waste discharges provided:

(A) There is no waste discharge to surface water; and

(B) All groundwater quality protection requirements of OAR 340-040-0030 are met. Neither the Department nor the Commission may grant a concentration limit variance as provided in OAR 340-040-0030, unless the Commission finds that all appropriate groundwater quality protection requirements and compliance monitoring are met and there will be no measurable change in the water quality of the surface water that would be potentially affected by the proposed facility. For any variance request, a public hearing must be held prior to Commission action on the request.

(c) The Department may issue WPCF permits for new domestic sewage treatment facilities provided there is no waste discharge to surface water and provided:

(A) All groundwater quality protection requirements of OAR 340-040-0030 are met. Neither the Department nor the Commission may grant a concentration limit variance as provided in OAR 340-040-0030, unless the Commission finds that all appropriate groundwater quality protection requirements and compliance monitoring are met and there will be no measurable change in the water quality of the surface water that would be potentially affected by the proposed facility. For any variance request, a public hearing

must be held and the permit application will be evaluated according to paragraphs (B) and (C) of this subsection;

(B) The Commission finds that the proposed new domestic sewage treatment facility provides a preferable means of sewage collection, treatment and disposal as compared to individual on-site sewage disposal systems. To be preferable, the Commission must find that one of the following criteria applies:

(i) The new sewage treatment facility will eliminate a significant number of failing individual on-site sewage disposal systems that cannot be otherwise reliably and cost-effectively repaired; or

(ii) The new sewage treatment facility will treat domestic sewage that would otherwise be treated by individual on-site sewage disposal systems, from which the cumulative impact to groundwater is projected to be greater than that from the new facility; or

(iii) If an individual on-site sewage disposal system, or several such systems, would not normally be utilized, a new sewage treatment facility may be allowed if the Commission finds that the social and economic benefits of the discharge outweigh the possible environmental impacts.

(C) Applicants for domestic wastewater WPCF permits must meet the following requirements:

(i) Application must be for an individual permit; and

(ii) The proposed discharge must not include wastes that incapacitate the treatment system; and

(iii) The facility must be operated or supervised by a certified wastewater treatment plant operator as required in OAR 340-049-0015, except as exempted by ORS 448.430; and

(iv) An annual written certification of proper treatment and disposal system operation must be obtained from a qualified Registered Sanitarian, Professional Engineer, or certified wastewater treatment system operator.

(9) The Environmental Quality Commission may investigate, together with any other affected State agencies, the means of maintaining at least existing minimum flow during the summer low flow period.

~~(10) In order to improve water quality within the Yamhill River subbasin to meet the existing water quality standard for pH, the following special rules for total maximum daily loads, waste load allocations, load allocations and program plans are established:~~

~~(a) After completion of wastewater control facilities and program plans approved by the Commission under this rule and no later than June 30, 1994, no activities may be allowed~~

~~and no wastewater may be discharged to the Yamhill River or its tributaries without the authorization of the Commission that cause the monthly median concentration of total phosphorus to exceed 70 ug/l as measured during the low flow period between approximately May 1 and October 31*** of each year;~~

~~(b) Within 90 days of adoption of these rules, the Cities of McMinnville and Lafayette must submit a program plan and time schedule to the Department describing how and when they will modify their sewerage facility to comply with this rule;~~

~~(c) Final program plans will be reviewed and approved by the Commission. The Commission may define alternative compliance dates as program plans are approved. All proposed final program plans must be subject to public hearing prior to consideration for approval by the Commission;~~

~~(d) The Department will within 60 days of adoption of these rules distribute initial waste load allocations and load allocations to the point and nonpoint sources in the basin. These allocations are considered interim and may be redistributed based upon the conclusions of the approved program plans. ***Precise dates for complying with this rule may be conditioned on physical conditions (i.e., flow, temperature) of the receiving water and may be specified in individual permits or memorandums of understanding issued by the Department. The Department may consider system design flows, river travel times, and other relevant information when establishing the specific conditions to be inserted in the permits or memorandums of understanding.~~

Stat. Auth.: ORS 468.020, 468B.030, 468B.035, 468B.048
Stats. Implemented: ORS 468B.030, 468B.035, 468B.048
Hist.: DEQ 17-2003, f. & cert. ef. 12-9-03

Good morning, my name is Nancy Hatch and I'm a resident of north east Portland, I want to thank the Chair and the Members of Environmental Quality Commission for holding this Public Forum.

Last summer I was riding my bike along the Willamette between, OMSI and the Selwood bridge, and feeling a sense of peace and contentment while watching the river flow by. However, those good feelings quickly came to an end when I started thinking about all the toxic chemicals and heavy metals being legally discharged into the Willamette every day. I began thinking of all the Oregonians who also feel drawn to the Willamette's natural beauty but who are unaware of the existence of toxic mixing zones or at least of their locations.

I believe that it is bad enough that DEQ continues to permit toxic mixing zones, in spite of the Clean Water Act but even worse that there is no way for the general public to know their locations or contents. I believe that Oregonians have the right to know of the existence and location of mixing zones through buoys in the water, signs on shore and maps on DEQ's webstie.

Also, it is imperative the DEQ begins thorough testing/monitoring of water, plants, fish and river sediment within and down stream of TMZ's. Doing so will definitively show the hazards of TMZ's. The DEQ already warns the public about air pollution. Why doesn't DEQ do so for water pollution, particularly point source pollution?

Thank you for your support of increased toxics monitoring. Please fully fund TMZ monitoring and please make sure that public knows where in our rivers chronic levels of toxic pollution exists.

Thank you for your consideration.

KELLY Toneasha

From: LOTTRIDGE Helen [Helen.Lottridge@state.or.us]
Sent: Tuesday, March 06, 2007 11:33 AM
To: KELLY Toneasha
Subject: FW: Portland Ozone Plan
Importance: High

Toneasha, please print this and add it to the record for the February EQC meeting.

Thanks!

Helen

-----Original Message-----
From: COLLIER David
Sent: Thursday, February 22, 2007 3:12 PM
To: LOTTRIDGE Helen
Subject: FW: Portland Ozone Plan
Importance: High

Helen- below is an email chain from Conde Cox who had requested his comments (below) be entered into the record during the public forum portion of today's EQC meeting. He sent it at 10:30 last night. I only saw his email briefly just prior to the meeting and misunderstood his request. I thought he wanted to his comments read as part of the adoption item (which we can't do because the comment period is closed). I don't know if there is an opportunity to distribute Conde's remarks as an FYI to the Commission tomorrow or add it to the record, but I thought I'd bring it to your attention.

d

-----Original Message-----
From: COLLIER David
Sent: Thursday, February 22, 2007 3:01 PM
To: 'Conde Cox'
Subject: RE: Portland Ozone Plan

Sorry Conde. I misunderstood. I'll pass on your email to the Commissions administrator this afternoon.

d

> -----Original Message-----
> **From:** Conde Cox [mailto:condecox@charter.net]
> **Sent:** Thursday, February 22, 2007 2:42 PM
> **To:** COLLIER David
> **Cc:** GINSBURG Andy; FITZGERALD Marianne; dwmonk@oregontoxics.org; 'Gaylene Hurley'; 'Mark Riskedahl'
> **Subject:** RE: Portland Ozone Plan
>
> David—

My stated intention was not to offer these comments prior to the EQC vote on the plans, but rather during the subsequent public general comment period.

Conde

From: COLLIER David [mailto:COLLIER.David@deq.state.or.us]
Sent: Thursday, February 22, 2007 2:31 PM
To: Conde Cox
Cc: GINSBURG Andy; FITZGERALD Marianne; dwmonk@oregontoxics.org; Gaylene Hurley; Mark Riskedahl
Subject: RE: Portland Ozone Plan

Hi Conde. As you know, the comment period for the ozone plans closed some time ago, so I was not able to convey your comments below to the EQC as you requested. However, your comments were covered in our comment summary and department response document, Attachment B to the adoption package. This morning, the Commission did unanimously adopt the Portland and Salem Ozone Plans.

I understand you've been raising your concerns about our public notice process at Andy's environmental round table group. I think that's a good forum to have that conversation. It's always our desire to have our notices be clear and understandable. It's good to get feed back on how we're doing.

Thanks

dc

-----Original Message-----
From: Conde Cox [mailto:condecox@charter.net]
Sent: Wednesday, February 21, 2007 10:25 PM
To: COLLIER David
Cc: GINSBURG Andy; FITZGERALD Marianne; dwmonk@oregontoxics.org; 'Gaylene Hurley'; 'Mark Riskedahl'
Subject: Portland Ozone Plan

David—

I had intended to go to EQC meeting tomorrow, but current road conditions will preclude my attendance; I-5 has in the last hour been closed by ODOT near my home. I do not expect the road conditions to significantly improve, and in fact they may worsen, between now and tomorrow morning.

I ask that you or another staff member please read the following three paragraphs into the record on my behalf at the EQC meeting during the public hearing portion of the proceedings, (or print this out and pass it out to the Commissioners).

Generally, my problem with the report that Andy and Marianne will be presenting tomorrow on the northern Oregon Ozone maintenance plans is that these plans represent the all too common approach taken by the DEQ—an approach that misleads the public. For example the agency states in its report to the EQC on these plans that "an industrial growth allowance can be part of an overall management approach" to a maintenance plan, yet a growth allowance by definition is to accept a defined amount of new pollution from a KNOWN source that will cause a measurable amount of increase in regional ambient conditions! This is contrary to the representations made in the public notice for the proposed plans which states, and I quote: "all strategies for control of emissions will be maintained." The public notice was therefore misleading. Furthermore, a growth allowance for a threatened AQMA for a criteria pollutant reaching in recent years non-attainment levels is generally not in the public interest and generally solely for the private financial gain of one or two corporate entities that are almost always owned and controlled by persons not living in Oregon and certainly

not in the affected AQMAs.

More specifically, I have two points: Point One: your public notice of the proposed plan leads people to believe that all existing strategies will be continued, yet a growth allowance is included in the fine print. When I read the original public notice of the proposed plans several months ago, I just happened to read the fine print on the 500 page plan document itself (which i rarely do with DEQ notices), only to find that the fine print contained something directly contrary to the general representation set forth in the public notice! The notice says that "all strategies and controls will be maintained," and therefore a reasonable person would think that existing levels of pollution would be held to their current levels at worst. In reality, your plan calls for specific increases of up to 5,000 TONS of more industrial VOCs. THEREFORE, Marianne's official Response to Comment 3, that the "DEQ disagrees" with my comment about the misleading nature of the public notice for these plans is not a response at all.

Point Two: Why would I raise this seemingly minor issue on an ozone maintenance plan for a region that does not cover my own AQMA? Because the DEQ has repeatedly, in my AQMA and elsewhere, misled the public; the EQC needs to learn of such DEQ practices and absolutely proscribe them in the future. For example, in the proposed PM10 maintenance plan that was attempted to be rammed down the throats of Southern Oregon, (5,000 written comments in opposition was required to stop such a proposal from making to the EQC), we were told repeatedly in public by the chief Southern Oregon DEQ staff, Mr. John Becker, (in televised and printed public interviews) that the DEQ was "not changing the air quality standards," (John used this precise language a lot), yet the PM proposal from the agency was in reality going to change all the rules and eliminate nearly all of the industrial emission control strategies in place for in this region. For John to state that 'all standards' were not to be changed was to use 'ambient air standard' technical language in a manner that was clearly and perhaps knowingly misleading because the proposal eliminated most control strategies and substituted a very large growth allowance. The same can be said of the public notice for the Portland and Salem ozone maintenance plans, because to represent to the public in a formal notice that there are no proposed changes in control strategies yet to include a significant growth allowance in the fine print is to mislead the public. This practice needs to be stopped.

David, your good faith in dealing with concerned citizens like me can be demonstrated by sharing this statement with the EQC on my behalf, particularly under these circumstances in which the weather (i,e,, I-5 closure) has prevented me from attending the meeting.

Thank you

Conde Cox
Member, Board of Directors, Oregon Toxics Alliance (Eugene)
Member, Steering Committee, Rogue Valley Citizens for Clean Air (Medford)

From: Conde Cox [mailto:condecox@charter.net]
Sent: Wednesday, February 21, 2007 6:59 PM
To: 'COLLIER David'
Subject: RE: [Norton AntiSpam] Portland Ozone Plan

FYI, I intend to attend tomorrow's meeting in Salem; I will be getting in my car at 5 am. See you there.

Conde

From: COLLIER David [mailto:COLLIER.David@deq.state.or.us]
Sent: Wednesday, February 21, 2007 6:04 PM
To: Conde Cox
Subject: [Norton AntiSpam] Portland Ozone Plan

Hi Conde. I hope all is well with you. Since you commented on the Portland Ozone Maintenance Plan I want to let you know that we'll be proposing adoption of the plan at tomorrows EQC meeting in Salem. Below is the link to the Commission's agenda and the ozone plan package. The agency's comment summary and response to comments is Attachment B. Thanks for taking the time to comment.

I hope you're finding Andy's round table discussions interesting.

David Collier

http://www.deq.state.or.us/about/eqc/agendas/2007/200702EQCAgenda.htm

Good morning, my name is Nancy Hatch and I'm a resident of north east Portland, I want to thank the Chair and the Members of Environmental Quality Commission for holding this Public Forum.

Last summer I was riding my bike along the Willamette between, OMSI and the Selwood bridge, and feeling a sense of peace and contentment while watching the river flow by. However, those good feelings quickly came to an end when I started thinking about all the toxic chemicals and heavy metals being legally discharged into the Willamette every day. I began thinking of all the Oregonians who also feel drawn to the Willamette's natural beauty but who are unaware of the existence of toxic mixing zones or at least of their locations.

I believe that it is bad enough that DEQ continues to permit toxic mixing zones, in spite of the Clean Water Act but even worse that there is no way for the general public to know their locations or contents. I believe that Oregonians have the right to know of the existence and location of mixing zones through buoys in the water, signs on shore and maps on DEQ's webstie.

Also, it is imperative the DEQ begins thorough testing/monitoring of water, plants, fish and river sediment within and down stream of TMZ's. Doing so will definitively show the hazards of TMZ's. The DEQ already warns the public about air pollution. Why doesn't DEQ do so for water pollution, particularly point source pollution?

Thank you for your support of increased toxics monitoring. Please fully fund TMZ monitoring and please make sure that public knows where in our rivers chronic levels of toxic pollution exists.

Thank you for your consideration.

Attachment A-2
Revised Tables and Figures

from OAR 340-041

Table 21. Dissolved Oxygen & Intergravel Dissolved Oxygen Criteria

Table 33A. Water Quality Criteria Summary (criteria effective for NPDES permitting)

Table 33B. Water Quality Criteria Summary (criteria not yet effective)

Table 121A. Designated Beneficial Uses, Mainstem Snake River (340-041-0120)

Table 180A. Designated Beneficial Uses, Klamath Basin (340-041-0180)

Table 201A. Designated Beneficial Uses, Malheur River Basin (340-041-0201)

Table 260A. Designated Beneficial Uses, Powder/Burnt Basin (340-041-0260)

Table 340A. Designated Beneficial Uses, Willamette Basin (340-041-0340)

Figure 151A: Fish Use Designations, Grande Ronde Basin, Oregon

Figure 201A: Fish Use Designations, Malheur River Basin, Oregon

Figure 271B: Salmon and Steelhead Spawning Use Designations, Rogue Basin, Oregon

Figure 300A: Fish Use Designations, South Coast Basin, Oregon

Figure 320B: Salmon and Steelhead Spawning Use Designations, Umpqua Basin, Oregon

Figure 340B: Salmon and Steelhead Spawning Use Designations, Willamette Basin, Oregon

TABLE 21
DISSOLVED OXYGEN & INTERGRAVEL DISSOLVED OXYGEN CRITERIA
(Applicable to All Basins)

Class	Concentration and Period[1] (All Units are mg/L)					Use/Level of Protection
	30-D	7- D	7- Mi	Min		
Salmonid Spawning		11.0[2,3]		9.0[3]		Principal use of salmonid spawning and incubation of embryos until emergence from the gravels. Low risk of impairment to cold-water aquatic life, other native fish and invertebrates. ~~The IGDO criteria represents an acute threshold for survival based on field studies.~~
				8.0[4]	6.0[5]	
Cold Water	8.0[6,5]		6.5	6.0		Principally cold-water aquatic life. Salmon, trout, cold-water invertebrates, and other native cold-water species exist throughout all or most of the year. Juvenile anadromous salmonids may rear throughout the year. No measurable risk level for these communities.
Cool Water	6.5		5.0	4.0		Mixed native cool-water aquatic life, such as sculpins, smelt, and lampreys. Waterbodies includes estuaries. Salmonids and other cold-water biota may be present during part or all of the year but do not form a dominant component of the community structure. No measurable risk to cool-water species, slight risk to cold-water species present.
Warm Water	5.5			4.0		Waterbodies whose aquatic life beneficial uses are characterized by introduced, or native, warm-water species.
No Risk	No Change from Background					The only DO criterion that provides no additional risks is "no change from background". Waterbodies accorded this level of protection include marine waters and waters in Wilderness areas.

Note:
Shaded values present the absolute minimum criteria, unless the Department believes adequate data exists to apply the multiple criteria and associated periods.

[1] 30-D = 30-day mean minimum as defined in OAR 340-41-006.
7-D = 7-day mean minimum as defined in OAR 340-41-006.
7-Mi = 7-day minimum mean as defined in OAR 340-41-006.
Min = Absolute minimums for surface samples when applying the averaging period, spatial median of IGDO.

[2] When Intergravel DO levels are 8.0 mg/L or greater, DO levels may be as low as 9.0 mg/L, without triggering a violation.

[3] If conditions of barometric pressure, altitude and temperature preclude achievement of the footnoted criteria, then 95 percent saturation applies.

[4] ~~Intergravel DO action level, spatial median minimum~~. Intergravel DO criterion, spatial median minimum.

[5] ~~Intergravel DO criterion, spatial median minimum~~.

[6-5] If conditions of barometric pressure, altitude, and temperature preclude achievement of 8.0 mg/L, then 90 percent saturation applies.

TABLE 33A

Note: The Environmental Quality Commission adopted the following criteria on May 20, 2004 to become effective February 15, 2005. However, EPA has not yet (as of June 2006) approved the criteria. Thus, Table 33A criteria may be used in NPDES permits, but not for the section 303(d) list of impaired waters.

WATER QUALITY CRITERIA SUMMARY[A]

The concentration for each compound listed in Table 33A is a criterion not to be exceeded in waters of the state in order to protect aquatic life and human health. All values are expressed as micrograms per liter (µg/L) except where noted. Compounds are listed in alphabetical order with the corresponding EPA number (from National Recommended Water Quality Criteria: 2002, EPA-822-R-02-047), the Chemical Abstract Service (CAS) number, aquatic life freshwater acute and chronic criteria, aquatic life saltwater acute and chronic criteria, human health water & organism and organism only criteria, and Drinking Water Maximum Contaminant Level (MCL). The acute criteria refer to the average concentration for one (1) hour and the chronic criteria refer to the average concentration for 96 hours (4 days), and that these criteria should not be exceeded more than once every three (3) years.

EPA No.	Compound			CAS Number	Freshwater				Saltwater				Human Health For Consumption of:				
					Acute (CMC)	Effective Date	Chronic (CCC)	Effective Date	Acute (CMC)	Effective Date	Chronic (CCC)	Effective Date	Water + Organism [B]	Effective	Organism only[B]	Effective	Drinking Water M.C.L.
56	Acenaphthene			83329									670		990		
57	Acenaphthylene			208968													
17	Acrolein			107028									190		290		
18	Acrylonitrile			107131									0.051		0.250		
102	Aldrin			309002	3 O	X			1.3 O	X			0.00004 9		0.00005 0		
1 N	Alkalinity						20,000 P										
2 N	Aluminum (pH 6.5 - 9.0)			7429905													
3 N	Ammonia			7664417					D	X	D	X					
58	Anthracene			120127									8300		40000		
1	Antimony			7440360									5.6		640		
2	Arsenic			7440382									~~0.018 R~~	Z	~~0.14 R~~	Z	0.05mg
15	Asbestos			1332214									~~7.0E+06 fibers/Liter~~	Z			
6 N	Barium			7440393									1000				1.0mg
19	Benzene			71432									~~2.2~~	Z	~~51~~	Z	

TABLE 33A

WATER QUALITY CRITERIA SUMMARY (Continued)

EPA No.	Compound			CAS Number	Freshwater				Saltwater				Human Health For Consumption of:				
					Acute (CMC)	Effective Date	Chronic (CCC)	Effective Date	Acute (CMC)	Effective Date	Chronic (CCC)	Effective Date	Water + Organism [D]	Effective	Organism only[D]	Effective	Drinking Water M.C.L.
59	Benzidine			92875									0.00008 6		0.00020		
60	Benzo(a)Anthracene			56553									0.0038		0.018		
61	Benzo(a)Pyrene			50328									0.0038		0.018		
62	Benzo(b)Fluoranthene			205992									0.0038		0.018		
63	Benzo(g,h,i)Perylene			191242													
64	Benzo(k)Fluoranthene			207089									0.0038		0.018		
3	Beryllium			7440417													
103	BHC alpha-			319846									0.0026		0.0049		
104	BHC beta-			319857									0.0091		0.017		
106	BHC delta-			319868													
105	BHC gamma- (Lindane)			58899	0.95		0.08	X	0.16 O				~~0.98~~	Z	~~1.8~~	Z	0.004mg
7 N	Boron			7440428													
20	Bromoform			75252									4.3		140		
69	Bromophenyl Phenyl Ether 4-																
70	Butylbenzyl Phthalate			85687									1500		1900		
4	Cadmium			7440439													0.010mg
21	Carbon Tetrachloride			56235									0.23		1.6		
107	Chlordane			57749	2.4 O	X	0.0043 O	X	0.09 O	X	0.004 O	X	~~0.00080~~	Z	~~0.00081~~	Z	
8 N	Chloride			1688700 6	860000		230000										
9 N	Chlorine			7782505	19	X	11	X	13	X	7.5	X					
22	Chlorobenzene			108907									130		1600		
23	Chlorodibromomethane			124481									0.40		13		
24	Chloroethane			75003													
65	ChloroethoxyMethane Bis2-			111911													
66	ChloroethylEther Bis2-			111444									0.030		0.53		
25	Chloroethylvinyl Ether 2-			110758													
26	Chloroform			67663									~~5.7~~	Z	~~470~~	Z	
67	ChloroisopropylEther Bis2-			108601									~~1400~~	Z	~~65000~~	Z	

TABLE 33A

WATER QUALITY CRITERIA SUMMARY (Continued)

EPA No.	Compound			CAS Number	Freshwater				Saltwater				Human Health For Consumption of:				
					Acute (CMC)	Effective Date	Chronic (CCC)	Effective Date	Acute (CMC)	Effective Date	Chronic (CCC)	Effective Date	Water + Organism [B]	Effective	Organism only[B]	Effective	Drinking Water M.C.L.
15 N	ChloromethylEther, Bis			542881									~~0.00010~~	Z	0.00029		
71	Chloronaphthalene 2-			91587									1000		1600		
45	Chlorophenol 2-			95578									81		150		
10 N	Chlorophenoxy Herbicide (2,4,5,-TP)			93721									10 H				
11 N	Chlorophenoxy Herbicide (2,4-D)			94757									100 H				
72	Chlorophenyl Phenyl Ether 4-			7005723													
12 N	Chloropyrifos			2921882	0.083	X	0.041	X	0.011	X	0.0056	X					
																	~~0.05mg~~
5a	Chromium (III)													Z		Z	0.05mg
5b	Chromium (VI)			18540299										Z			~~0.05mg~~
73	Chrysene			218019									0.0038		0.018		
6	Copper			7440508									1300 H				
14	Cyanide			57125	22 S	X	5.2 S	X	1 S	X	1 S	X	140		140		
108	DDT 4,4'-			50293	1.1 O,T	X	0.001 O,T	X	0.13 O,T	X	0.001 O,T	X	~~0.00022~~	Z	~~0.00022~~	Z	
109	DDE 4,4'-			72559									0.00022		0.00022		
110	DDD 4,4'-			72548									0.00031		0.00031		
14 N	Demeton			8065483			0.1	X			0.1	X					
74	Dibenzo(a,h)Anthracene			53703									0.0038		0.018		
75	Dichlorobenzene 1,2-			95501									420		1300		
76	Dichlorobenzene 1,3-			541731									320		960		
77	Dichlorobenzene 1,4-			106467									63		190		
78	Dichlorobenzidine 3,3'-			91941									0.021		0.028		
27	Dichlorobromomethane			75274									0.55		17		
28	Dichloroethane 1,1-			75343													

TABLE 33A

WATER QUALITY CRITERIA SUMMARY (Continued)

EPA No.	Compound			CAS Number	Freshwater				Saltwater				Human Health For Consumption of:				
					Acute (CMC)	Effective Date	Chronic (CCC)	Effective Date	Acute (CMC)	Effective Date	Chronic (CCC)	Effective Date	Water + Organism [B]	Effective	Organism only[B]	Effective	Drinking Water M.C.L.
29	Dichloroethane 1,2-			107062									0.38		37		
30	Dichloroethylene 1,1-			75354									330		7100		
46	Dichlorophenol 2,4-			120832									77		290		
31	Dichloropropane 1,2-			78875									0.50		15		
32	Dichloropropene 1,3-			542756									0.34		21		
111	Dieldrin			60571	0.24				0.71 O	X	0.0019 O	X	0.00005 2		0.00005 4		
79	DiethylPhthalate			84662									17000		44000		
47	Dimethylphenol 2,4-			105679									380		850		
80	DimethylPhthalate			131113									270000		1100000		
81	Di-n-Butyl Phthalate			84742									2000		4500		
49	Dinitrophenol 2,4-			51285									69		5300		
27 N	Dinitrophenols			2555058 7									69		5300		
82	Dinitrotoluene 2,4-			121142									0.11		3.4		
83	Dinitrotoluene 2,6-			606202													
84	Di-n-Octyl Phthalate			117840													
16	Dioxin (2,3,7,8-TCDD)			1746016									5.0E-09		5.1E-09		
85	Diphenylhydrazine 1,2-			122667									0.036		0.20		
68	EthylhexylPhthalate Bis2-			117817									1.2		2.2		
	Endosulfan				0.22 I,P	X	0.056 I,P	X	0.034 I,P	X	0.0087 I,P	X	62 I		89 I		
112	Endosulfan alpha-			959988	0.22 O		0.056 O		0.034 O		0.0087 O		62		89		
113	Endosulfan beta-			3321365 9	0.22 O		0.056 O		0.034 O		0.0087 O		62		89		
114	Endosulfan Sulfate			1031078									62		89		
115	Endrin			72208	0.086				0.037 O		0.0023 O		0.059		0.060		0.0002mg
116	Endrin Aldehyde			7421934									0.29		0.30		

TABLE 33A

WATER QUALITY CRITERIA SUMMARY (Continued)

EPA No.	Compound			CAS Number	Freshwater				Saltwater				Human Health For Consumption of:				
					Acute (CMC)	Effective Date	Chronic (CCC)	Effective Date	Acute (CMC)	Effective Date	Chronic (CCC)	Effective Date	Water + Organism [B]	Effective	Organism only[B]	Effective	Drinking Water M.C.L.
33	Ethylbenzene			100414									530		2100		
86	Fluoranthene			206440									~~130~~	Z	~~140~~	Z	
87	Fluorene			86737									1100		5300		
17 N	Guthion			86500			0.01	X			0.01	X					
117	Heptachlor			76448	0.52 O	X	0.0038 O	X	0.053 O	X	0.0036 O	X	0.00007 9		0.00007 9		
118	Heptachlor Epoxide			1024573	0.52 O		0.0038 O		0.053 O		0.0036 O		0.00003 9		0.00003 9		
88	Hexachlorobenzene			118741									0.00028		0.00029		
89	Hexachlorobutadiene			87683									0.44		18		
91	Hexachloroethane			67721									1.4		3.3		
																	~~0.004~~mg
19 N	Hexachlorocyclo-hexane-Technical			319868									0.0123 J		0.0414 J		
90	Hexachlorocyclopentadiene			77474									40		1100		
92	Ideno1,2,3-(cd)Pyrene			193395									0.0038		0.018		
20 N	Iron			7439896			1,000	X					~~300 K~~	Z			
93	Isophorone			78591									35		960		
7	Lead			7439921										Z			0.05mg
21 N	Malathion			121755			0.1	X			0.1	X					
22 N	Manganese			7439965									~~50 K~~	Z	~~100 K~~	Z	
8a	Mercury			7439976	2.4	X	0.012	X	2.1	X	0.025	X		Z		Z	0.002mg
23 N	Methoxychlor			72435			0.03	X			0.03	X	100 J				0.1mg
34	Methyl Bromide			74839									47		1500		

TABLE 33A

WATER QUALITY CRITERIA SUMMARY (Continued)

EPA No.	Compound			CAS Number	Freshwater				Saltwater				Human Health For Consumption of:				
					Acute (CMC)	Effective Date	Chronic (CCC)	Effective Date	Acute (CMC)	Effective Date	Chronic (CCC)	Effective Date	Water + Organism [B]	Effective	Organism only[B]	Effective	Drinking Water M.C.L.
35	Methyl Chloride			74873													
48	Methyl-4,6-Dinitrophenol 2-			534521									13		280		
52	Methyl-4-Chlorophenol 3-			59507													
36	Methylene Chloride			75092									4.6		590		
8b	Methylmercury			22967926											300ug/kg L		
24N	Mirex			2385855			0.001	X			0.001	X					
94	Naphthalene			91203													
9	Nickel			7440020									~~610~~	Z	~~4600~~	Z	
25N	Nitrates			14797558									10000 J				10mg
95	Nitrobenzene			98953									17		690		
50	Nitrophenol 2-			88755													
51	Nitrophenol 4-			100027													
26N	Nitrosamines			35576911									0.0008 J		1.24 J		
28N	Nitrosodibutylamine,N			924163									0.0063		0.22		
29N	Nitrosodiethylamine,N			55185									0.0008 J		1.24 J		
96	N-Nitrosodimethylamine			62759									0.00069		3.0		
98	N-Nitrosodiphenylamine			86306									3.3		6.0		
30N	Nitrosopyrrolidine,N			930552									0.016		34		
97	N-Nitrosodi-n-Propylamine			621647									0.0050		0.51		
32N	Oxygen, Dissolved			7782447													
33N	Parathion			56382	0.065	X	0.013	X									
119	Polychlorinated Biphenyls PCBs:			1336363	2 U	X	0.014 U	X	10 U	X	0.03 U	X	0.000064 U		0.000064 U		

TABLE 33A

WATER QUALITY CRITERIA SUMMARY (Continued)

EPA No.	Compound			CAS Number	Freshwater				Saltwater				Human Health For Consumption of:				
					Acute (CMC)	Effective Date	Chronic (CCC)	Effective Date	Acute (CMC)	Effective Date	Chronic (CCC)	Effective Date	Water + Organism [B]	Effective	Organism only[B]	Effective	Drinking Water M.C.L.
34 N	Pentachlorobenzene			608935									1.4		1.5		
53	Pentachlorophenol			87865	M				13		7.9		0.27		3.0		
99	Phenanthrene			85018													
54	Phenol			108952									~~21000~~	Z	1700000		
36 N	Phosphorus Elemental			7723140							0.1						
100	Pyrene			129000									830		4000		
10	Selenium			7782492									~~170~~	Z	4200		0.01mg
11	Silver			7440224										Z			0.05mg
40 N	Sulfide-Hydrogen Sulfide			7783064			2	X			2	X					
43 N	Tetrachlorobenzene,1,2,4,5			95943									0.97		1.1		
37	Tetrachloroethane 1,1,2,2-			79345									0.17		4.0		
38	Tetrachloroethylene			127184									0.69		3.3		
12	Thallium			7440280									0.24		0.47		
39	Toluene			108883									1300		15000		
120	Toxaphene			8001352	0.73	X	0.0002	X	0.21	X	0.0002	X	0.00028		0.00028		0.005mg
40	Trans-Dichloroethylene 1,2-			156605									140		10000		
44 N	Tributyltin (TBT)			688733													
101	Trichlorobenzene 1,2,4-			120821									35		70		
41	Trichloroethane 1,1,1-			71556										Z		Z	
42	Trichloroethane 1,1,2-			79005									0.59		16		
43	Trichloroethylene			79016									2.5		30		
45 N	Trichlorophenol 2,4,5			95954									1800		3600		
55	Trichlorophenol 2,4,6-			88062									~~1.4~~	Z	2.4		

TABLE 33A

WATER QUALITY CRITERIA SUMMARY (Continued)

EPA No.	Compound			CAS Number	Freshwater				Saltwater				Human Health For Consumption of:				
					Acute (CMC)	Effective Date	Chronic (CCC)	Effective Date	Acute (CMC)	Effective Date	Chronic (CCC)	Effective Date	Water + Organism [B]	Effective	Organism only[B]	Effective	Drinking Water M.C.L.
44	Vinyl Chloride			75014									0.025		2.4		
13	Zinc			7440666									7400		26000		

Footnotes for Tables 33A and 33B:

A Values in Table 20 are applicable to all basins.

B Human Health criteria values were calculated using a fish consumption rate of 17.5 grams per day (0.6 ounces/day) unless otherwise noted.

C Ammonia criteria for freshwater may depend on pH, temperature, and the presence of salmonids or other fish with ammonia-sensitive early life stages. Values for freshwater criteria (of total ammonia nitrogen in mg N/L) can be calculated using the formulae specified in *1999 Update of Ambient Water Quality Criteria for Ammonia* (EPA-822-R-99-014; http://www.epa.gov/ost/standards/ammonia/99update.pdf):

Freshwater Acute:

$$\text{salmonids present....CMC} = \frac{0.275}{1+10^{7.204-pH}} + \frac{39.0}{1+10^{pH-7.204}}$$

$$\text{salmonids not present...CMC} = \frac{0.411}{1+10^{7.204-pH}} + \frac{58.4}{1+10^{pH-7.204}}$$

Freshwater Chronic:

fish early life stages present

$$CCC = \left(\frac{0.0577}{1+10^{7.688-pH}} + \frac{2.487}{1+10^{pH-7.688}} \right) * MIN(2.85, 1.45*10^{0.028*(25-T)})$$

fish early life stages not present

$$CCC = \left(\frac{0.0577}{1+10^{7.688-pH}} + \frac{2.487}{1+10^{pH-7.688}} \right) * 1.45*10^{0.028*(25-MAX(T,7))}$$

Note: these chronic criteria formulae would be applied to calculate the 30-day average concentration limit; in addition, the highest 4-day average within the 30-day period should not exceed 2.5 times the CCC.

WATER QUALITY CRITERIA SUMMARY (Continued)

D Ammonia criteria for saltwater may depend on pH and temperature. Values for saltwater criteria (total ammonia) can be calculated from the tables specified in *Ambient Water Quality Criteria for Ammonia (Saltwater)--1989* (EPA 440/5-88-004; http://www.epa.gov/ost/pc/ambientwqc/ammoniasalt1989.pdf).

E Freshwater and saltwater criteria for metals are expressed in terms of "dissolved" concentrations in the water column, except where otherwise noted (e.g. aluminum).

F The freshwater criterion for this metal is expressed as a function of hardness (mg/L) in the water column. Criteria values for hardness may be calculated from the following formulae (CMC refers to Acute Criteria; CCC refers to Chronic Criteria):

$$CMC = (\exp(m_A*[\ln(\text{hardness})] + b_A))*CF$$

$$CCC = (\exp(m_C*[\ln(\text{hardness})] + b_C))*CF$$

where CF is the conversion factor used for converting a metal criterion expressed as the total recoverable fraction in the water column to a criterion expressed as the dissolved fraction in the water column.

Chemical	m_A	b_A	m_C	b_C
Cadmium	1.0166	-3.924	0.7409	-4.719
Chromium III	0.8190	3.7256	0.8190	0.6848
Copper	0.9422	-1.700	0.8545	-1.702
Lead	1.273	-1.460	1.273	-4.705
Nickel	0.8460	2.255	0.8460	0.0584
Silver	1.72	-6.59		
Zinc	0.8473	0.884	0.8473	0.884

Conversion factors (CF) for dissolved metals (the values for total recoverable metals criteria were multiplied by the appropriate conversion factors shown below to calculate the dissolved metals criteria):

TABLE 33A

WATER QUALITY CRITERIA SUMMARY (Continued)

Chemical	Freshwater		Saltwater	
	Acute	Chronic	Acute	Chronic
Arsenic	1.000	1.000	1.000	1.000
Cadmium	1.136672-[(ln hardness)(0.041838)]	1.101672-[(ln hardness)(0.041838)]	0.994	0.994
Chromium III	0.316	0.860	--	--
Chromium VI	0.982	0.962	0.993	0.993
Copper	0.960	0.960	0.83	0.83
Lead	1.46203-[(ln hardness)(0:145712)]	1.46203-[(ln hardness)(0.145712)]	0.951	0.951
Nickel	0.998	0.997	0.990	0.990
Selenium	0.996	0.922	0.998	0.998
Silver	0.85	0.85	0.85	--
Zinc	0.978	0.986	0.946	0.946

G Human Health criterion is the same as originally published in the 1976 EPA Red Book (Quality Criteria for Water, EPA-440/9-76-023) which predates the 1980 methodology and did not use the fish ingestion BCF approach.

H This value is based on a Drinking Water regulation.

I This value is based on criterion published in Ambient Water Quality Criteria for Endosulfan (EPA 440/5-80-046) and should be applied as the sum of alpha- and beta-endosulfan.

J No BCF was available; therefore, this value is based on that published in the 1986 EPA Gold Book.

K Human Health criterion is for "dissolved" concentration based on the 1976 EPA Red Book conclusion that adverse effects from exposure at this level are aesthetic rather than toxic.

L This value is expressed as the fish tissue concentration of methylmercury.

M Freshwater aquatic life values for pentachlorophenol are expressed as a function of pH, and are calculated as follows: CMC=(exp(1.005(pH)-4.869); CCC=exp(1.005(pH)-5.134).

N This number was assigned to the list of non-priority pollutants in National Recommended Water Quality Criteria: 2002 (EPA-822-R-02-047).

O This criterion is based on EPA recommendations issued in 1980 that were derived using guidelines that differed from EPA's 1985 Guidelines for minimum data requirements and derivation procedures. For example, a "CMC" derived using the 1980 Guidelines was derived to be used as an instantaneous maximum. If assessment is to be done using an averaging period, the values given should be divided by 2 to obtain a value that is more comparable to a CMC derived using the 1985 Guidelines.

P Criterion shown is the minimum (i.e. CCC in water should not be below this value in order to protect aquatic life).

Q Criterion is applied as total arsenic (i.e. arsenic (III) + arsenic (V)).

TABLE 33A

WATER QUALITY CRITERIA SUMMARY (Continued)

R Arsenic criterion refers to the inorganic form only.
S This criterion is expressed as µg free cyanide (CN)/L.
T This criterion applies to DDT and its metabolites (i.e. the total concentration of DDT and its metabolites should not exceed this value).
U This criterion applies to total PCBs (e.g. the sum of all congener or all isomer or homolog or Arochlor analyses).
V The CMC=1/[(f1/CMC1)+(f2/CMC2)] where f1 and f2 are the fractions of total selenium that are treated as selenite and selenate, respectively, and CMC1 and CMC2 are 185.9 µg/L and 12.82 µg/L, respectively.
W The acute and chronic criteria for aluminum are 750 µg/L and 87 µg/L, respectively. These values for aluminum are expressed in terms of "total recoverable" concentration of metal in the water column. The criterion applies at pH<6.6 and hardness<12 mg/L (as $CaCO_3$).
X The effective date for the criterion in the column immediately to the left is 1991.
Y No criterion.
Z A more stringent criterion exists in Table 20 and must be used until EPA approves the Table 33B criteria values.

TABLE 33B

Note: The Environmental Quality Commission adopted the following criteria on May 20, 2004 to become effective on EPA approval. EPA has not yet (as of June 2006) approved these criteria. The Table 33B criteria may not be used until they are approved by EPA.

WATER QUALITY CRITERIA SUMMARY[A]

The concentration for each compound listed in Table 33A is a criterion not to be exceeded in waters of the state in order to protect aquatic life and human health. All values are expressed as micrograms per liter (µg/L) except where noted. Compounds are listed in alphabetical order with the corresponding EPA number (from National Recommended Water Quality Criteria: 2002, EPA-822-R-02-047), the Chemical Abstract Service (CAS) number, aquatic life freshwater acute and chronic criteria, aquatic life saltwater acute and chronic criteria, human health water & organism and organism only criteria, and Drinking Water Maximum Contaminant Level (MCL). The acute criteria refer to the average concentration for one (1) hour and the chronic criteria refer to the average concentration for 96 hours (4 days), and that these criteria should not be exceeded more than once every three (3) years.

EPA No.	Compound			CAS Number	Freshwater				Saltwater				Human Health For Consumption of:				
					Acute (CMC)	Effective Date	Chronic (CCC)	Effective Date	Acute (CMC)	Effective Date	Chronic (CCC)	Effective Date	Water + Organism [B]	Effective	Organism only[B]	Effective	
2 N	Aluminum (pH 6.5 - 9.0)			7429905	W		W										
3 N	Ammonia			7664417	C		C										
2	Arsenic			7440382									0.018 R		0.14 R		
15	Asbestos			1332214									7.0E+06 fibers/Liter				
19	Benzene			71432									2.2		51		
3	Beryllium			7440417									Y		Y		
105	BHC gamma- (Lindane)			58899									0.98		1.8		
4	Cadmium			7440439	E,F		E,F		40 E		8.8 E		Y				
107	Chlordane			57749									0.00080		0.00081		
	CHLORINATED BENZENES												Y		Y		
26	Chloroform			67663									5.7		470		
67	ChloroisopropylEther Bis2-			108601									1400		65000		
15 N	ChloromethylEther, Bis			542881									0.00010				
5a	Chromium (III)				E,F		E,F						Y				
5b	Chromium (VI)			18540299	16 E		11 E						Y		Y		
6	Copper			7440508	E,F		E,F		4.8 E		3.1 E						
108	DDT 4,4'-			50293									0.00022		0.00022		
	DIBUTYLPHTHALATE												Y		Y		
	DICHLOROBENZENES												Y		Y		
	DICHLOROBENZIDINE												Y		Y		

TABLE 33B

WATER QUALITY CRITERIA SUMMARY (Continued)

EPA No.	Compound			CAS Number	Freshwater				Saltwater				Human Health For Consumption of:				
					Acute (CMC)	Effective Date	Chronic (CCC)	Effective Date	Acute (CMC)	Effective Date	Chronic (CCC)	Effective Date	Water + Organism [B]	Effective	Organism only[B]	Effective	
	DICHLOROETHYLENES												Y		Y		
	DICHLOROPROPENE												Y		Y		
111	Dieldrin			60571			0.056										
	DINITROTOLUENE												Y		Y		
	DIPHENYLHYDRAZINE												Y		Y		
115	Endrin			72208			0.036										
86	Fluoranthene			206440									130		140		
	HALOMETHANES												Y		Y		
20 N	Iron			7439896									300 K				
7	Lead			7439921	E,F		E,F		210 E		8.1 E		Y				
22 N	Manganese			7439965									50 K		100 K		
8a	Mercury			7439976									Y		Y		
	MONOCHLOROBENZENE												Y		Y		
9	Nickel			7440020	E,F		E,F		74 E		8.2 E		610		4600		
53	Pentachlorophenol			87865			M										
54	Phenol			108952									21000				
	POLYNUCLEAR AROMATIC HYRDOCARBONS												Y		Y		
10	Selenium			7782492	E,V		5 E		290 E		71 E		170				
11	Silver			7440224	E,F,P		0.10 E		1.9 E,P				Y				
44 N	Tributyltin (TBT)			688733	0.46		0.063		0.37		0.01						
41	Trichloroethane 1,1,1-			71556									Y		Y		
55	Trichlorophenol 2,4,6-			88062									1.4				
13	Zinc			7440666	E,F		E,F		90 E		81 E						

Footnotes for Tables 33A and 33B:

A Values in Table 20 are applicable to all basins.

B Human Health criteria values were calculated using a fish consumption rate of 17.5 grams per day (0.6 ounces/day) unless otherwise noted.

C Ammonia criteria for freshwater may depend on pH, temperature, and the presence of salmonids or other fish with ammonia-sensitive early life stages. Values for freshwater criteria (of total ammonia nitrogen in mg N/L) can be calculated using the formulae specified in *1999 Update of Ambient Water Quality Criteria for Ammonia* (EPA-822-R-99-014; http://www.epa.gov/ost/standards/ammonia/99update.pdf):

WATER QUALITY CRITERIA SUMMARY (Continued)

Freshwater Acute:

salmonids present....CMC = $\frac{0.275}{1+10^{7.204-pH}} + \frac{39.0}{1+10^{pH-7.204}}$

salmonids not present...CMC= $\frac{0.411}{1+10^{7.204-pH}} + \frac{58.4}{1+10^{pH-7.204}}$

Freshwater Chronic:

fish early life stages present

$$CCC = \left(\frac{0.0577}{1+10^{7.688-pH}} + \frac{2.487}{1+10^{pH-7.688}}\right) * MIN(2.85, 1.45*10^{0.028*(25-T)})$$

fish early life stages not present

$$CCC = \left(\frac{0.0577}{1+10^{7.688-pH}} + \frac{2.487}{1+10^{pH-7.688}}\right) * 1.45*10^{0.028*(25-MAX(T,7))}$$

Note: these chronic criteria formulae would be applied to calculate the 30-day average concentration limit; in addition, the highest 4-day average within the 30-day period should not exceed 2.5 times the CCC.

D Ammonia criteria for saltwater may depend on pH and temperature. Values for saltwater criteria (total ammonia) can be calculated from the tables specified in *Ambient Water Quality Criteria for Ammonia (Saltwater)--1989* (EPA 440/5-88-004; http://www.epa.gov/ost/pc/ambientwqc/ammoniasalt1989.pdf).

E Freshwater and saltwater criteria for metals are expressed in terms of "dissolved" concentrations in the water column, except where otherwise noted (e.g. aluminum).

F The freshwater criterion for this metal is expressed as a function of hardness (mg/L) in the water column. Criteria values for hardness may be calculated from the following formulae (CMC refers to Acute Criteria; CCC refers to Chronic Criteria):

$$CMC = (\exp(m_A*[\ln(\text{hardness})] + b_A))*CF$$

$$CCC = (\exp(m_C*[\ln(\text{hardness})] + b_C))*CF$$

where CF is the conversion factor used for converting a metal criterion expressed as the total recoverable fraction in the water column to a criterion expressed as the dissolved fraction in the water column.

TABLE 33B

WATER QUALITY CRITERIA SUMMARY (Continued)

Chemical	m_A	b_A	m_C	b_C
Cadmium	1.0166	-3.924	0.7409	-4.719
Chromium III	0.8190	3.7256	0.8190	0.6848
Copper	0.9422	-1.700	0.8545	-1.702
Lead	1.273	-1.460	1.273	-4.705
Nickel	0.8460	2.255	0.8460	0.0584
Silver	1.72	-6.59		
Zinc	0.8473	0.884	0.8473	0.884

Conversion factors (CF) for dissolved metals (the values for total recoverable metals criteria were multiplied by the appropriate conversion factors shown below to calculate the dissolved metals criteria):

Chemical	Freshwater		Saltwater	
	Acute	Chronic	Acute	Chronic
Arsenic	1.000	1.000	1.000	1.000
Cadmium	1.136672-[(ln hardness)(0.041838)]	1.101672-[(ln hardness)(0.041838)]	0.994	0.994
Chromium III	0.316	0.860	--	--
Chromium VI	0.982	0.962	0.993	0.993
Copper	0.960	0.960	0.83	0.83
Lead	1.46203-[(ln hardness)(0.145712)]	1.46203-[(ln hardness)(0.145712)]	0.951	0.951
Nickel	0.998	0.997	0.990	0.990
Selenium	0.996	0.922	0.998	0.998
Silver	0.85	0.85	0.85	--
Zinc	0.978	0.986	0.946	0.946

G Human Health criterion is the same as originally published in the 1976 EPA Red Book (Quality Criteria for Water, EPA-440/9-76-023) which predates the 1980 methodology and did not use the fish ingestion BCF approach.

H This value is based on a Drinking Water regulation.

I This value is based on criterion published in Ambient Water Quality Criteria for Endosulfan (EPA 440/5-80-046) and should be applied as the sum of alpha- and beta-endosulfan.

J No BCF was available; therefore, this value is based on that published in the 1986 EPA Gold Book.

K Human Health criterion is for "dissolved" concentration based on the 1976 EPA Red Book conclusion that adverse effects from exposure at this level are aesthetic rather than toxic.

WATER QUALITY CRITERIA SUMMARY (Continued)

L This value is expressed as the fish tissue concentration of methylmercury.

M Freshwater aquatic life values for pentachlorophenol are expressed as a function of pH, and are calculated as follows: CMC=(exp(1.005(pH)-4.869); CCC=exp(1.005(pH)-5.134).

N This number was assigned to the list of non-priority pollutants in National Recommended Water Quality Criteria: 2002 (EPA-822-R-02-047).

O This criterion is based on EPA recommendations issued in 1980 that were derived using guidelines that differed from EPA's 1985 Guidelines for minimum data requirements and derivation procedures. For example, a "CMC" derived using the 1980 Guidelines was derived to be used as an instantaneous maximum. If assessment is to be done using an averaging period, the values given should be divided by 2 to obtain a value that is more comparable to a CMC derived using the 1985 Guidelines.

P Criterion shown is the minimum (i.e. CCC in water should not be below this value in order to protect aquatic life).

Q Criterion is applied as total arsenic (i.e. arsenic (III) + arsenic (V)).

R Arsenic criterion refers to the inorganic form only.

S This criterion is expressed as µg free cyanide (CN)/L.

T This criterion applies to DDT and its metabolites (i.e. the total concentration of DDT and its metabolites should not exceed this value).

U This criterion applies to total PCBs (e.g. the sum of all congener or all isomer or homolog or Arochlor analyses).

V The CMC=1/[(f1/CMC1)+(f2/CMC2)] where f1 and f2 are the fractions of total selenium that are treated as selenite and selenate, respectively, and CMC1 and CMC2 are 185.9 µg/L and 12.82 µg/L, respectively.

W The acute and chronic criteria for aluminum are 750 µg/L and 87 µg/L, respectively. These values for aluminum are expressed in terms of "total recoverable" concentration of metal in the water column. The criterion applies at pH<6.6 and hardness<12 mg/L (as $CaCO_3$).

X The effective date for the criterion in the column immediately to the left is 1991.

Y No criterion.

Z A more stringent criterion exists in Table 20 and must be used until EPA approves the Table 33B criteria values.

Table 121A

Designated Beneficial Uses
Mainstem Snake River
(340-41-0120)

Beneficial Uses	Snake River RM 176 to 409
Public Domestic Water Supply[1]	X
Private Domestic Water Supply[1]	X
Industrial Water Supply	X
Irrigation	X
Livestock Watering	X
Fish & Aquatic Life[2]	X
Wildlife & Hunting	X
Fishing	X
Boating	X
Water Contact Recreation	X
Aesthetic Quality	X
Hydro Power	X
Commercial Navigation & Transportation	X

[1] With adequate pretreatment and natural quality that meets drinking water standards.

[2] See also Table ~~102~~121B for fish use designations for this river.

Table produced ~~November, 2003~~February, 2007

~~Table 180A~~

Designated Beneficial Uses
Klamath Basin
(340-41-0180)

Beneficial Uses	Klamath River from Klamath Lake to Keno Dam (RM 255 to 232.5)	Lost River (Rm 5 to 65) & Lost River Diversion Channel	All Other Basin Waters
Public Domestic Water Supply[1]	X	X	X
Private Domestic Water Supply[1]	X	X	X
Industrial Water Supply	X	X	X
Irrigation	X	X	X
Livestock Watering	X	X	X
Fish & Aquatic Life[2]	X	X	X
Wildlife & Hunting	X	X	X
Fishing	X	X	X
Boating	X	X	X
Water Contact Recreation	X	X	X
Aesthetic Quality	X	X	X
Hydro Power	X		
Commercial Navigation & Transportation	X		

[1] With adequate pretreatment (filtration & disinfection) and natural quality to meet drinking water standards.

[2] See also ~~Table~~ Figure 180~~B~~A for fish use designations for this basin.

Table produced ~~November, 2003~~February, 2007

Table 201A

Designated Beneficial Uses
Malheur River Basin
(340-41-0201)

Beneficial Uses	Malheur River (Namorf to Mouth) Willow Creek (Brogan to Mouth) Bully Creek (Reservoir to Mouth)	Willow Creek (Malheur Reservoir to Brogan) Malheur River (Beulah Dam & Warm Springs Dams to Namorf)	Reservoirs Malheur Bully Creek Beulah Warm Springs	Malheur River & Tributaries Upstream from Reservoirs
Public Domestic Water Supply[1]	X	X	X	X
Private Domestic Water Supply[1]	X	X	X	X
Industrial Water Supply	X	X	X	X
Irrigation	X	X	X	X
Livestock Watering	X	X	X	X
Fish & Aquatic Life[2]	X	X	X	X
Wildlife & Hunting	X	X	X	X
Fishing	X	X	X	X
Boating	X	X	X	X
Water Contact Recreation	X	X	X	X
Aesthetic Quality	X	X	X	X
Hydro Power				
Commercial Navigation & Transportation				

[1] With adequate pretreatment (filtration & disinfection) and natural quality to meet drinking water standards.

[2] See also ~~Table~~ Figure 201~~B~~A for fish use designations for this basin.

Table produced ~~November, 2003~~February, 2007

Table 260A

Designated Beneficial Uses
Powder/Burnt Basin
(340-41-0260)

Beneficial Uses	All Basin Waters
Public Domestic Water Supply[1]	X
Private Domestic Water Supply[1]	X
Industrial Water Supply	X
Irrigation	X
Livestock Watering	X
Fish & Aquatic Life[2]	X
Wildlife & Hunting	X
Fishing	X
Boating	X
Water Contact Recreation	X
Aesthetic Quality	X
Hydro Power	
Commercial Navigation & Transportation	

[1] With adequate pretreatment (filtration & disinfection) and natural quality to meet drinking water standards.

[2] See also ~~Table~~ Figure 260~~B~~A for fish use designations for this basin.

Table produced ~~November, 2003~~February, 2007

Table 340A

Designated Beneficial Uses
Willamette Basin
(340-041-0340)

Beneficial Uses	Willamette River Tributaries						Main Stem Willamette River			
	Clackamas River	Molalla River	Santiam River	McKenzie River	Tualatin River	All Other Streams & Tributaries	Mouth to Willamette Falls, Including Multnomah Channel	Willamette Falls to Newberg	Newberg to Salem	Salem to Coast Fork
Public Domestic Water Supply[1]	X	X	X	X	X	X	X	X	X	X
Private Domestic Water Supply[1]	X	X	X	X	X	X	X	X	X	X
Industrial Water Supply	X	X	X	X	X	X	X	X	X	X
Irrigation	X	X	X	X	X	X	X	X	X	X
Livestock Watering	X	X	X	X	X	X	X	X	X	X
Fish & Aquatic Life[2]	X	X	X	X	X	X	X	X	X	X
Wildlife & Hunting	X	X	X	X	X	X	X	X	X	X
Fishing	X	X	X	X	X	X	X	X	X	X
Boating	X	X	X	X	X	X	X	X	X	X
Water Contact Recreation	X	X	X	X	X	X	X[3]	X[3]	X	X
Aesthetic Quality	X	X	X	X	X	X	X	X	X	X
Hydro Power	X	X	X	X	X	X	X	X		
Commercial Navigation & Transportation							X	X	X	

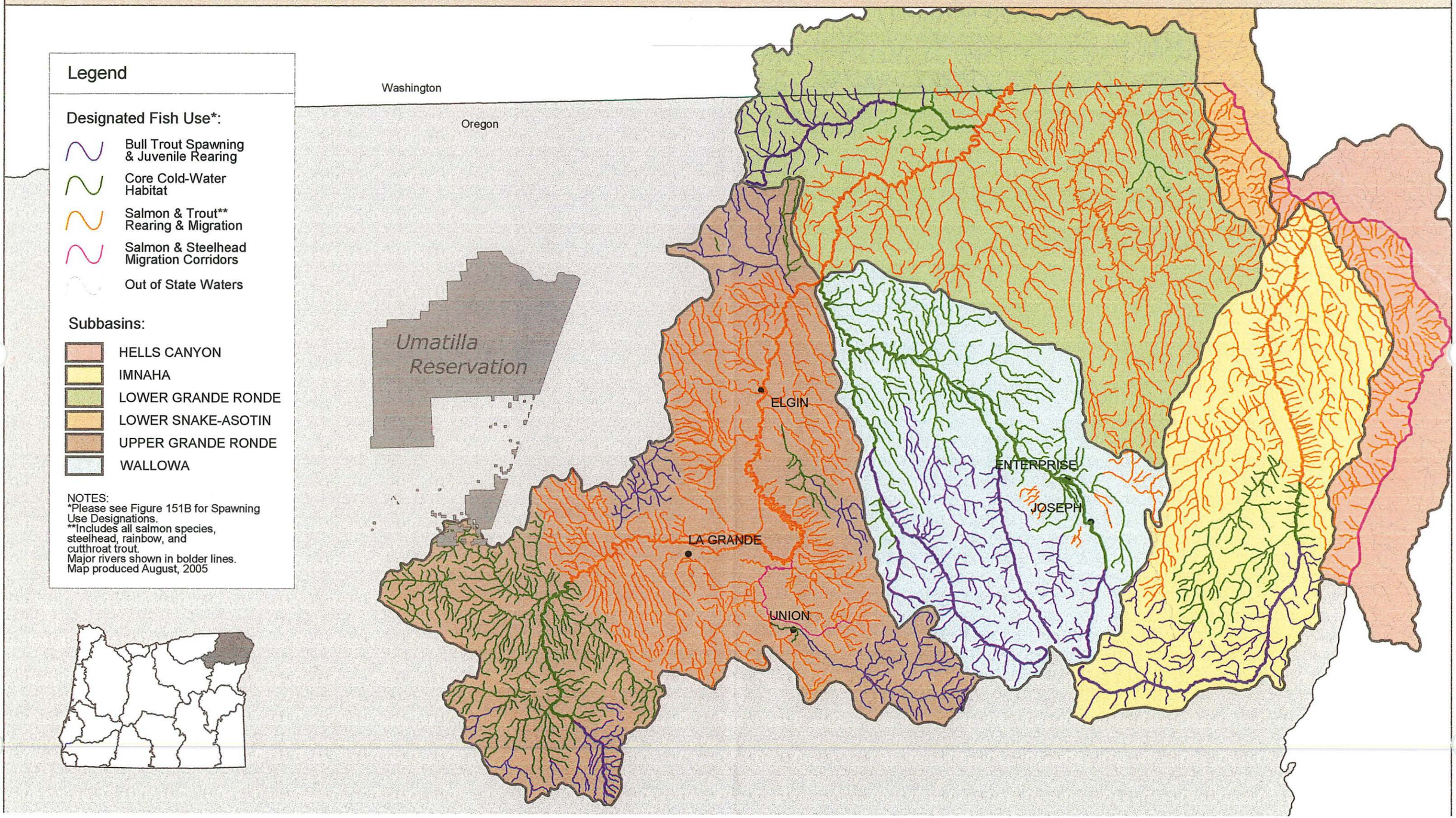
[1] With adequate pretreatment and natural quality that meets drinking water standards.

[2] See also Figures 340A and 340B for fish use designations for this basin.

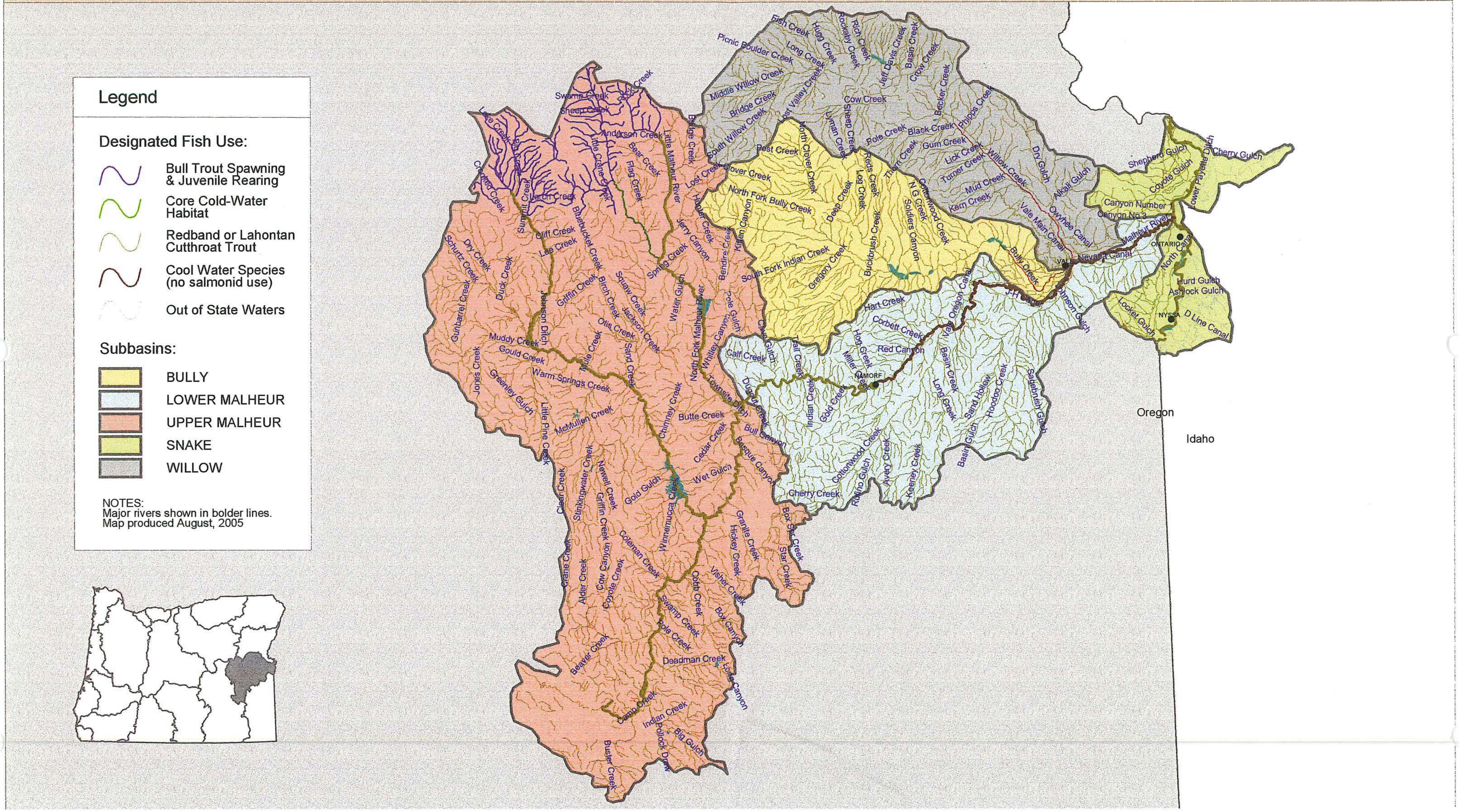
[3] Not to conflict with commercial activities in Portland Harbor.

Table produced ~~November, 2003~~February, 2007

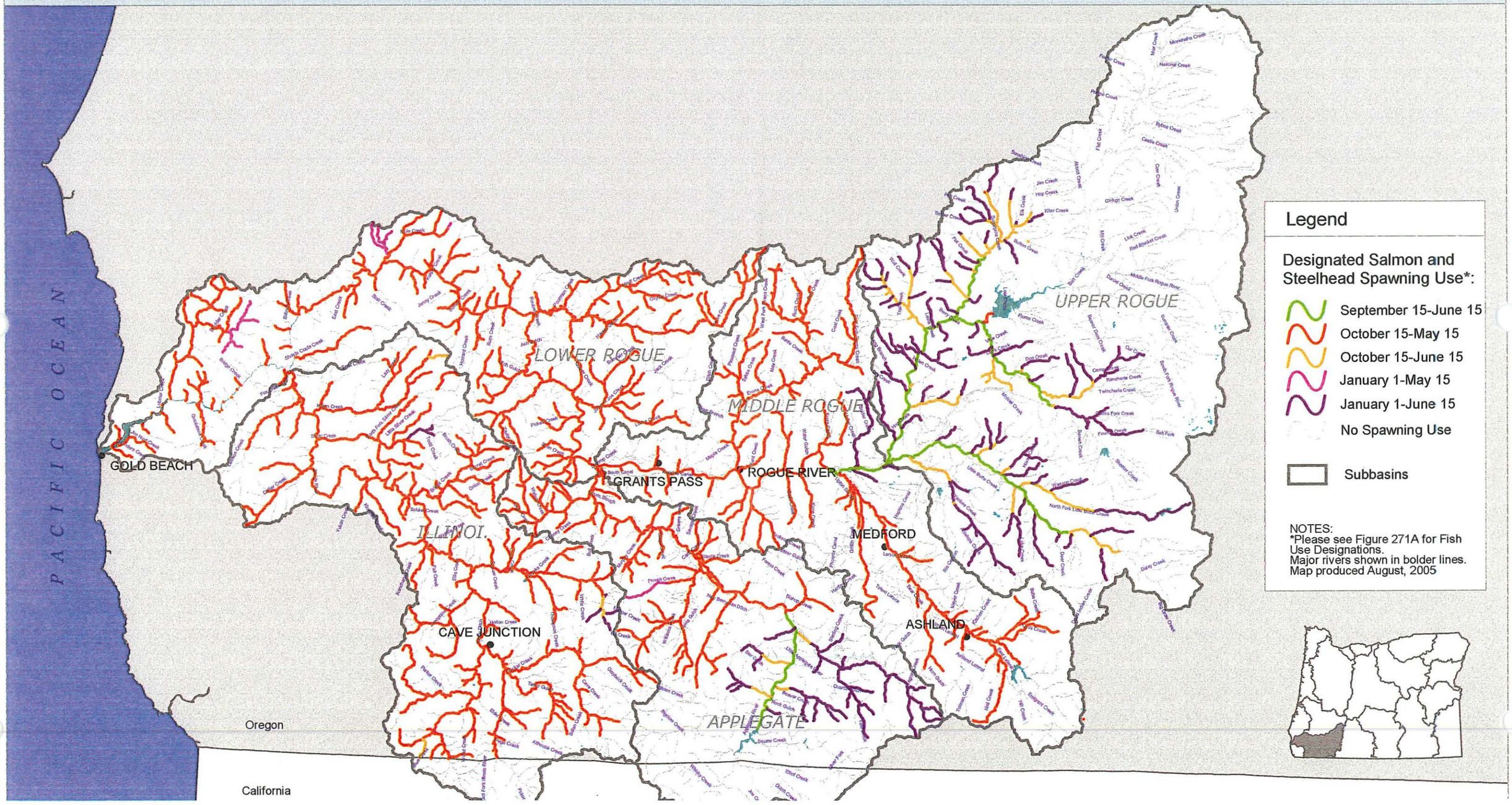
*Draft Revised Figure 151A: Fish Use Designations**
Grande Ronde Basin, Oregon



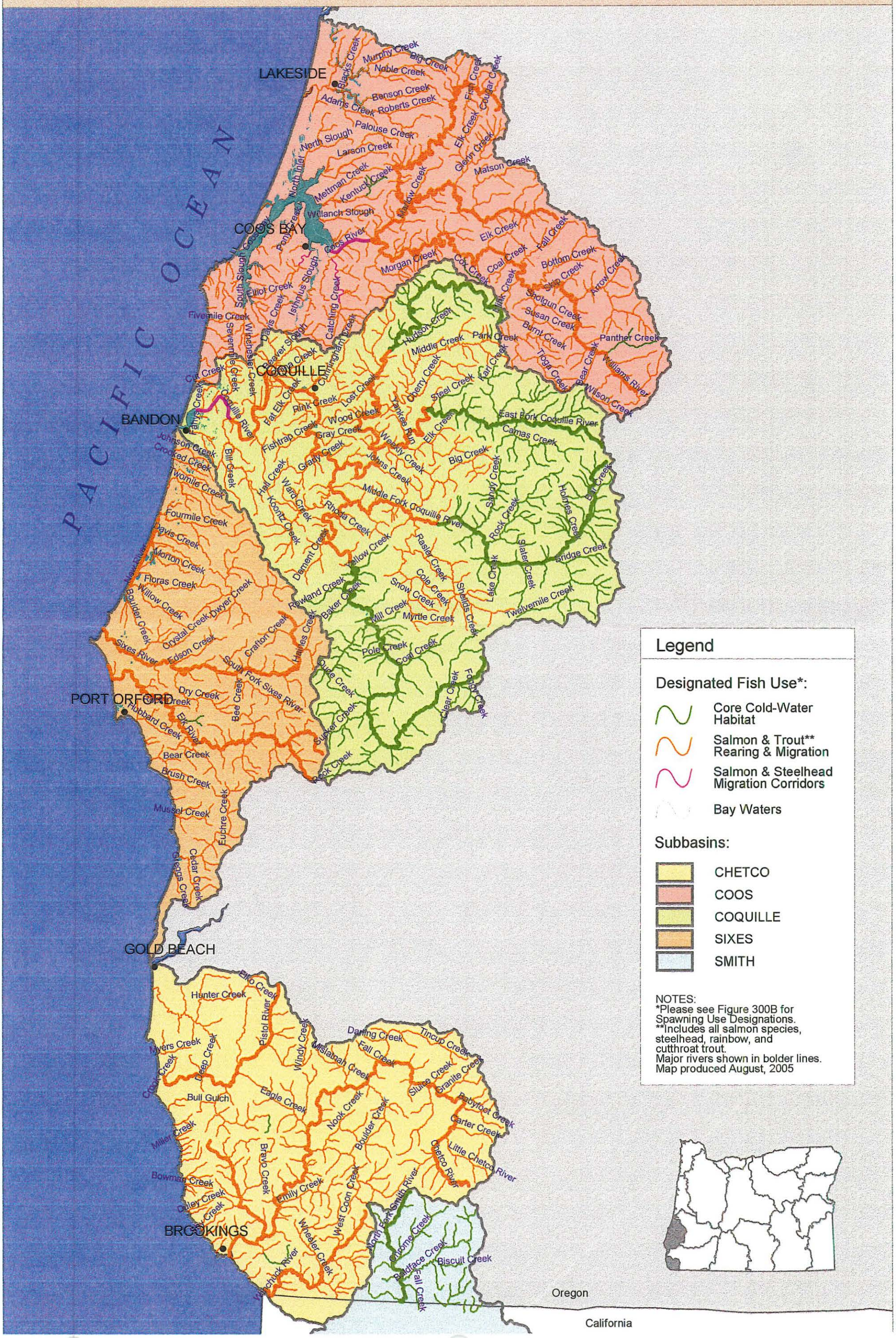
Draft Revised Figure 201A: Fish Use Designations
Malheur River Basin, Oregon



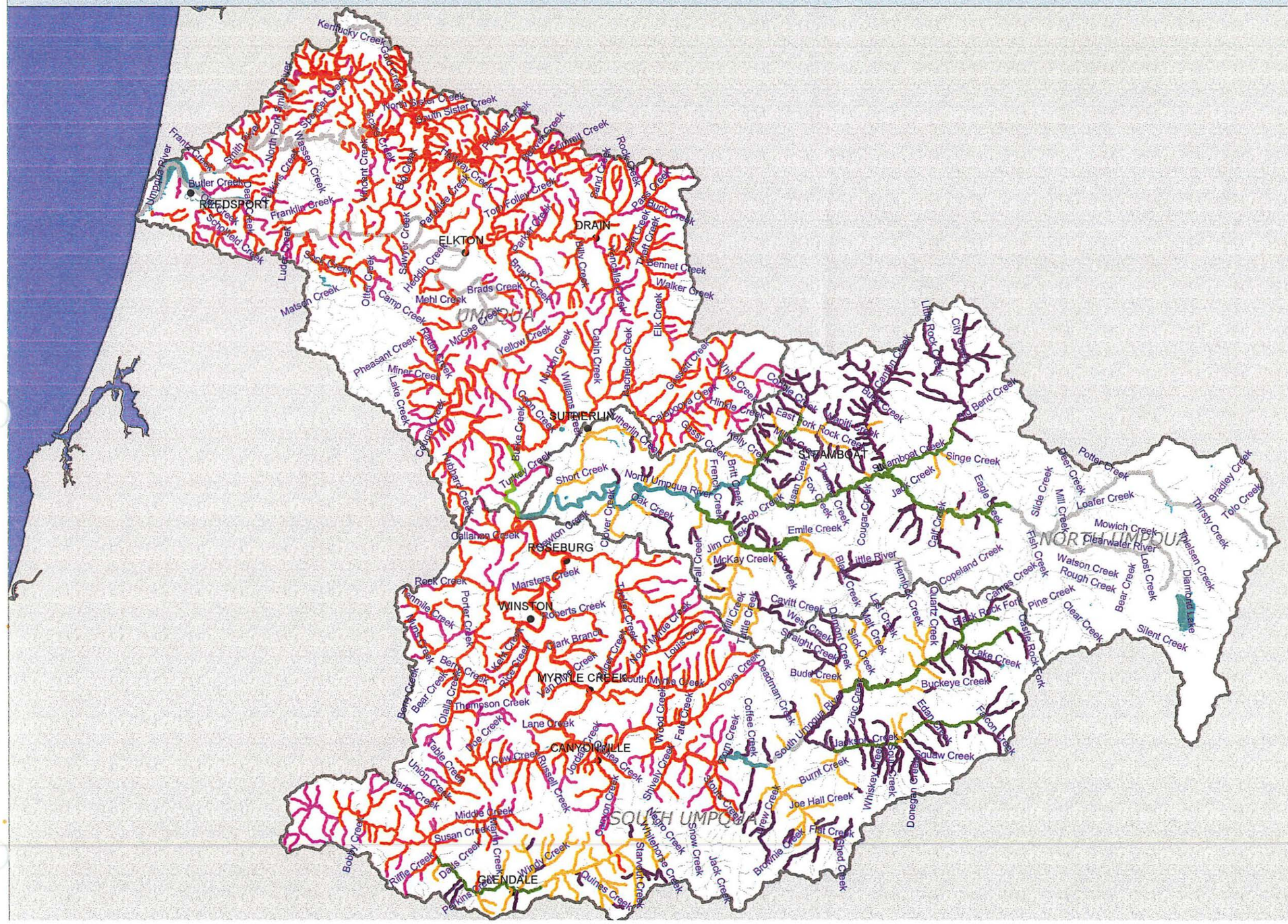
*Draft Revised Figure 271B: Salmon and Steelhead Spawning Use Designations**
Rogue Basin, Oregon



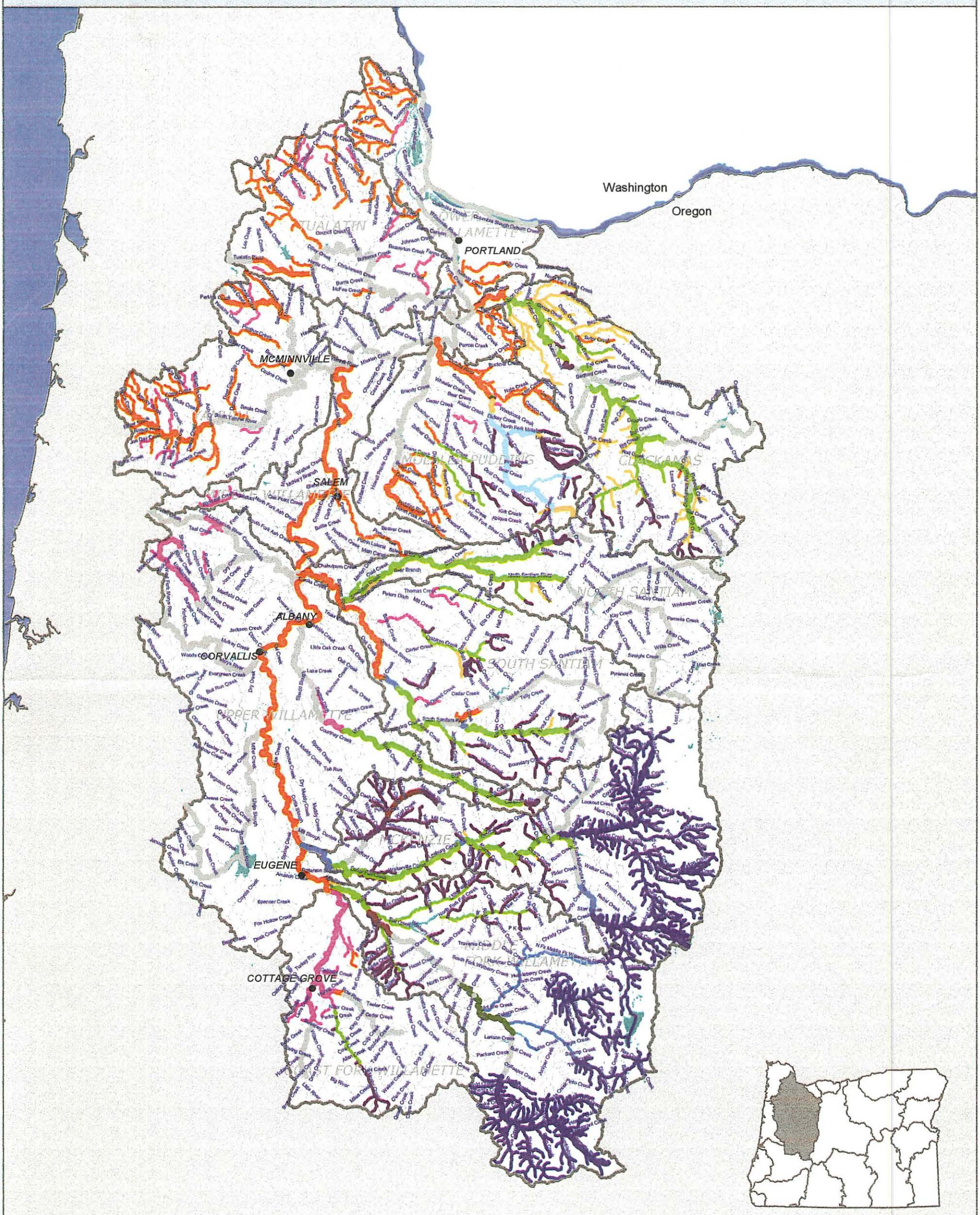
Draft Revised Figure 300A: Fish Use Designations South Coast Basin, Oregon*



Draft Revised Figure 320B: Salmon and Steelhead Spawning Use Designations Umpqua Basin, Oregon*



Draft Revised Figure 340B: Salmon and Steelhead Spawning Use Designations, Willamette Basin, Oregon*



Legend

Designated Salmon and Steelhead Spawning Use*:

- August 15-June 15
- September 1-May 15
- September 1-June 15
- September 15-May 15
- September 15-June 15
- October 15-May 15
- October 15-June 15
- January 1-May 15
- January 1-June 15
- No Spawning Use
- Subbasins

Bull Trout Spawning and Rearing Use:

- Bull Trout Spawning and Rearing Habitat

NOTES:
*See Figure 340A for Fish Use Designations.
Major rivers shown in bolder lines.
Map produced August, 2005

Attachment B
Summary and Response to Comments
Proposed Revisions to OAR Chapter 340 Division 41

Topic	Comment (Source*)
Definitions **OAR 340-041-0002**	Comment 1: Does the State intend to designate waters for warm water aquatic life, as defined in OAR section [-0002(78)]? If so, will criteria be developed for this use? (7) *Response: Borax lake chub is the only native warm water species in Oregon. Waters associated with Borax Lake and Lower Borax Lake in the Alvord subbasin (Harney County) are designated for Borax Lake chub use and DEQ has established a temperature criteria for this species (see OAR [0028(10)]). DEQ does not plan to designate additional waters for warm water species*
Antidegradation **OAR 340-041-0004(5)(c)**	Comment 2: DEQ should not add language that allows the Department to authorize exceptions to the Antidegradation policy. (10) *Response: The addition of the language, "or Department" in section [-0004(5) (c)] has been made in order to provide consistency with section [-0004(9)], which already allows either DEQ or the Environmental Quality Commission (EQC) to authorize exceptions to the rule. The language in section (5) (c) was added in 2003 and the inconsistency with section (9) was an error.*
Dissolved Oxygen **OAR 340-041-0016**	Comment 3: [0016(1)] - The application of the spawning criteria to resident trout is ambiguous and could result in potential legal defect in the existing and proposed rule. Clarify where and when the spawning through fry emergence criteria for resident trout apply, based on the Department's February 2004 letter to EPA. It would be inappropriate regulatory policy if the proposed language were interpreted to require resident trout spawning through fry emergence periods and locations on a case by case basis. (9) *Response: This rulemaking did not include a review of fish use designations and does not propose new fish use designations. The purpose of the proposed revision to the dissolved oxygen rule is only to clarify that the spawning criteria do apply to resident trout. This is not a change in policy; the dissolved oxygen (DO) criteria for spawning applied to resident trout under the prior and current rules. When the rule was amended to add reference to the salmon and steelhead spawning maps, however, the*

* Each comment is followed by a number(s) that corresponds to an individual, agency, or organization that provided the comment. See list of comment providers at the end of this document.

	intent with respect to resident trout became less clear. The proposed language revisions make it clear that the DO spawning criteria continue to apply to resident trout.
Dissolved Oxygen **OAR 340-041-0016**	Comment 4: [0016(1)] - The narrative dissolved oxygen criteria for resident trout "*spawning through fry emergence*" is ambiguous, subject to interpretation, and fails to assess how existing uses are protected. This approach undermines the court findings of Northwest Environmental Advocated vs. EPA that require the Department to define the dates and places where certain life-cycle criteria apply. (10) *Response: See the response to Comment #3 above. In response to NWEA vs. EPA, DEQ clarified and refined fish and aquatic life use designation subcategories, including spawning use for salmon and steelhead, in the water quality standards rules (OAR 340-041) revisions adopted in December 2003. Resident trout spawning was not specifically delineated during the last review of fish uses because: (1) sufficient statewide data identifying where and when trout spawning occurs were not available; (2) the rulemaking was focused on the temperature standard and there is no numeric temperature criterion for resident trout spawning; (3) the time provided by the court order was insufficient to develop adequate data for resident trout, and 4) DEQ's priority was to address salmon and steelhead spawning because of concerns over the threatened or endangered status of many salmon and steelhead runs.*
pH **OAR 340-041-0021 (1)(b)**	Comment 5: Revisions have deleted the pH criterion of "6.5 to 8.5" for estuarine and fresh waters and replaced with "See basin-specific criteria". Not all of the basins of the basin-specific criteria sections (OAR-0101 – OAR -0350) include pH criterion, specifically Klamath, Rogue and Umpqua basins. (6) *Response: The basin-specific rules for the Klamath, Rogue, and Umpqua basins do include pH criteria. They may be found at OAR 340-041-0185(1) (a), OAR 340-041-0275(1) (b), and OAR 340-041-0326(1) (b), respectively. These basin rules were not shown in the proposed revisions to Division 41 because they are not being revised in this rulemaking.*
Temperature Standard (General Comments) **OAR 340-041-0028**	Comment 6: DEQ should establish obtainable, year-round water temperature standards that are based on historical data. (3) *Response: Sufficient historical data to establish temperature standards statewide is not available. The biologically based criteria are based on temperatures that will prevent impacts to the sensitive aquatic life uses according to the scientific literature. However, the natural conditions criterion allows DEQ to use the best data available to estimate the natural*

	thermal potential of the water body. That estimated natural thermal potential then becomes the standard rather than the biologically based numeric criteria.
	Comment 7: DEQ should use "natural conditions" to replace "ambient conditions" in order to incorporate scientific principles and reduce the economic burden the regulations would place on citizens of the State. (4) *Response: The proposed revisions do replace "ambient" with "natural" conditions in the sections of this rule pertaining to Natural Lakes, Oceans and Bays, and Borax lake Chub ([-0028(6], [-0028(7] and ([-0028(10], respectively). The term "ambient conditions" has been removed from the section pertaining to Cool Water Species ([-0028(9]).*
	Comment 8: Individual suction dredge miners do not have any impact on stream temperature. (11) *Response: The temperature standard rule does not state whether any particular activity increases temperature, only that the allowed increase from human activity is limited. The permitting process is used to ensure that potential impacts relating to suction dredge mining do not violate the water quality standards.*
	Comment 9: The temperature standards are not adequately clear with respect to the obligations, actual standards, and requirements to conduct and submit monitoring reports. There should be a clear connection between the monitoring report requirements and the standard. (12) *Response: The temperature standard is a statement of the thermal condition of the water required to protect beneficial uses. It is not intended to address the obligations of sources. Point source permits, water quality certifications or TMDL water quality management plans identify the specific obligations of sources, including monitoring and reporting requirements. In addition, DEQ has monitoring protocols available to anyone who is required or volunteers to conduct monitoring.*
	Comment 10: Temperature criteria should be established based on reference stream conditions, not heavily affected watershed conditions. (12) *Response: The temperature criteria are not based on heavily affected watershed conditions. The numeric criteria are based on the literature - studies that have shown what temperature cause impacts to fish. The natural condition criterion is in place to address the reality that the numeric criteria are not always attainable in the natural environment.*

	"Natural conditions" in the context of the temperature standards means the thermal conditions of the stream not influenced by past or present anthropogenic activities. Most often stream temperature modeling is conducted during TMDL development to determine the natural thermal potential. However, it may be possible that reference stream conditions could be used in some cases to demonstrate natural conditions if adequate comparable reference sites are available to monitor.
	Comment 11: The temperature standard should not be relaxed for urban, agriculture, mining, or any other affected group. (13) *Response: DEQ is committed to protecting the water quality of Oregon's streams and rivers against pollution from a variety of sources. Water quality criteria establish the conditions of the water needed to protect sensitive beneficial uses. DEQ does not believe the temperature standard is being relaxed for any particular affected group or activity. Under the Federal Clean Water Act and state statutes DEQ directly regulates point source discharges (including mining) though NPDES permits and issues Section 401 certifications for fill and removal activities and hydropower projects. Under the CWA and state statutes DEQ is also authorized to establish total maximum daily loads (TMDLs), which identify the sources of pollutants and determine how much pollutant loading must be reduced to meet water quality standards. Forest, agricultural and urban lands management agencies may be identified in a TMDL and required to develop a water quality management plan describing how they will meet their pollutant load allocations. In addition, the Oregon Departments of Agriculture and Forestry administer programs intended to ensure that agriculture and forestry activities meet water quality standards.*
Temperature: Unidentified Tributaries **340-041-0028 (5)**	Comment 12: Adding the language, *This rule does not apply to the "Salmon and Steelhead Spawning Use Designations" maps* leaves nothing in place to protect the water quality of tributaries that support salmon and steelhead spawning areas but are not designated for that use. DEQ violates the Clean Water Act with this proposed rule revision. (10) *Response: The "Salmon and Steelhead Spawning Use Designations" maps specify the stream reaches that the Oregon Department of Fish & Wildlife fish distribution database shows as salmon or steelhead spawning habitat. The ODFW fish distribution maps show that the location of spawning habitat is more limited and discreet than rearing habitat. The "unidentified tributaries" rule pertains to tributaries that are too small to appear on the 1:100,000 scale maps. Tributaries that are not designated as spawning habitat, whether they show on the map as non-spawning use or they are too small to show on the map, are still designated for fish rearing and migration and subject to the criteria for those uses. In*

	addition, these tributaries are indirectly affected by the spawning criteria. In order for the spawning reaches to meet the spawning criterion (13°C), many of the tributary and upstream waters will also need to be at or below that temperature.
Temperature: Natural Lakes **340-041-0028 (6)**	Comment 13: "Ambient" condition referred to in current temperature narrative (for Natural Lakes, Ocean and Bays, and Borax Lake Chub) is sufficient for describing temperature conditions over background conditions of surface water. (2) *Response: EPA disapproved these criteria because they do not consider the "ambient" condition to be clearly protective of designated beneficial uses. In response to this disapproval, DEQ proposes to replace the term "ambient" with "natural" in the criteria for Natural Lakes, Oceans and Bays, and Borax Lake Chub. DEQ recognizes that in many cases, the ambient and natural condition for these water bodies are the same.*
	Comment 14: Explain the rationale behind choosing the degree of warming (0.3°C) that would impact beneficial uses. (2) *Response: DEQ selected 0.3°C as the amount of warming allowed based upon a combination of what is "measurable" given the sensitivity of current monitoring instruments, and what biologists agreed could reasonably be considered biologically insignificant. The allowed amount of warming is small enough that we do not expect it to negatively impact aquatic biota.*
	Comment 15: Do not change the current narrative, "*unless a greater increase would not reasonably be expected to adversely affect fish or other aquatic life*" (for Natural Lakes and Ocean and Bays). EPA disapproval of this narrative is not supported with rational for objections. (2) *Response: DEQ is not proposing to change or remove this phrase quoted above from the criteria for natural lakes or oceans and bays.*
	Comment 16: DEQ should use a scientific approach, such as modeling, to determine "natural condition." Clearly state how DEQ will determine the natural condition in the presence of anthropogenic sources. (1) *Response: DEQ does estimate natural condition via temperature modeling for many streams and rivers during TMDL development. However, we do not intend to model the natural thermal condition of natural lakes unless necessary. Where we expect anthropogenic sources are influencing lake temperature, we would first try other methods such as monitoring or mass balance calculations for thermal discharges.*

	Comment 17: Revised language for the Natural Lakes temperature criteria is supported. Basing the criteria in natural lakes on "natural condition" is appropriate as the species in lakes evolved to survive under thermal conditions of lakes. (7) *Response: DEQ appreciates the favorable response to this revision.*
	Comment 18: DEQ should undertake sufficient monitoring to determine if natural conditions are ambient or not. Otherwise, the proposed substitution of "natural" for "ambient" is meaningless. (10) *Response: DEQ anticipates that the ambient temperatures for most natural lakes are at natural condition. In the instance where there is evidence of anthropogenic activities that may affect the natural lake, monitoring and analysis would need to be conducted to determine if the natural thermal condition of the lake has been altered.*
	Comment 19: Temperature increases that are permitted under this rule are not well-defined and could result in substantial increases in temperature that have adverse and cumulative impacts on the waterbody. The impacts of "human modifications" are unclear: are upstream activities and activities that affect only a portion of the lake's waters considered in the proposed rule revisions? DEQ should consider if there is any basis for warming of lakes under any circumstances. If not, consider implementing a non-degradation standard. (10) *Response: DEQ has revised the criteria to allow a 0.3°C warming above the natural condition. Because the 0.3° increase is above the natural condition, this criterion should not result in substantial increases in temperature or cumulative impacts. The standard applies for permitted sources, at the edge of an assigned mixing zone. Upstream activities are held to the in-stream standard that applies to that stream or river segment.*
Temperature: Oceans and Bays **340-041-0028 (7)**	Comment 20: The seasonal variability in natural oceanic and climatic conditions is not adequately addressed in the rule language. The word "seasonal" should be inserted before the word "ambient" in the draft narrative. (1) *Response: "Ambient" condition has been replaced with "natural" condition in the proposed rule changes. DEQ recognizes that the natural condition of oceans and bays will vary inter-annually, seasonally, and with long-term climatic events such as El Nino events. DEQ believes that the addition of the word "seasonal" is unnecessary because natural condition already incorporates seasonality.*

	Comment 21: Revised language for the Ocean and Bays temperature criteria is supported. Basing the criteria of oceans and bays on "natural condition" is appropriate as the species in lakes evolved to survive under the natural thermal conditions of the oceans and associated bays. (7) *Response: DEQ appreciates the favorable response to this revision.*
	Comment 22: The proposal to change replace "ambient" with "natural" is meaningless according to DEQ definitions of the terms. The appropriate approach would be to prohibit any additional warming from sources in Bays, as well as from upstream sources. (10) *Response: The revised criterion requires analysis of the natural condition if there is reason to believe that there has been human caused warming of an ocean or bay water previously, rather than allowing the 0.3°C increase from the current condition. DEQ believes the revised criteria will protect the aquatic life in oceans and bays and that an absolute prohibition of any additional warming in these waters is not necessary to protect these uses. The standard does not allow more than a 0.3°C warming outside of assigned mixing zones. The 0.3°C allowed warming is considered biologically insignificant.*
Temperature: Cool Water Species **OAR 340-041-0028 (9)**	Comment 23: The State should provide supporting documentation in this section that includes: a. How the criteria are implemented; and an explanation of when this criterion is to be met; b. Explanation of why "natural condition" is not necessary to protect cool-water species; c. Explain what the State will do if sufficient information on the thermal requirements of the designated use is not available; d. Explain the range of thermal tolerances for cool-water designated uses; e. Explain how cold water designated uses will be protected from temperature increases due to this criterion; and, f. Explain how this criterion differs from the development of site-specific criteria. (7) *Responses:* *a. Implementation of the cool water species narrative criteria will be based on a case-by-case evaluation during the permitting or water quality certification process. DEQ will consider the thermal requirements of the cool water species that inhabit the receiving water and the nature of the discharge. A first likely step will be a reasonable potential analysis based on the Lahontan and redband trout criterion (20°C). If the source has no potential to exceed that criterion, it would not impair cool water species. In addition, the criteria will be implemented for nonpoint sources via water quality management plans*

and forest practice rules.

b. *Historically, some of the waters designated for cool water species use may have supported cold water species, or may have been colder than needed to protect the cool water species, which have a wider range of thermal tolerance. Some of these reaches have been greatly altered and were altered long before 1975. If a water body is designated for cool water species use, the criteria are only required to protect that use. The State is not required to set criteria for a historic use that is not an existing use. Even if the State did set it as our goal, some of these highly altered stream segments could not be restored to "natural condition" under current Clean Water Act authorities due to the water rights issues and large projects that have altered the natural hydrology, or it would be prohibitively expensive to do so.*

c. *If sufficient information is not available on the cool water species present, DEQ will use the best information that is available to determine the thermal requirements of the cool water species present. For example, DEQ may need to use information available for a related fish species, another species thought to have similar thermal requirements, or other organisms found in similar cool water communities (i.e. macro-invertebrates, amphibians and/or plants). If the stream is not highly altered, and sufficient information is available to determine the natural condition of the stream, this would be another possible approach applied on a site specific basis.*

d. *The scientific literature on the thermal requirements for cool water species is limited. The range of maximum temperature tolerance identified in the literature DEQ has looked at so far, including recovery plans for ESA listed species, is 26-36°C. Some references include:*

1) Kostow, K. (ed). 1995. *Biennial Report on the Status of Wild Fish in Oregon.* ORDFW. Portland, OR.
2) LAKEFISH. *Thermal Criteria for Three Fish Guilds.* http://lakefish.lamar.edu/ *Accessed 2/20/2003.*
3) DEQ Laboratories – Bio-monitoring Section. BIO98-004
4) DEQ Laboratory. *1998 Oregon Fish Plan*
5) USFWS. 1993 Lost River and Shortnose Sucker Recovery Plan. Portland, OR. 108 pp.
6) USFWS. 1998. Recovery Plan for the Native Fishes of the Warner Basin and Alkali Subbasin. Portland, OR. 86 pp.
7) USFWS. 1998. Oregon Chub Recovery Plan. Portland, OR. 69+ pp.
8) Holmes, John A. and John H. Youson, 1998. Extreme and Optimal Temperatures for Metamorphosis in Sea Lampreys, University of Toronto. Transactions of the American Fisheries Society (1998) 127(2): 206-211.
9) Eakins, R. 2002. Ontario Freshwater Fishes Life History Database. Version 2.11. World Wide Web electronic publication. http://www.beak.com/info/features/fishdb.htm 25 November 2002.

e. *The cool water criteria only apply where the cool water use is*

	designated. A water body designated for a cold water use, will be protected under the criteria applicable to that use. It is possible that sources or activities on a cool water reach will be controlled due to their contribution to warming of a downstream cold water reach even though the load limit may not be required for local or "near field" affects. *f. The cool water species language in the temperature rule is a general narrative that applies to all reaches in the State with a "cool water species" use designation. A site specific narrative criterion is proposed for the Klamath River.*
	Comment 24: It is premature to set a standard for cool water species in the absence of complete data on thermal tolerances and preferences for the species in this group. DEQ should take the time to develop a complete data set on these thermal tolerances before setting a standard. (1) *Response: The Federal Clean Water Act (CWA) requires the State to set water quality criteria to protect designated uses, including fish and aquatic life, based on the best available data. DEQ is proposing a reasonable criterion to protect cool water species in the limited number of reaches in the state that have no cold water specie given the lack of information. If additional information becomes available, the proposed cool water criterion can be re-evaluated.*
	Comment 25: The cool water standard should not be a static temperature. This standard should be revised to reflect different conditions, where appropriate, during different seasons. (4) *Response: DEQ does not agree that the proposed cool water criterion is "static." It is a narrative that may be applied in multiple seasons and under varying conditions to waters identified supporting cool water species. Refer to OAR section [-0028(9)] for the exact language of this standard. Often there is a critical season, such as summer, when conditions and/or source loads have the greatest potential to exceed the criteria and this becomes the focus of the permit or regulatory action.*
	Comment 26: Replace "indentified" with "identified".(5) *Response: DEQ has corrected this error.*
	Comment 27: Section OAR-0028 (9) (a), Cool water species criterion for Klamath River, should be located in the basin-specific rules. (8) *Response: DEQ agrees and has moved the criterion to the basin specific criteria rule for the Klamath Basin (340-041-0185).*

	Comment 28: Structure 340-041-0028 (9) (a) to stand alone as a site-specific criterion. The criterion does not follow the construction laid out in OAR-0028 (9) for cool water species. (7) *Response: DEQ has placed the site specific criterion in the basin specific rule for the Klamath basin. DEQ wants to be clear that the site specific cool water species criterion for the Klamath River is a seasonal criterion. OAR 340-041-0028 (9) applies to the Klamath River during the remainder of the year.*
	Comment 29: The narrative for Cool Water Species omits analysis of existing uses, as defined by EPA regulations. (10) *Response: The proposed rule revision does not designate new cool water reaches; it revises the criterion that applies to cool water species. DEQ is not required to do a use analysis when revising the criterion to protect cool water use. Some cool water reaches have been so designated for many years. Some additional reaches were designated for cool water use when DEQ reviewed and clarified the fish use designations in December 2003. At that time, staff evaluated the available information on existing uses and designated cool water use only where cold water fishes are not present during the warm summer months. If DEQ does not adopt and obtain EPA approval of a cool water use criterion, Oregon will have no temperature criterion in our standards to protect cool water species.*
Temperature: Borax Lake Chub **OAR 340-041-0028 (10)**	Comment 30: "Section OAR-0028 (10) (a) Borax Lake Chub" should be located in the basin-specific rules. (8) *Response: DEQ will include the criterion for Borax Lake chub in the basin-specific rules for the Malheur Lakes Basin, and also leave it in the temperature standard rule.*

	Comment 31: Without "sufficient information on the thermal requirements of Borax Lake Chub", as indicated by DEQ, the restriction that the waters of Malheur Lake Basin cannot be cooled by more than 0.3C is arbitrary. (1) *Response: The Federal Clean Water Act (CWA) requires that DEQ establish criteria to support the designated beneficial uses of the State's water bodies. Absent sufficient information necessary to establish a numeric criterion, DEQ believes that a reasonable approach for protection of Borax Lake Chub is to limit the anthropogenic alteration of their natural thermal environment.*
	Comment 32: Revised language for the Borax Lake Chub temperature criteria is supported. Basing the criteria to protect the species on "natural condition" is appropriate as the species in lakes evolved to survive under thermal conditions of these waters. (7) *Response: DEQ appreciates the favorable response to this revision.*
	Comment 33: There is no reason to adopt language that allows for alteration in the Malheur Lake basin that could cause impairment to Borax Lake Chub. A protective standard would include lake monitoring to determine if ambient conditions are natural conditions, in combination with a standard that prohibits any decrease in temperature. (10) *Response: The proposed change to this criterion replaces "ambient" condition with "natural" condition. The natural condition of the waters supporting Borax Lake Chub is protective of that species and the allowed cooling of 0.3°C is believed to be biologically insignificant. There are no permitted activities in this basin and DEQ has no reason to suspect that Borax lake has been cooled below its natural condition due to any human caused activity to date. Monitoring is not typically required as part of a water quality criteria. Monitoring would likely be required if a discharge or activity is proposed that may impact the thermal condition of the lake. Otherwise, this would not be a priority use of the State's limited monitoring resources.*

Mixing Zones **OAR 340-041-0053 (2)(h)**	Comment 34: OAR-0053 (2) (h) should remain as written (not repealed), with the exception of changing definitions of OAR-0053 (2) (h) (C) and OAR-0053 (2) (h) (D). OAR-0053 (2) (h) (C) should be changed to include suction dredges with intake nozzles 4 inches or less as "insignificant discharges." OAR-0053 (2) (h) (D) should include, "alternate mixing zones will have a reasonable distance met where aquatic life passage is not blocked". (2) *Response: This section of the Mixing Zone rule was disapproved by the EPA in 2004. It is no longer effective for Clean Water Act purposes and is therefore not being implemented by DEQ. DEQ does not understand why it would be beneficial to leave the language in the administrative rules and doing so could be misleading and confusing to the public.*
Beneficial Use Designations	Comment 35: The removal of spawning as a designated use in the Willamette River from Newberg to the Yamhill River does not address whether the decision rules and methods used to develop the spawning use designation maps, along with the ODFW database, are consistent with federal law. This comment also applies to the change on "Catherine Creek and a small tributary to named Pyles Cr." (10) *Response: The reaches proposed for revision are not identified as spawning habitat in the ODFW data base, which DEQ used as the best available source of statewide fish distribution information, and should not have been designated for spawning according to the methods used for mapping fish uses for the December 2003 rulemaking. These reaches were shown as spawning segments on the maps in error. A workgroup of State and Federal agencies, including EPA, developed the use mapping methods. EPA participated in the development of this method and has approved the fish use designations based on this method.*

Official Written Comments				
Commenter #	**Name**	**Representing**	**Address**	**Phone**
1	William E. Kramer	National Rural Water Association (NRWA)	101 Constitution Ave, NW Suite 900 Washington D.C. 20001	
2	Ed Hardt	Eastern Oregon Mining Association (EOMA)	PO Box 932 Baker City, OR 97814	
3	Liz VanLeeuwen	Linn Soil and Water Conservation	33935 HWY 99E, Suite C Tangent, OR 97389	(541)926-2483
4	Pat Larson	Oregon Cattlemen's Association	3415 Commercial St. S.E. Salem, OR 97302	
5	Ellen Hammond	Oregon Dept. of Agriculture (ODA)	2146 NE 4th St. Bend, OR 97701	(541)614-0017
6	Laurie Lindell	Bureau of Land Management (BLM)	3040 Biddle Road Medford, OR 97504	(541)618-2254
7	Jannine Jennings	Environmental Protection Agency (EPA), Region 10	1200 Sixth Ave Seattle, WA 98101	(206)553-2724
8	Frannie Brindle	Oregon Department of Transportation	355 Capitol Street, NE Room 314 Salem, OR 97301	(503)986-3370
9	John P. Sample	PacifiCorp	825 N.E. Multnomah, Suite 1500 Portland, OR 97232	(503)813-5000
10	Nina Bell	Northwest Environmental Advocates	PO Box 12187 Portland, OR 97212	(503)295-0490
Public Testimony- Grants Pass Public Hearing, January 17, 2006				
11	Jerry Kelly	self		
12	Cindy Deacon-Williams	self; Headwaters		
13	Paul Kaye	self		

State of Oregon
Department of Environmental Quality **Memorandum**

Presiding Officer's Report

Date: February 28, 2006

To: Environmental Quality Commission

From: Dick Nichols, Water Quality Manager
Eastern Region, Bend Office

Subject: Presiding Officers Report for Rulemaking Hearing
Hearing Date and Time: December 2, 2005, 2PM
Hearing Location: Central Oregon Board of Realtors, 2112 NE 4th St., Bend, Oregon

Proposals: Revising Water Quality Criteria for Turbidity, Temperature, and Other Standards – Clean Water Act

Bob Baumgartner, Tom Rosetta, and Dick Nichols represented the Department of Environmental Quality at this hearing. The meeting was opened at 2:00 p.m. with an informational and questions /answer presentation from 2:00 – 2:45 pm.

At 2:45 pm the Q and A session was completed and the formal hearing opened. Dick Nichols was the presiding officer of the hearing. Those attending the hearing were asked to sign the attendance sheet. Those who wished to present testimony were asked to sign a registration sheet. All in attendance were informed the purpose of the formal hearing was to take testimony on the above referenced proposal. People were also advised that the hearing was being recorded and of the procedures to be followed.

Eleven (11) people signed the attendance sheet as requested and were present at the hearing. Five (5) people presented comments.

Hearing Comments

- Of the 5 people who testified, all opposed the proposed turbidity revisions.

General Comments:

- Two (2) of the five who commented were concerned that the effect of the proposal would restrict recreational mining activities. Three (3) were opposed to the proposal as being unprotective of beneficial uses; in part with concerns for the way the review was initially funded.

State of Oregon
Department of Environmental Quality **Memorandum**

Presiding Officer's Report

Date: December 2, 2005

To: Environmental Quality Commission

From: Heidi Williams, Eastern Region, Pendleton Office

From: Julie M. Berndt; Natural Resource Specialist
Western Region-Eugene - Water Quality Program

Subject: Presiding Officer's Report for Public Hearing
Hearing Date and Time: November 30, 2005, beginning at 6:45: p.m.
Hearing Location: Knight Library, Room 106, University of Oregon Campus, Eugene,

Proposals: Revising Water Quality Criteria for Turbidity, Temperature, and Other Standards – Clean Water Act

The public hearing on the above proposal was convened at 6:20 p.m. after the conclusion of a brief informational and questions /answer presentation from 6:00 – 6:20 pm. on November 30, 2005. Julie Berndt of the DEQ was the presiding officer (PO) of the hearing. People who attended the hearing were asked to sign the attendance sheet. People were asked to sign witness registration forms if they wished to present testimony. People were informed as to the purpose of the hearing which was to take testimony on the above referenced proposed permit action. People were also advised that the hearing was being recorded and of the procedures to be followed.

Nineteen (19) people were in attendance at the hearing. Six (6) people signed up to give testimony.

Prior to receiving testimony, Mr. Tom Rosetta, a representative of the DEQ, briefly explained the specific proposals, the reason for the proposed actions, and responded to questions from the audience.

Summary of Oral Testimony

1) Six (6) commenters expressed concern over various aspects of the rule revisions. The concerns included, but were not limited to the following:

- DEQ has a conflict of interest and credibility issue with writing the turbidity rule revision with receipts authority monies from the pulp and paper industry.

- Several commenters expressed concern that the rule revisions will result in a lessening of water quality, particularly with regard to turbidity. They requested that the DEQ not lessen the

protectiveness of the turbidity standard and that this rule revision, if promulgated, would be less protective of the environment. It would especially be less protective of the beneficial use of fisheries, particularly with regard to salmon.

Written Testimony

Two commenters gave a copy of their remarks to Tom Rosetta. No other written comments were received at the hearing.

There was no further testimony and the hearing was closed at about 6:50 p.m.

State of Oregon
Department of Environmental Quality **Memorandum**

Presiding Officer's Report

Date: February 28, 2006

To: Environmental Quality Commission

From: John Blanchard. Basin Planning/Water Quality Manager
Western Region-Medford

Subject: Presiding Officers Report for Rulemaking Hearing
Hearing Date and Time: January 17, 2006, 6PM
Hearing Location: Anne Basker Auditorium Grants Pass, Oregon

Proposals: Revising Water Quality Criteria for Turbidity, Temperature, and Other Standards – Clean Water Act

Tom Rosetta and John Blanchard represented the Department of Environmental Quality at this hearing. The meeting was opened at 6:00 p.m. with an informational and questions /answer presentation from 6:00 – 7:00 pm. One attendee informed the presiding officer (PO) that he wished to tape the entire meeting including the Q and A session. The PO had no objections.

At 7:00 pm the Q and A session was completed and the formal hearing opened. John Blanchard was the presiding officer of the hearing. Those attending the hearing were asked to sign the attendance sheet. Those who wished to present testimony were asked to sign a registration sheet. All in attendance were informed the purpose of the formal hearing was to take testimony on the above referenced proposal. People were also advised that the hearing was being recorded and of the procedures to be followed.

Thirty-six (36) people signed the attendance sheet as requested and were present at the hearing. There were a handful of additional attendees who did not sign in. Twelve (12) people signed up and presented testimony. There were several who signed testimony registration sheets who declined to comment when their names were called.

Hearing Comments

- Of the 12 who testified, 10 opposed the proposal, 2 were neutral.
- Two persons who testified were asked to close out their testimony due to time constraints. One of those then completed his testimony in a timely manner, the other was offered additional time upon completion of other attendees testimony. At one point that person turned off the tape recorder stating he was not concerned with whether his comments were taped or not. The PO turned the tape back on quickly and instructed that person not to interfere with the tape recorder.
- That second person did take opportunity to continue his testimony after others had an opportunity to testify. During this testimony the tape ran out, he did continue to speak as the tape was replaced. He was also asked to wind up his second session testimony too, due to time limits, and a recommendation was made by the PO for him to submit the written material he was reading. He closed his testimony, and the hearing was then closed at 9:00 PM. He did not submit the written material.
- 2 of those testifying also submitted written materials.

General Comments:

- Those in attendance held very strong beliefs, and were very concerned about the effect of the proposal on mining activities.
- Many raised points and questions relative to their position on whether DEQ had legal authority to regulate their activities. (In the Q and A session they were informed we were here to address the turbidity and other standards for water quality, not permits.)

State of Oregon
Department of Environmental Quality **Memorandum**

Presiding Officer's Report

Date: May 2, 2006

To: Environmental Quality Commission

From: Heidi Williams, Eastern Region, Pendleton Office

Subject: Presiding Officer's Report for Rulemakng Hearing
Hearing Date and Time: January 30, 2006, 6PM
Hearing Location: 1705 Main, 1st floor (Ballroom), Baker City, Oregon

Proposals: Revising Water Quality Criteria for Turbidity, Temperature, and Other Standards – Clean Water Act

Mitch Wolgamott, Tom Rosetta, and Heidi Williams represented the Department of Environmental Quality at this hearing. The meeting was opened at 6:00 p.m. with an informational and questions /answer presentation from 6:00 – 6:45 pm.

At 6:45 pm the Q and A session was completed and the formal hearing opened. Heidi Williams was the presiding officer of the hearing. Those attending the hearing were asked to sign the attendance sheet. Those who wished to present testimony were asked to sign a registration sheet. All in attendance were informed the purpose of the formal hearing was to take testimony on the above referenced proposal. People were also advised that the hearing was being recorded and of the procedures to be followed.

Sixteen (16) people signed the attendance sheet as requested and were present at the hearing. Six (6) people signed up and presented comments.

Hearing Comments

- Of the 6 people who testified, five opposed the proposed turbidity revisions, and one (1) supported it.

General Comments:

- Most in attendance were very concerned about the effect of the proposal on mining activities, including most of the commenters. One commenter representing the pulp and peper industry supported the proposed revisions.

State of Oregon
Department of Environmental Quality **Memorandum**

Presiding Officer's Report

Date: February 28, 2006

To: Environmental Quality Commission

From: Rubin Kretzschmar, Western Region, Coos Bay Office

Subject: Presiding Officers Report for Rulemaking Hearing
Hearing Date and Time: December 1, 2005, 6PM
Hearing Location: North Bend Public Library, 1800 Sherman Ave., North Bend, Oregon

Proposals: Revising Water Quality Criteria for Turbidity, Temperature, and Other Standards – Clean Water Act

Bob Baumgartner, Tom Rosetta, and Ruben Kretzschmar represented the Department of Environmental Quality at this hearing. The meeting was opened at 6:00 p.m. with an informational and questions /answer presentation from 6:00 – 6:45 pm.

At 6:45 pm the Q and A session was completed and the formal hearing opened. Ruben Kretzschmar was the presiding officer of the hearing. Those attending the hearing were asked to sign the attendance sheet. Those who wished to present testimony were asked to sign a registration sheet. All in attendance were informed the purpose of the formal hearing was to take testimony on the above referenced proposal. People were also advised that the hearing was being recorded and of the procedures to be followed.

Twenty-three (23) people signed the attendance sheet as requested and were present at the hearing. Two (2) people signed up and presented comments.

Hearing Comments

- Of the 2 people who testified, both opposed the proposed turbidity revisions.

General Comments:

- Most in attendance were very concerned about the effect of the proposal on mining activities, including both commenters.

State of Oregon
Department of Environmental Quality **Memorandum**

Presiding Officer's Report

Date: May 9, 2006

To: Environmental Quality Commission

From: Loretta Pickerell, Presiding Officer

Subject: Presiding Officer's Report for Rulemaking Hearing
Title of Proposal: Revising Water Quality Criteria for Turbidity, Temperature and other Standards – Clean Water Act
Hearing Date and Time: November 29, 2005, 6:45 p.m.
Hearing Location: DEQ HQ in Portland

The Department convened the rulemaking hearing on the proposal referenced above on November 29, 2005, at 6:45 p.m. and closed it at 8:15 p.m. People were asked to sign registration forms if they wished to present comments. People were also advised that the hearing was being recorded. Before taking comments, Tom Rosetta briefly explained the rulemaking proposal and I explained the procedures for the hearing.

Fifty-seven people signed the attendance sheet, although more attended the hearing. Twenty-three people commented at the hearing, primarily on the turbidity rule revisions. Twenty-two commenters opposed the turbidity rule revisions, and one commenter supported those revisions. The summary of written and oral comments received at the hearing is included in the Department's Summary of Comments and Agency Responses for this rulemaking.

Attachment D
Relationship to Federal Requirements

Note: This document refers to proposed turbidity standards, which were part of the rulemaking released for public comment in October, 2005. However, the turbidity standard revisions are not being proposed for adoption at this time.

Answers to the following questions identify how the proposed rulemaking relates to federal requirements and potential justification for differing from federal requirements. The questions are required by OAR 340-011-0029.

1. Are there federal requirements that are applicable to this situation? If so, exactly what are they?

Turbidity:

Yes. Applicable federal requirements for water quality standards are found in the federal Water Pollution Control Act Section 303(a)-(c) (33 USC Section 1313(a)-(c)) and implementing regulations in 40 CFR Part 131. At least every three years, states must review their water quality standards and, as appropriate, modify and adopt standards to ensure beneficial uses are protected.

In the 1970's, EPA adopted guidelines (not requirements) for turbidity, which Oregon used to update state turbidity criteria in 1980 and 1987. The proposed turbidity criteria incorporate current scientific data to better address the effects of turbidity on beneficial uses, including the most sensitive beneficial uses. Revisions are designed to better address current conditions, including low ambient turbidity levels where the existing 10 percent increase allowance for turbidity may be negligible in relation to natural or background levels, and have little or no impact on beneficial uses. Revisions also include tighter restrictions on limited-duration exceedances, and language promoting greater uniformity in applying the rule.

Specific Temperature criteria:

EPA does not have guidance or recommended temperature criteria specifically for natural lakes, oceans and bays, cool water species or Borax Lake chub. However, under the Clean Water Act and its implementing regulations (40CFR Part 131), EPA must approve State water quality standards and to do so must find that the criteria will protect designated uses. EPA has told the State that they can not make this finding for Oregon's narrative criteria for natural lakes, oceans and bays, cool water species and Borax Lake chub and, therefore, intend to disapprove these criteria , which were adopted in December, 2003.

2. Are the applicable federal requirements performance based, technology based, or both with the most stringent controlling?

Federal requirements are performance based.

3. Do the applicable federal requirements specifically address the issues that are of concern in Oregon? Was data or information that would reasonably reflect Oregon's concern and situation considered in the federal process that established the federal requirements?

Yes. The federal requirements and guidelines for water quality standards address procedural and substantive issues of concern to Oregon, but federal turbidity guidelines are outdated. There are no specific federal temperature criteria for natural lakes or cool water species of Oregon.

4. Will the proposed requirement improve the ability of the regulated community to comply in a more cost effective way by clarifying confusing or potentially conflicting requirements (within or cross-media), increasing certainty, or preventing or reducing the need for costly retrofit to meet more stringent requirements later?

Turbidity: The proposed rules clarify application of turbidity criteria to various types of activities and water bodies. In developing criteria DEQ looked at monitoring capability and practicality for different types of discharges in order to allow flexibility in measuring compliance. For example, we incorporated the use of surrogates like suspended sediment data or a visual contrast methods into the draft rule (and guidance) providing less expensive or technically easier alternatives to using a turbidity meter. We developed criteria that will protect beneficial uses and be less costly for projects causing turbidity increases; whereas the current criteria is thought to be overly protective, especially in clear water background conditions where the allowed 10% increases allowance is negligible and would have little or no impact on beneficial uses. We also developed approaches allowing controlled and protective short-term pulses of turbidity while providing practical work period application and flexibility for specific projects. We worked with stakeholders on these approaches, many of which will be doing the monitoring, as well as DEQ staff involved in implementing the criteria through permits, 401 applications, or through other state or federal agencies.

Temperature: The proposed rule revisions, which are minor, do not provide more clarity or certainty than the current language. However, EPA, due to concerns that the current temperature criteria for natural lakes, oceans and bays, cool water species and Borax Lake chub are not sufficiently protective, intends to disapprove these criteria. By revising the criteria in a manner that is approvable by EPA and will, therefore, become the effective water quality standard for these uses under the clean water act, this rule revision does provide clarity and certainty to the regulated community. If DEQ does not revise a standard that is disapproved by EPA, then EPA must promulgate criteria for the State. This would be a longer process and Oregon parties would have less certainty as to the outcome of that federal rulemaking.

5. Is there a timing issue which might justify changing the time frame for implementation of federal requirements?

No.

10/14/05

6. Will the proposed requirement assist in establishing and maintaining a reasonable margin for accommodation of uncertainty and future growth?

When DEQ establishes water quality standards, we do consider uncertainties in the scientific information on which the criteria are based. DEQ does not, in the criteria setting process, add a specific margin to accommodate future growth. This purpose is accomplished through our antidegradation review policy and when we establish total maximum daily loads (TMDLs) to bring water bodies into compliance with water quality standards.

7. Does the proposed requirement establish or maintain reasonable equity in the requirements for various sources? (level the playing field)

Because they are better tailored to protect beneficial uses, the proposed turbidity criteria will be more equitable for the sources affected. All turbidity-causing activities are subject to the basic criteria including the proposed maximum, monthly average, and visual criteria. Specific magnitude and duration exceedances of these criteria would be available with additional assessments of data and information through NPDES permits or water quality 401 certification reviews, and possibly other agency authorizations with modifications to the FPA or SB1010. This could include all or most permitted, certified and otherwise authorized activities that discharge into state waters. Additional flexibility could be granted through a 401 water quality certification review for emergencies, ecological restoration, and essential dredging projects. Emergency situations are different than other activities and require special conditions; though they would be expected to perform best management practices to the maximum extent practicable. Ecological restoration and essential dredging projects would have to either show a long-term gain in the protection of beneficial uses or offset (or mitigate) for negative impacts to beneficial uses, so the overall level of protection should not be different than for other projects.

8. Would others face increased costs if a more stringent rule is not enacted?

The proposed numeric criteria are equally or less stringent than the current criteria under most applications. Adopting less protective criteria than proposed might lead to loss of beneficial uses and increased costs for water body restoration. If the proposed rule is not enacted, costs could be relatively higher by keeping the more stringent (existing) criteria in place. BMP costs could increase with the proposed rule for some in-stream projects, especially regarding higher magnitude turbidity increases.

9. Does the proposed requirement include procedural requirements, reporting or monitoring requirements that are different from applicable federal requirements? If so, Why? What is the "compelling reason" for different procedural, reporting or monitoring requirements?

The proposed turbidity rule includes review procedures for limited duration exceedances, not specified in the federal guidelines. This flexibility, not provided in the federal rules, is associated with increased monitoring. The proposed rule also specifies some monitoring requirements, including background measurement and compliance distances, that are not specified in the federal guidelines.

10. Is demonstrated technology available to comply with the proposed requirement?

10/14/05

Yes. Demonstrated technology and management practices for point and nonpoint sources are available to comply with the revised criteria. However, costs may vary depending on the size of the project and the extent turbidity-causing materials put into waterways. In some cases the costs could be too great; for example in dam removals or other extraordinary channel modifications, in some channel dredging operations, or in emergency situations where work must be perfomed quickly.

11. Will the proposed requirement contribute to the prevention of pollution or address a potential problem and represent a more cost effective environmental gain?

Yes. The proposed requirement will prevent turbidity pollution by limiting human-caused increases to specified levels in both the magnitude and duration of turbidity and at levels believed to be protective of beneficial uses, including the most sensitive uses. Costs would be reduced by allowing controlled and protective short-term pulses of turbidity while providing practical work period application and flexibility for specific projects.

Attachment E

DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ)
Chapter 340
Proposed Rulemaking
STATEMENT OF NEED AND FISCAL AND ECONOMIC IMPACT

Note: This document refers to proposed turbidity standards, which were part of the rulemaking released for public comment in October, 2005. However, the turbidity standard revisions are not being proposed for adoption at this time.

Title of Proposed Rulemaking:	Revising Water Quality Criteria for Turbidity, Temperature and Other Standards - Clean Water Act [Expanded title: Revisions to Division 41, Water Quality Standards: Criteria for Turbidity; Narrative Temperature Criteria; Repeal of Alternate Mixing Zone Requirements; and other Changes to Correct Errors and Clarify Language in the Temperature Criteria]
Need for the Rule(s)	The federal Environmental Protection Agency (EPA) has authorized DEQ to administer sections of the Clean Water Act (CWA). Section 303 of the CWA requires DEQ to review Oregon's water quality standards regularly to incorporate the latest scientific information and consider the state's current needs. OAR chapter 340, division 041 includes Oregon's water quality standards. <u>Turbidity</u>: This proposed rulemaking will revise the ambient water quality criteria for Oregon's turbidity standard to better address current information and understanding of the effects of turbidity on beneficial uses, including the most sensitive uses. Turbidity is a measure of cloudiness in water with turbidity levels increasing with increasing cloudiness in the water column. Turbidity can be caused by soil erosion, stormwater runoff and waste discharge. Beneficial uses that may be affected by turbidity include aquatic life; swimming, aesthetics, and recreation; drinking water supply; and agricultural and industrial water supplies. Rule revisions are designed to better address current conditions, including low ambient turbidity levels where the existing 10 percent increase allowance for turbidity may be negligible in relation to natural or background levels, and have little or no impact on beneficial uses. Revisions also include tighter restrictions on limited-duration exceedances, and language promoting greater uniformity in applying the rule. Oregon's turbidity standard was adopted in the 1970's and last revised in 1991 (and then only to shift measurement from JTUs (Jackson Turbidity Units) to more reliable and applicable NTUs (Nephelometric Turbidity Units)). <u>Temperature and other water quality standards</u>: The proposed rulemaking revises the narrative temperature criteria for natural lakes, oceans and bays, cool water species and Borax Lake chub. These revisions are needed to respond to EPA Region 10's decision to disapprove the current criteria, adopted in December, 2003. EPA is concerned that the current rule language may not protect beneficial uses. Additionally, the rulemaking includes a number of "errata" and minor changes to Division 41 to correct errors or clarify meaning of the rules adopted in December, 2003, when the Department reformatted the entire Division 41, and in May, 2004 when the Department updated the toxic pollutants criteria. Finally, the proposed rulemaking repeals the alternate requirements for mixing zones in OAR 340-041-0053(2) (h). These requirements are currently not being implemented because they

	were disapproved by EPA Region 10 in October, 2004, under their CWA authority to disapprove State water quality standards.
Documents Relied Upon for Rulemaking	Turbidity: The following documents are available at the websites indicated below or by contacting Tom Rosetta, Oregon DEQ, Water Quality Division, 811 SW Sixth Ave., Portland, OR 97204-1390, (503) 229-5053, or toll-free in Oregon at 1-800-452-4011, x5053, rosetta.thomas.n@deq.state.or.us. DEQ (2003). Draft Technical Basis for Revising Turbidity Criteria. Oregon Department of Environmental Quality, Program Policy and Project Assistance Section. (http://www.deq.state.or.us/wq/standards/wqstdshome.htm) Temperature and other water quality standards: DEQ (2005). Draft Memo on proposed Errata Changes to Division 41. DEQ (2005). Draft Memo on Revised Narrative Temperature Criteria. EPA (October, 2004). Letter from EPA Region 10 (Michael Gearheard) to Oregon DEQ Director (Stephanie Hallock) disapproving OAR 340-041-0053(2) (h) Alternate Requirements for Mixing Zones.
How Water Quality Standards are Used	The Department uses turbidity, temperature, and other water quality standards to: o Limit and control turbid wastewater and stormwater discharges to surface waters through National Pollutant Discharge Elimination System (NPDES) permits; o Certify activities under §401 of the CWA (e.g., dredge and fill and other instream activities including hydroelectric projects); o Identify impaired water bodies for listing under §303(d) of the CWA; o Develop Total Maximum Daily Loads (TMDLs), including management plans to control discharges from nonpoint sources to waters of the state; o Prioritize and carry out water quality monitoring programs; and o Determine the effectiveness of nonpoint source management under Forest Practices Act (FPA) rules, Senate Bill (SB) 1010 implementation plans for agriculture, and federal water quality implementation plans. Other agencies and local governments designated to manage nonpoint sources under their authority also use the criteria to establish and implement management practices to control discharges to waters of the state.
Who May be Affected	The public interested in the quality of Oregon's waters and small and large businesses, communities, and public agencies that conduct activities that increase turbidity in waters of the state may be affected by the proposed changes
Rule Changes Proposed	Turbidity and overview of how changes may affect costs The proposed rules revise turbidity criteria as follows: • Revise water quality criteria for turbidity to better address effects on beneficial uses. OAR 340-041-0036(2) and (3) o Revise the allowable increases above background turbidity using maximum and monthly average limits for different background levels. (Existing criteria allow 10% cumulative increase above background for any activity.) o Continue to allow limited duration exceedances of the criteria for discharges under a permit or §401 certification but cap the exceedances. (No maximum cap in current rule. Criteria are developed for specific projects through water quality 401 certifications.)

- Allow additional exemptions from criteria for channel restoration activities, emergencies, and essential dredging activities.

- Establishes a specified distance downstream from a source where compliance is measured (compliance distance) in the draft rule OAR 340-041-0038(3), with defined compliance distances identified for both flowing and ponded systems.
- Exempts nuisance phytoplankton growth regulated under OAR 340-041-0019 from the turbidity criteria.

Changes in the numeric turbidity criteria themselves will not significantly affect current practices because the revised criteria NTU levels are equivalent to or less stringent than existing criteria.[1] Proposed criteria would be less restrictive than current criteria as applied to sources of pollution since proposed criteria would result in similar or greater water quality effluent limits. Both existing and proposed criteria have processes to allow in-stream work, and for that work, both would require the same Best Management Practice (BMP) implementation to be employed to the maximum extent practicable. Restrictions placed in the new rule may result in less flexibility in implementing the criteria than with the existing rule. In other cases there would be more flexibility with the new rule. This is discussed in more detail below regarding compliance distances, visual criteria, and limited duration exceedance criteria. The Department believes that overall, most sources or activities that meet existing criteria will also meet the revised criteria.

The proposed standard is more explicit than the current rule by identifying compliance distances. A compliance distance is the distance (in feet) from the point of discharge or re-suspension of turbidity-causing materials to a point downstream in flowing systems, or to a point on a radius regarding ponded systems, at or beyond which the criteria must be met. Sources may be either less or more constrained by explicit compliance distances under the proposed rule as compared to the current rule which relies on site-specific project characteristics and professional judgment in order to make compliance distance decisions for each application. For all but the smallest stream width category, the proposed compliance distances would be equivalent to or greater than what has typically been applied in CWA 401 water quality certifications. This equates to a less stringent criteria for some dischargers by allowing more dilution at the point of compliance. Other sources may be more constrained as discretion for larger compliance distances is limited. Discharges to the smallest water body category (≤ 30 feet width) may be more constrained. However, there may be little difference with the proposed criteria since full mix can be rapidly reached for small water bodies resulting in little change of turbidity beyond the point of full mix unless deposition of discharged materials is occurring. Beyond these practical comparisons, there has been a concern that less flexibility in the proposed rule regarding compliance distances could result in more stringent applications of the criteria in the new rule.

The visual contrast criterion, which has been used as a compliance condition in 401 certifications is also embodied jn the proposed rule. This is more restrictive of activites than the numeric 5 NTU maximum criteria, depending on the clarity of the background level for comparison. There will be sources that produce visible plumes, but who have not monitored in the past, that would have to monitor the numeric criteria in order to achieve compliance. For sources that have used visual monitoring in the past, the achievement of the criteria would not change under the proposed rule.

Existing criteria do not cap limited duration exceedances. The new caps are believed to be consistent with the exceedances allowed in the past through permits or certifications. The proposed rule would extend the application of limited duration exceedances to permitted projects with discharges originating out of the stream (upland). This would potentially reduce costs under the proposed criteria. However, for many in-stream projects, the proposed rule is more explicit in describing the exceedance parameters (magnitude and duration) in order to

[1] The proposed maximum turbidity criteria (applicable at a discrete time and location) are less stringent than existing criteria at all background levels. The monthly average turbidity criteria are less stringent than existing criteria at background levels at and below 30 NTUs and are equivalent to the existing criteria at higher background levels.

	protect uses. This may constrain some turbidity-causing activities, resulting in greater BMP costs for in-stream activities. For other projects, limited to ecological restoration, essential dredging, and emergencies, additional flexibility in the proposed rule is similar to the current rule. Turbidity criteria, like other water quality standards, apply to all affected sources. In the past, DEQ has limited application of turbidity criteria in permits, due in part to the lack of precision in the pre-1991 criteria. More comprehensive implementation of the turbidity criteria will affect a number of permitted sources, as noted below. <u>Temperature and other water quality standards</u> The proposed temperature narrative revisions change the criteria for natural lakes, oceans and bays and Borax Lake chub from a limited increase above the "ambient" temperature to a limited increase above the "natural condition." The criterion for cool water species is changed to prohibit an increase in temperature that would reasonably be expected to harm the cool water species beneficial use. The proposed changes also include a variety of revisions to correct errors and clarify meaning. For example, several of these are cross references that were not updated when changes were made between the proposed and final rule. A couple revisions refer to the basin specific criteria so that readers are aware that some criteria, such as pH and TDS vary by basin. Another corrects Table 33A, which shows toxic pollutant criteria are effective as of February 15, 2005 for purposes of State law. All of the proposed changes are listed in the "Draft Memo on Proposed Errata Changes to Division 41," DEQ, June 2005. The proposed repeal of the alternate mixing zone requirements removes the requirements from the mixing zone rules.
Fiscal and Economic Impacts - Turbidity	This section discusses how proposed criteria changes may affect costs to the regulated community and to regulators. The evaluation is broken down by types of permits as well as types of business or regulatory role of agencies. Additional information is currently being gathered regarding specific activities, especially with respect to small business. This information will be received through the upcoming public review period (slated for mid-October to the end of November 2005) and be evaluated for the final fiscal impact assessment. An addendum is attached at the end of this report that provides a detailed evaluation of BMP choices, and relative cost scenarios based on specific activity-types. Table1 of the addendum lists important categories and the number (per year) of projects that undergo CWA water quality certification reviews. Table 2 lists the numbers of active NPDES permits that may involve turbidity discharges. ***NPDES Permits:*** Because the proposed criteria are equivalent to or less stringent than existing criteria in most respects, DEQ expects the costs of compliance with the proposed criteria to decrease or remain the same for most sources with individual NPDES permits. Permitted sources subject to but not in full compliance with the existing turbidity criteria may incur a cost for compliance. In addition, as discussed below, sources registered under several general permits for wastewater and storm water discharges and municipalities with NPDES permits for storm water discharges from their separate storm sewer systems may experience compliance costs. Costs may be associated with treatment strategies including but not limited to system management, outfall structures, and capability to filter or settle out suspended solids (see attached addendum for more information). The Department will conduct reasonable potential analyses (RPAs) in order to identify sources that require limits. The proposed rule would allow limited duration exceedances in cases where short-term high-turbidity releases may be needed and for which the monthly average criteria can still be met. This would not be allowed under the current rule. Sources may have more difficulty in meeting criteria if they discharge high turbidity continuously into waterbodies that do

not provide adequate dilution, particularly with respect to smaller receiving waters. Costs will subject to management, treatment, or most likely both.

DEQ will review the effectiveness of technology-based controls for several general permits including suction dredging 700-J, and seafood processing 900-J, filter backwash 1000-J, fish hatcheries 300-J, and wash water 1700-A. . DEQ will address turbidity in new permits and permit renewals as described in DEQ's *Implementation Guidance for Turbidity Standard* (9/04). DEQ will also review the turbidity controls in existing permits as they come up for renewal and may require additional controls. Regardless of whether a new criteria is adopted or the existing criteria is maintained, the current review of turbidity criteria as well as increased attention to storm water discharges will probably raise the expectation level for improving BMPs to meet a turbidity standard, whatever the final decision may be.

The proposed rules allow compliance with the turbidity criteria to be determined using visual observation in lieu of a turbidimeter for many activities, which may eliminate turbidimeter expenses for some activities (although visual observations are already used to measure compliance for some of these sources).

Allowing limited duration exceedances from the turbidity criteria for riparian, wetland, channel restoration, dredging, and other in-water work through a permit or §401 certification may decrease costs for some of these activities, although controls to protect water quality may still be required.

§401 certification:
DEQ currently requires compliance with turbidity criteria in §401 certifications. Application of the proposed criteria would not significantly alter certification practices or costs. Under both the current and proposed criteria, the implementation of BMPs would be to the maximum extent practicable. To support consistent application of the turbidity criteria, the revised rule describes compliance distances and limited duration exceedances that would be used in §401 certifications. As discussed above, explicit compliance distances, and explicit limited duration criteria that cap the magnitudes and durations of allowed turbidity pulses may constrain some activities that would not be constrained under the existing criteria, requiring greater turbidity control and potentially higher costs than with the current rule. However, this does not account for the potential costs associated with habitat or other resource losses downstream of activities under the current rule which does not cap the magnitude or duration of limited duration exceedances.

Other applications:
DEQ does not expect changes in the criteria to significantly affect other applications of revised criteria: identifying impaired water bodies under §303(d) of the CWA; developing TMDLs; monitoring water quality; and evaluating Forest Practices Act, agricultural SB 1010, federal, and local water quality implementation plans.

Costs of compliance:
Costs for complying with the proposed turbidity criteria for most activities should be the same or less than costs with existing criteria which are equivalent or more stringent and more difficult for many sources to apply. For some activities, particularly those that would discharge high levels of turbidity into state waters, proposed criteria may be more constraining than the current criteria, and potentially more costly.

NPDES-permitted sources and activities requiring §401 certification not fully complying with the existing turbidity criteria may require the following compliance costs: a turbidimeter if required (@$700 - $1000); grab sample monitoring (daily monitoring or less during discharges with constant turbidity level and effluent flow and requiring more frequent monitoring if turbidity or effluent flows vary substantially); reporting turbidity under their NPDES permits (<1-2 hours/month); and any costs associated with facility upgrades to meet the proposed criteria (e.g., additional best management practices or treatment equipment

	DEQ does not expect full implementation of the revised criteria to require additional costs for most nonpoint sources subject to TMDLs or other management plans.
Small Business	DEQ expects that small business with individual NDPES-permitted discharges currently complying with the existing turbidity criteria will require no upgrades or other costs to comply with the revised turbidity criteria. As described in the overview above, compliance costs for these sources would remain the same or decrease. Newly regulated sources may incur costs for monitoring and reporting and any changes in management practices or other upgrades necessary to comply, as described in the Overview. It is possible that greater management or use of BMPS would be necessary to achieve criteria at the proposed compliance distances and with respect to the visual criteria. Activities under NPDES permits that currently require turbidity monitoring would be revised according to the new rule revisions. Under proposed criteria, compliance distances in permits regarding recreational mining (700PM) would be modified, potentially making compliance with turbidity criteria more difficult for miners who use larger dredges (4 inch diameter or greater) or in cases where two or more dredges with diameters of less than four inches are used at the same location. However, compliance would be easier under the proposed criteria compared to the current criteria for miners using one dredge with diameters of less than four inches. That is because a field test conducted by DEQ indicated that a single dredge (< 4 inches in diameter) would meet limited duration criteria in the proposed rule, and monitoring would not be required. There may also be additional monitoring costs for sources that produce visible plumes, but who have not monitored in the past, that would have to monitor the numeric criteria in order to achieve compliance. Additional monitoring costs may also be associated with determining compliance of numeric criteria for sources not currently subject to visual contrast criteria. DEQ plans to use compliance schedules to allow owners or operators of newly regulated sources time to comply with the revised criteria and will work with these businesses through the permitting process to help minimize compliance costs. Because proposed criteria are less stringent than existing criteria, DEQ does not expect small businesses responsible for nonpoint source discharges subject to forestry or agricultural management plans or TMDLs to incur costs for additional management practices to control those discharges as a result of the proposed changes.
Large Business	DEQ expects large businesses that have NPDES-permitted discharges or are responsible for nonpoint source discharges to incur the same costs savings and increases as described for small businesses. Most of the newly regulated sources with individual NPDES permits and some under the general permits will be large businesses, including most of the major, or large volume, dischargers.
Local Government	Local governments that have NPDES permits for point sources or are responsible for nonpoint sources that are or will be subject to the proposed turbidity criteria will incur the same fiscal impacts as described for large and small businesses. Locally-owned sewage treatment plants with lagoons are the primary local government source that may face greater requirements as turbidity criteria are implemented for the first time in permits. Lagoons are easy to operate, are relatively inexpensive, and often preferred by small communities. The proposed criteria will result in fewer communities being newly regulated for turbid discharges from lagoon systems as compared to the existing criteria. Well operated lagoons are generally expected to be able to achieve criteria if discharging within dilution design requirements. Lagoons discharging to streams providing limited dilution or containing high turbidity from algae may require increased management or upgrades. Upgrades may vary from simple to more sophisticated treatment systems requiring greater financial and management costs, and may be difficult for small communities to operate and finance, especially if new facilities are required. In addition, the local governments with NPDES municipal storm sewer system permits subject to existing

	criteria that have not implemented best management practices to the maximum extent practicable, as currently required, may also incur costs to comply with the revised criteria, as described in the Overview. Because DEQ does not expect to add or revise TMDLs as a result of the proposed changes, local governments that are designated management agencies for nonpoint sources under their authority should not incur additional administrative costs associated with TMDL implementation.
General public	The revised criteria will benefit the general public by protecting beneficial uses of Oregon's waters. These uses provide fiscal and economic benefits such as drinking water, water for industrial and agriculture activities, increased recreational opportunities and protection of fish and wildlife. Businesses and local governments may pass along to the public cost increases or savings that result from compliance with revised criteria in the form of increased costs and fees. DEQ expects any resulting costs or savings to the public to be negligible because projected fiscal impacts will not alter overall business or project costs significantly, and any changes will be further attenuated when spread among the goods or services produced.
State Agencies	State agencies, such as the Oregon Department of Fish and Wildlife, the Oregon Department of Transportation, Oregon Department of Forestry (ODF) and Oregon Department of Agriculture (ODA), that have NPDES permits for point sources or are responsible for nonpoint sources that are or will be subject to the proposed turbidity criteria will incur the same fiscal impacts as described for large and small businesses and local government. Since DEQ does not expect to add or revise TMDLs as a result of the proposed changes, state agencies that are designated management agencies for nonpoint sources under their authority should not incur additional administrative costs associated with TMDL implementation. For ODF and ODA, charged with ensuring that forestry and agriculture sources under their authorities meet water quality standards, including turbidity criteria, the revised criteria may result in increased costs if they necessitate changes to rules implementing the Forest Practices Act and Senate Bill 1010.
DEQ	Implementation of turbidity criteria may result in staff time to work through compliance. Implementing the proposed criteria will be less costly to staff resources than the existing criteria because compliance will be equivalent to or less difficult to achieve than compliance of the old criteria. There may be added costs of compliance with water quality standards as DEQ updates legally defensible permits. These costs area in part due to implementing BMPs in order to control sediments and meet water quality standards including turbidity criteria.
Other agencies	See Local Government and State Agencies for impacts on other agencies.
Assumptions	This analysis is based on existing state and federal laws and regulations that establish requirements for maintaining and restoring water quality. It assumes that equivalent criteria (existing and proposed) will not affect costs, that less stringent proposed criteria will reduce costs. It also considers BMPs (Best Management Practices) needed to meet criteria, and associated costs, as well as monitoring costs.
Housing Costs	The Department has determined that this proposed rulemaking will have no effect on the cost of development of a 6,000 square foot parcel and the construction of a 1,200 square foot detached single family dwelling on that parcel. BMP costs would be the same for the old and new (proposed) criteria. The current review of turbidity criteria as well as increased attention to storm water discharges will probably raise the expectation level for improving BMPs to meet a turbidity standard whatever the final decision may be regarding whether a new criteria is adopted or the existing criteria is maintained.
Fiscal and	This analysis of the fiscal and economic impacts of the proposed temperature narrative and

Economic Impacts – Temperature and Other Water Quality Standards	errata rule changes and the repeal of the alternate mixing zone requirements is limited in scop because DEQ expects there will be little cost associated with these revisions. The proposed revisions to the narrative temperature criteria for natural lakes, oceans and bays and Borax Lake chub are expected to have a negligible fiscal or economic impact. While the wording is being revised, the policy intent and implementation of the criteria will largely be the same as under the current language. The exception would be a natural lake or bay that has been impacted by human activity in a manner that has altered the temperature of the lake or bay outside of an assigned mixing zone. In this case, the revised standard would be more costly for DEQ to implement because DEQ would need to determine the natural temperature condition of the lake or bay, the magnitude of the temperature increase that has been caused by human activity, and possibly develop a TMDL to reduce the anthropogenic heat load to the lake or bay. DEQ expects this situation to be rare if it occurs at all and there are very few permitted discharges into lakes. The proposed revision to the narrative criterion for cool water species may require slightly more agency resources to implement than the current rule language because it will in some cases require a site specific evaluation of whether a proposed increase in temperature will impair the local cool water species. However, there are very few water bodies in the State designated for cool water species use and very few NPDES sources discharge to those waterbodies. In addition, a screening analysis can be used to determine whether there is reasonable potential to impair cool water species, which will further limit where additional analysis is required. Depending on the case, the new criteria language could be more or less restrictive or costly for those few sources where the site specific evaluation will be required. The proposed errata revisions to Division 41 are not expected to have a fiscal or economic impact. The alternate mixing zone requirements were disapproved by EPA Region 10 in October of 2004. Because of the disapproval, the rule is not effective for Clean Water Act purposes and is not being implemented. Therefore, repeal of the language from the Oregon rules will not cause fiscal or economic impact.
Advisory Committee And Stakeholder Involvement	In developing the proposed turbidity criteria, DEQ consulted with external and internal policy and technical advisory groups to develop the proposed changes. Involved stakeholder groups have included: Associated Oregon Industries, Oregon Forest Industry Council, Oregon Farm Bureau, Oregon Cattlemen's Association, Confederated Tribes of the Siletz Reservation, Association of Clean Water Agencies, Northwest Environmental Advocates, League of Oregon Cities, Oregon Environmental Council, Oregon Trout, Northwest Pulp & Paper Association, Pacific Coast Federation of Fishermen's Associations, small-scale suction miners, The Port of Portland, Oregon Home Builder's Association, various tribal representatives, and state & federal agencies. The external technical advisory group included representatives of academia and state and federal resource agencies. A public review of the draft turbidity technical basis was conducted in February and March of 2004. DEQ is currently in the process of consulting with the regulated community, especially small business, in order to refine information regarding costs of the turbidity rule change on specific activities, including but not limited to: dredge and fill operations, construction activities, municipal & industrial wastewater facilities, recreational mining, fish processing plants, and agricultural & forestry operations.

Prepared by _____ Printed name _____ Date _____

Approved by DEQ Budget Office _____ Printed name _____ Date _____

Attachment F

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking Proposal
for
Water Quality Criteria Revisions

Land Use Evaluation Statement

Note: This document refers to proposed turbidity standards, which were part of the rulemaking released for public comment in October, 2005. However, the turbidity standard revisions are not being proposed for adoption at this time.

1. Explain the purpose of the proposed rules.

Turbidity:

This proposed rulemaking will revise the ambient water quality criteria for Oregon's turbidity standard to better address the effects of turbidity on beneficial uses, including the most sensitive uses. Turbidity is a measure of cloudiness in water. It can be caused by soil erosion, waste discharge and runoff. High turbidity levels mean that water bodies have a denser amount of particles in the water. Turbidity may adversely affect several designated beneficial uses pertaining to water supply, aesthetics and recreation and aquatic life including endangered fish.

The proposed turbidity criteria incorporate current scientific data to better address the effects of turbidity on beneficial uses, including the most sensitive beneficial uses. Revisions are designed to better address current conditions, including low ambient turbidity levels where the existing 10 percent increase allowance for turbidity may be negligible in relation to natural or background levels, and have little or no impact on beneficial uses. Revisions also include tighter restrictions on limited-duration exceedances, and language promoting greater uniformity in applying the rule.

Temperature and Other Standards:

The proposed rulemaking also revises narrative temperature criteria for natural lakes, oceans and bays, cool water species and Borax Lake chub to address EPA concerns that EPA can not approve the current criteria as being protective of the beneficial uses.
This rule package also proposes "errata" and minor changes to Division 41 to correct errors or clarify meaning of rules adopted in December 2003, when the Department reformatted the entire Division 41, or in May, 2004. The proposed changes include:

- adding or correcting cross references,
- making a few small corrections to the fish use designation maps,
- correcting changes made for the purpose of reformatting and streamlining the rule that mistakenly changed the meaning of the criteria,

- correcting Table 33A, which shows which toxic pollutant criteria are effective as of February 15, 2005 for purposes of State law, and
- others as described in a DEQ memo on proposed errata revisions dated June, 2005.

Finally, this rule package proposes to repeal the alternate mixing zone requirements under the Mixing Zone rules contained in our water quality standards rules (OAR 340, Division 41). The alternate mixing zone requirements were disapproved by EPA in October, 2004 and are, therefore, not effective under the Clean Water Act and not being implemented by DEQ at this time.

2. Do the proposed rules affect existing rules, programs or activities that are considered land use programs in the DEQ State Agency Coordination (SAC) Program?

Yes X No____

a. If yes, identify existing program/rule/activity:

OAR 340-018-030 [Coordination of land use rules]
(5) Water Quality Division:
(a) Approval of Wastewater System and Facility Plans;
(e) Issuance of NPDES and WPCF Permits;
(f) Development of Water Quality Wetland Protection Criteria;
(g) Requirement of an Implementation Plan to Meet Restrictions for Waste Load Allocations on Water Quality Limited Waterways (TMDLs);
(h) Certification of Water Quality Standards for Federal Permits, Licenses.

b. If yes, do the existing statewide goal compliance and local plan compatibility procedures adequately cover the proposed rules?

Yes X No____ (if no, explain):

Programs/activities are existing DEQ land use programs and require an approved Land Use Compatibility Statement (LUCS) or other evidence of approval from affected local governments to ensure consistency with local comprehensive land use plans.

c. If no, apply the following criteria to the proposed rules.

Staff should refer to Section III, subsection 2 of the SAC document in completing the evaluation form. Statewide Goal 6 - Air, Water and Land Resources is the primary goal that relates to DEQ authorities. However, other goals may apply such as Goal 5 - Open Spaces, Scenic and Historic Areas, and Natural Resources; Goal 11 - Public Facilities and Services; Goal 16 - Estuarine Resources; and Goal 19 - Ocean Resources. DEQ programs and rules that relate to statewide land use goals are considered land use programs if they are:

1. Specifically referenced in the statewide planning goals; or

2. Reasonably expected to have significant effects on
   a. resources, objectives or areas identified in the statewide planning goals, or
   b. present or future land uses identified in acknowledged comprehensive plans.

In applying criterion 2 above, two guidelines should be applied to assess land use significance:

- The land use responsibilities of a program/rule/action that involved more than one agency, are considered the responsibilities of the agency with primary authority.
- A determination of land use significance must consider the Department's mandate to protect public health and safety and the environment.

In the space below, state if the proposed rules are considered programs affecting land use. State the criteria and reasons for the determination.

3. **If the proposed rules have been determined a land use program under 2. above, but are not subject to existing land use compliance and compatibility procedures, explain the new procedures the Department will use to ensure compliance and compatibility.**

Not applicable.

DEQ's Mission: To be an active leader in restoring, enhancing, and maintaining the quality of Oregon's air, water, and land.

Water Quality Standards

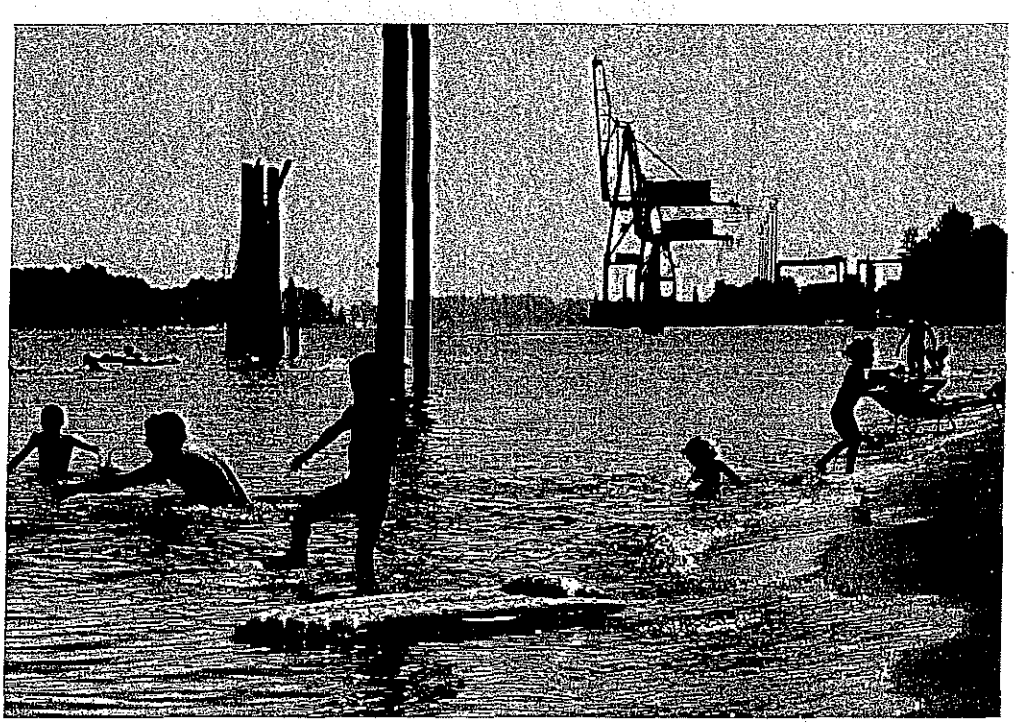


Photo courtesy of Port of Portland

Water. If there is one thing all Oregonians agree on, it's that water is one of our most precious natural resources. In fact, with over 100,000 miles of streams and rivers, 360 miles of coastline and some of the cleanest lakes and reservoirs in the world, you could say that water defines Oregon. Our rivers, streams and lakes not only provide great natural beauty, they supply the water necessary for drinking, recreation, industry, agriculture and aquatic life.

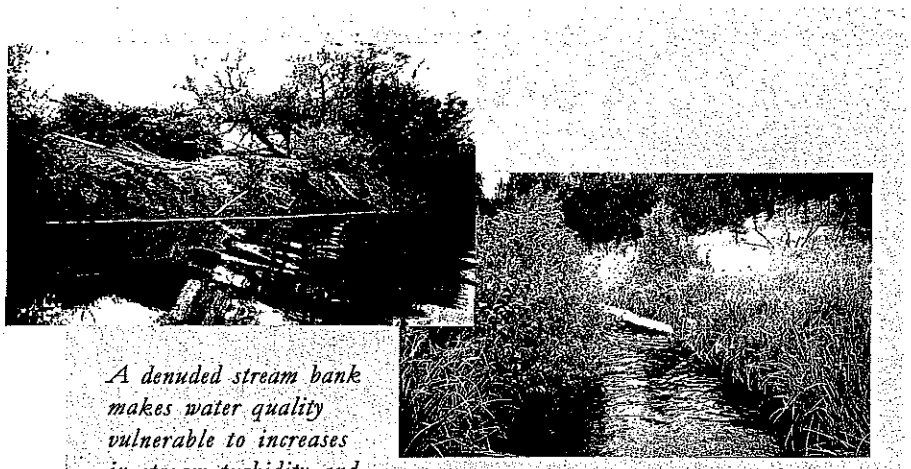
"DEQ scientists monitor hundreds of rivers, streams, lakes, groundwater areas and estuaries in Oregon."

Why we need water quality standards

Standards are the benchmarks we use to know if we're doing our job to protect Oregon's water. When a river or stream meets the standards, the activities the water is used for are protected. Standards tell us if we can allow more growth (and the water pollution that comes with growth) in a given area and still maintain safe, healthy, aesthetically pleasing waters.

The elements of water quality standards

The first element identifies the existing or potential uses of the water. This might include supporting activities like recreation, fishing, and irrigation. The second element identifies specific benchmarks that describe the quality of water needed to be able to use the water for those purposes. These guidelines can be either narrative or numeric. Narrative guidelines describe what Oregon's waters will be "free from", like oil and scum, color and odor, and other substances that can harm people and fish. Numeric guidelines assign numbers that represent limits and/or ranges of chemical concentrations, like oxygen, or physical conditions like water temperature.

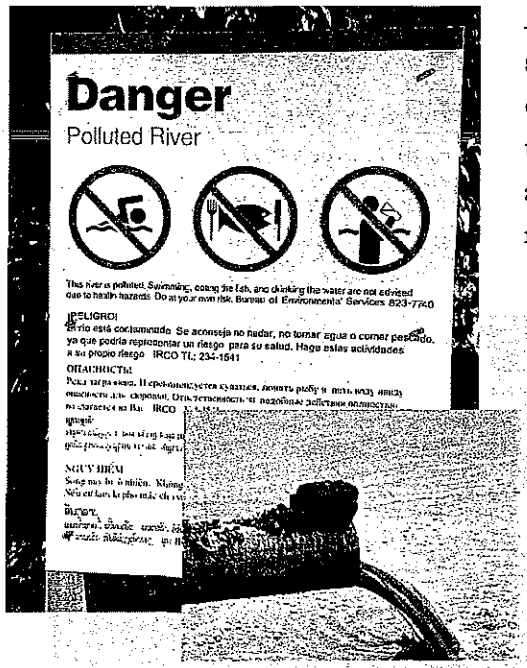


A denuded stream bank makes water quality vulnerable to increases in stream turbidity and temperature as well as excessive erosion and runoff.

Adequate stream side vegetation plays a vital role protecting water quality. It provides shade, stablizes banks preventing erosion and filters runoff, which can contain a wide variety of pollutants like fertilizers, sediment and toxic chemicals.

A water body often has to support several uses, including cold-water fish like salmon and trout, industrial processes and agriculture. Federal law requires that DEQ protect the most *sensitive* of these uses. So while exceeding the temperature standard might have little impact on industry or agriculture, salmon and trout are profoundly affected by water temperature and must still be protected.

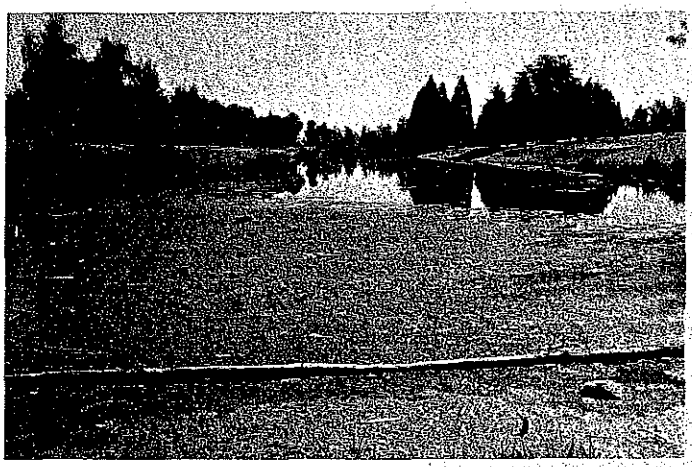
Water quality standards are not established to protect against detrimental effects of all water



When it rains - even just a little - combined sewer overflows, or CSOs, carry untreated human wastes and storm water runoff directly into the river. DEQ has water quality standards that limit how much ***fecal coliform bacteria*** *can be present in water. When bacteria are from human sources, such as sewage, there is a particular concern from a human health standpoint.*

Photos courtesy of City of Portland, Bureau of Environmental Services

pollution 100% of the time - a certain level of risk is allowed. For example, standards for human carcinogens in water – things like arsenic and PCBs – are set using a risk estimate of 1 in one million.



Although a certain amount of ***algae*** *is essential in a healthy aquatic ecosystem, too much is a problem. Algal blooms (excessive amounts of algae) are commonly caused by fertilizers entering streams from agriculture and urban sources like lawns and gardens. Algal blooms can turn water green and murky and can increase the pH, causing eye irritation in humans. When blooms die off, the bacteria that consumes the dead algae can severely deplete oxygen in the water, harming fish and other aquatic organisms.*

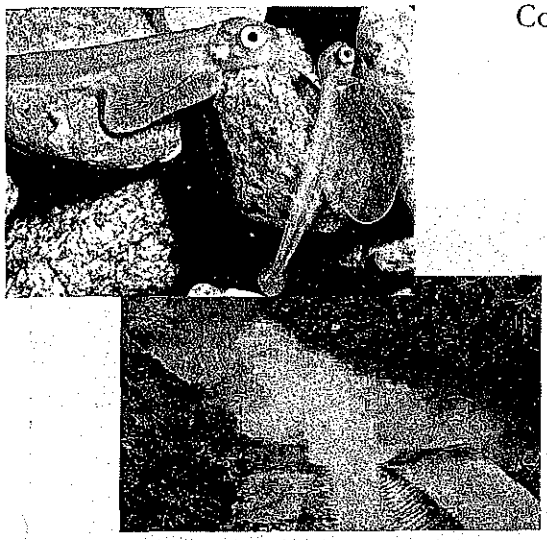
Photo courtesy of Oregon Department of Fish and Wildlife

How are water quality standards established?

The most important thing DEQ does is look at all of the information available from scientists in Oregon, at EPA, and across the nation. All of the written scientific information is reviewed. Additional studies are completed if necessary.

This information is taken to a technical/scientific advisory committee. This committee is made up of experts from universities, industry, state and federal agencies, Indian tribes and environmental groups. The technical group typically develops a range of possible standards which is forwarded to a second group, a policy advisory committee, which reviews the alternatives and selects one. The Oregon Environmental Quality Commission actually adopts the standards, after extensive public review.

DEQ examines its standards every three years to make sure they are up to date scientifically.



The ***temperature standard*** *protects Oregon's native "cold-water" species like salmon, trout, and amphibians. When water temperature becomes too high, cold-water species suffer a variety of ill effects ranging from decreased spawning success to death.*

Turbidity *is caused by fine particles of soil, clay and sand being carried into lakes, streams and rivers by stormwater runoff. Excessive turbidity can clog the gills of fish, promote excessive algae growth, and reduce oxygen in water. It also fills in gravel beds, destroying salmon spawning habitat.*

Photos courtesy of Oregon Department of Fish and Wildlife

How are water quality standards measured and applied?

DEQ scientists monitor hundreds of rivers, streams, lakes, groundwater areas and estuaries in Oregon. The monitoring process involves many techniques ranging from on-the-spot measurement of things like pH and alkalinity to taking water samples for later laboratory analysis for things like heavy metals or bacteria. DEQ also has computerized equipment that continuously monitors and records conditions including temperature and oxygen in a stream over a period of days, weeks or months. All data is reviewed for precision and accuracy using strict, scientifically sound protocols and EPA approved quality assurance methods. A report is prepared every two years showing which waters in Oregon don't meet standards.

All data is reviewed for precision and accuracy using strict, scientifically sound protocols.

Water Quality Standards

- Serve as benchmarks to protect human and aquatic health
- Indicate condition of a given water body
- Protect the most sensitive of multiple uses
- Serve as planning tools for setting water quality goals
- Estimate a certain level of risk from pollution

For more information contact:

DEQ Water Quality Division
811 SW Sixth Avenue
Portland, Oregon 97204-1390
(503) 229-5279 or (800) 452-4011
www.deq.state.or.us
www.epa.gov

DEQ is a partner in the Oregon Plan for Salmon and Watersheds.

State of Oregon
Department of Environmental Quality Memorandum

Date: February 5, 2007

To: Environmental Quality Commission

From: Stephanie Hallock, Director S. Hallock

Subject: Agenda Item H, Rule Adoption: Error Corrections and Clarifications to 2003 and 2004 Water Quality Standards Rules.
February 22, 2007 EQC Meeting

Why this is Important

Under the federal Clean Water Act, States adopt water quality standards to protect public health and the environment. Water quality standards identify the levels of chemical substances and the physical characteristics of water bodies needed to protect the uses of the State's waters. It is important that the water quality standards rules are clear and correct in order to not mislead or confuse the public and DEQ staff who must comply with or implement the rules.

Purpose of Rulemaking

The purpose of this rulemaking is to correct and clarify Oregon's water quality standards rules as follow-up to major revisions in 2003 and additional revisions in 2004.

Department Recommendation

The Department of Environmental Quality (DEQ) recommends that the Environmental Quality Commission (EQC) adopt the proposed rule revisions, shown in Attachment A-2 (OAR Chapter 340, Division 41), to correct errors and clarify the meaning of water quality standards rules adopted by the EQC in December 2003. DEQ also recommends corrections to the effective dates of criteria adopted in May 2004 to reflect that these criteria have not yet been approved by EPA.

When DEQ requested public comment on the proposed rules, the rulemaking package also included revisions to turbidity and temperature criteria and the mixing zone rule. The temperature and mixing zone rule revisions are being proposed for EQC adoption under a separate agenda item. See the staff report for agenda item G, February 22, 2007.

DEQ is not proposing changes to the turbidity criteria at this time. DEQ decided to do further work on the turbidity criteria, including obtaining review from the Independent Multi-Disciplinary Science Team and additional public review.

Background

The federal Clean Water Act (CWA) requires that states adopt water quality standards to protect fish and aquatic life, human health and other beneficial uses of the state's waters. Oregon law gives the EQC the authority to adopt water quality standards by administrative rule in order to fulfill this federal requirement.

The Environmental Protection Agency (EPA) is required to review standards adopted by the state. EPA has the authority to disapprove state standards if EPA concludes the standards do not adequately protect the uses of the state's waters. DEQ is discussing with EPA Region 10 whether the proposed corrections and clarifications will require EPA approval. DEQ expects that many of these revisions will not require approval because they: 1) are non-substantive, editorial changes; 2) restore language that was previously approved by EPA, or 3) correct fish use maps consistent with the methods and data used to develop the 2003 maps that were approved by EPA.

DEQ uses water quality standards to:

1. Limit pollution in State waters by requiring cities and businesses to obtain a permit when it is necessary to release pollutants into the environment;
2. Certify that certain activities, such as dredge and fill activities and hydroelectric dams and diversions, will meet water quality standards;
3. Assess the quality of the State's waters; and
4. Develop plans for restoring impaired waters (Total Maximum Daily Loads, TMDLs).

The large number of errors in the December 2003 rulemaking was due to the combination of: 1) a short timeframe (7 months) to complete the revisions required by the court order in the case of Northwest Environmental Advocates v. EPA (2003), and 2) the size and scope of the rulemaking.

<u>The 2003 rulemaking included</u>:

1. A major reformatting of the water quality standards rules (Division 41) to significantly reduce the size and redundancy of the rules and to make them easier to use. The reformatting changes proposed by DEQ were not intended to substantively change the standards or policy.
2. Changes to the temperature standards in response to EPA Region 10's Temperature Criteria Guidance. (For example, new criteria for bull trout and core cold water habitat were adopted.)
3. Mapping fish and aquatic life use subcategories for the first time to clarify where and when different fish species and life stages occur (This was done in response to a court order in the case of Northwest Environmental Advocates v. EPA, 2003).
4. Changes to Oregon's antidegradation policy. (This policy requires that

DEQ or EQC analyze alternatives and carefully consider whether the benefits of allowing degradation of a high quality water outweigh the impacts, even if the proposed activity will meet water quality standards).

5. Increasing the stringency of the intergravel dissolved oxygen criterion (a criterion for the amount of oxygen in the water between stream bed gravels needed to support developing fish eggs).

The 2004 rulemaking included revisions to many of Oregon's toxic pollutants criteria to align them with EPA's most recent recommended criteria (published in 2002). Prior to 2004, Oregon's toxic pollutants standards were based on EPA's 1986 criteria.

Need for Rulemaking and Effect of Rule

The proposed revisions are needed to correct errors and clarify the meaning of rules adopted by the EQC in 2003. Please see Attachment A-1 for additional description and explanation of the proposed revisions listed here. Attachment A-2 shows the proposed revised rule language (in red), tables and figures. (The rule language shown in blue applies to Agenda Item G, Revision of Oregon Temperature and Mixing Zone Rules to Align with EPA Action.)

The proposed error corrections include:

1. Correct cross-references to tables, figures or other rule provisions.
2. Replace three definitions, which were inadvertently omitted because they were no longer used in the temperature standard. These terms are still used in other standards.
3. Move rule language that was incorrectly placed or numbered, replace language that was mistakenly omitted, and remove language that was mistakenly repeated during the Division 41 reformatting (the language is not changed).
4. Correct a few fish and spawning use map errors (for example, three reaches where the spawning use shown is incorrect and one reach incorrectly identified as an 'out of state water').
5. Revise Tables 33A and 33B to correctly show which of the toxic pollutants criteria may currently be used for NPDES permitting and which may not be used until they are approved by EPA (the criteria are not changed).
6. Others shown in Attachment A-1.

Several revisions are recommended to clarify meaning where an inconsistency or possible confusion has been pointed out by DEQ staff or the public:

1. Clarify the total dissolved solids and pH rules. In other existing sections of the rules, these criteria vary by basin. The reader needs to look in the basin rules for these criteria.
2. Clarify that the "unidentified tributaries" provision in the temperature

standard applies to the year round fish use designations, not to the spawning use designations.
3. Eliminate any possible confusion that the dissolved oxygen criteria for spawning apply to resident trout in addition to salmon and steelhead.
4. Make two paragraphs of the antidegradation rule consistent in authorizing either the Department or the Commission to grant exemption from antidegradation requirements.
5. Others shown in Attachment A-1.

Commission Authority

The EQC has authority to take this action under ORS 468.020, 468B.010, 468B.015, 468B.030, 468B.035, and 468B.048.

Stakeholder Involvement

DEQ did not assemble an advisory committee for this rulemaking. Given the Department's limited resources for water quality standards work and the nature of these revisions, we provided for stakeholder involvement through an opportunity for public comment.

Public Comment

A public comment period extended from October 17, 2005 to February 6, 2006 and included 6 public hearings, located in Portland, Eugene, North Bend, Bend, Grants Pass and Baker City. A summary of public comment and the agency responses are provided in Attachment B. Hearing officer reports are provided in Attachment C.

DEQ released several proposed revisions to the water quality standards rules (Division 41) for public comment at this time, including the revised temperature criteria, mixing zone rule, turbidity criteria and numerous corrections and clarifications. You will see comments on these other topics in the attached documents, although this rulemaking deals only with the corrections and clarifications.

4 people provided 7 comments on the rule correction and clarification revisions. Most of the public comment pertained to the proposed turbidity criteria revisions, which are not part of this rulemaking.

Next Steps

DEQ expects that many of the proposed revisions will not require EPA approval before they are effective for Clean Water Act purposes. The rules that do not require EPA action will become effective upon filing with the Secretary of State. DEQ expects to file the rules in March, 2007 if they are adopted by the EQC on February 23, 2007.

If EPA decides it does need to approve one or more of the rule amendments, those rules will become effective upon EPA approval.

Attachments

A. Proposed Rule Revisions
   1. Summary of Proposed Corrections and Clarifications to OAR 340-041, Water Quality Standards: Beneficial Uses,

Policies and Criteria for Oregon

2. Proposed Rule Revisions (redlined version)
   Note: Revisions for this agenda item and also Agenda Item G are contained in this same attachment because of the overlap. Revisions for the corrections and clarifications are shown in red.

B. Summary of Public Comments and Agency Responses
C. Presiding Officer's Reports on 6 Public Hearings
D. Relationship to Federal Requirements
E. Statement of Need and Fiscal and Economic Impact
F. Land Use Evaluation Statement
G. Water Quality Standards Fact Sheet

Available Upon Request

1. Legal Notice of Hearing
2. Cover Memorandum from Public Notice
3. Written Comment Received

Approved:

Section:

Division:

Report Prepared by: Debra Sturdevant
Phone: 503-229-6691

State of Oregon

Department of Environmental Quality Memorandum

Date: January 9, 2007

To: Environmental Quality Commission

From: Stephanie Hallock, Director

Subject: Agenda Item I, Action Item: Director's Transactions for Commission Review February 22 – 23, 2007 EQC meeting.

Proposed Action

Oregon Accounting Policy 10.90.00 and Department of Environmental Quality (DEQ) Policy A10.90.00 (Attachments A and B) require that the Environmental Quality Commission (Commission) review and approve certain financial transactions of the DEQ Director on an annual basis. A summary of these transactions and copies of the Director's monthly timesheets and travel expense claims from January 1, 2006 – December 31, 2006 are provided in Attachment C.

Background

In 2001, the Department of Administrative Services (DAS) adopted a policy requiring Commission review and approval of certain Director's transactions, including monthly time reports, vacation pay, travel expenses, and the Small Purchase Order Transaction System (SPOTS) credit card use. In September 2001, the Commission adopted a policy delegating review and approval of these transactions to the Management Services Division Administrator, with annual Commission review of the approved transactions.

Department Recommendation

The Department recommends that the Commission review and approve these transactions. This review will be documented in the Commission meeting minutes as directed by State policy.

Attachments

A. Oregon Accounting Manual (OAM) Policy No. 10.90.00.PO.
B. DEQ Policy re: Approval of Director's Transactions.
C. Summary of Director's Financial Transactions as defined by OAM 10.90.00 for the period 1/1/2006 – 12/31/2006.

Approved:

Accounting Section:

Management Services Division:

OREGON ACCOUNTING MANUAL		Number 10.90.00.PO
Oregon Department of Administrative Services State Controller's Division	**Policy**	Effective Date July 16, 2001
Chapter **Internal Control**		.1 OF .3
Part **Approval of Agency Head Transactions**		
Section		Approval

Accountability and Control Standards

.101 This policy sets accountability and control standards for the determination and delegation of review and approval authority for the agency head's monthly time report, requests for vacation payoff, use of exceptional performance leave, travel expense reimbursement claims, and Small Purchase Order Transaction System (SPOTS) card purchases. This policy is intended to ensure that these transactions are reviewed for completeness and accuracy and that they are in conformance with and measured against the documentation and compliance standards provided herein. In the case of agency heads that are elected, this policy may be applied at the option of that elected official.

Establishing Review and Approval Authority

.102 Agency heads appointed by the Governor shall delegate review and approval authority for agency head financial transactions to the chief financial officer or to the person who holds the position of second-in-command to the agency head. The delegation shall be in writing.

Agency heads appointed by or reporting to a board or commission shall work with that body to create a review and approval structure for financial transactions of the agency head. The board or commission may delegate the review and approval authority, by direct designation or motion, in writing, to the board or commission chair or ranking officer. Or, the board or commission may delegate to the agency second-in-command, chief financial officer, or may choose to retain an active role in the approval process. Boards and commissions choosing to take an active role in the review and approval process must make the review and approvals of financial transactions a part of their regular meetings and document them in the minutes.

Boards and commissions delegating the review and approval process must at least annually review the financial transactions of the agency head approved as delegated. These post transaction reviews and approvals must be documented in the minutes of the board or commission annual meeting.

Requirement for Internal Procedure and Review

.103 This policy requires agencies to develop internal procedures for the review and approval of the following agency head transactions:

(a) Time reporting: Review and approve the agency head's monthly report of sick leave, vacation, holiday or other leave hours used. Review for completeness and accuracy and to ensure that all time that has been taken has been reported. Ensure that leave hours comply with HRSD 60.000.01 Sick Leave, 60.000.05 Vacation Leave, 60.010.01 Holidays, 60.000.15 Family Medical Leave, 60.005.01 Leave Without Pay and 60.000.10

Special Leaves with Pay. Time reporting (leave usage) must be documented using either paper or electronic timekeeping methods. The documentation must show that the time reports have been reviewed and approved by the appropriate authority, which, in the case of a board or commission, may be the ranking officer of the board. Note: Heads of agencies are classified as exempt from the Fair Labor Standards Act (FLSA) and as such should not be required to report actual hours worked. The time reporting review is intended to focus only on hours related to the categories defined above. The documentation must provide evidence for an audit trail and must be maintained by the agency for the prescribed IRS retention schedule for time records of three years and one quarter as well as the current record retention standards per Secretary of State, Archives Division.

(b) Travel expense reimbursements: Review and approve all travel claims submitted by the agency head, whether for in-state or out-of-state travel. Ensure compliance with DAS Travel Rules OAM 40 10 00.PO as well as OAM 10 40 00 PO, Expenditures. The review and approval of travel transactions must be documented to provide an audit trail and evidence that the review complies with and was conducted in accordance with the prevailing state policies as listed.

(c) Exceptional Performance Leave: This leave shall be granted to agency heads using the criteria set forth in HRSD 60.000.10 "Special Leaves With Pay". For agency heads appointed by the Governor, this leave shall only be granted by the Governor or by the Director of the Department of Administrative Services on behalf of the Governor. For agency heads reporting to a board or commission, this leave shall be granted by that body or by the board or commission chair and documented in the minutes of the board or commission. The review and approval responsibility is to ensure that the Exceptional Performance leave was granted based on appropriate criteria and authority and is in compliance with HRSD policy 60.000.10. The review and approval of these transactions must be documented to provide an audit trail and evidence that the review complies with and was conducted in accordance with the prevailing state policies as listed. The documentation must clearly demonstrate the criteria upon which the leave was granted. The documentation must include copies of the written request and approval granting the leave and copies of the board or commission minutes, if applicable. The documentation must be retained according to the current record retention standards per Secretary of State, Archives Division.

(d) Vacation Payoff: Review and approve ensuring compliance with HRSD policy 60 000.05 "Vacation Leave". The review and approval of these transactions must be documented to provide an audit trail and evidence that the review complies with and was conducted in accordance with HRSD 60.000.05. That review must clearly demonstrate that the vacation payoff was approved in accordance with Section (6)(b) of that policy which mandates that a vacation payoff is only granted when taking vacation leave is not appropriate. Copies of the written request and approval granting the vacation payoff and copies of the board or commission minutes, if applicable, must be part of the documentation for these transactions.

(e) Use of the Small Purchase Order Transaction System (SPOTS) purchase card: Review purchases to ensure that they are appropriate expenditures that further the business of the state and the mission of the agency and that the use of the SPOTS card complies with OAM 55 30 00.PO. The review must be conducted by someone other than the person whose name appears on the card. The review and approval of transactions must be documented to provide an audit trail and evidence that the review complies with and was conducted in accordance with the prevailing state policies as listed.

The documentation for all of the above should be retained according to the current record retention standards per Secretary of State, Archives Division.

Fiscal Officer Responsibility

.104 Agency fiscal officers processing these financial transactions for the agency head have a duty to pre-audit and verify that the transactions comply with this policy.

Seeking Guidance from State Controller's Division

.105 For the purposes of this policy, those persons delegated to review and approve financial transactions for state agency heads have a duty to comply with the provisions of this policy. Any agency head requests to deviate from this policy must be approved by the State Controller. Those persons delegated review and approval authority having reservations or questions about an agency head financial transaction may seek guidance from the State Controller's Division.

Transactions Subject to Audit

.106 All financial transactions of state agency heads are subject to periodic audit by the Secretary of State Audits Division.

DEPARTMENT OF ENVIRONMENTAL QUALITY POLICIES AND PROCEDURES	POLICY NUMBER: A10.90.00.PO
	SEPTEMBER 20, 2001
	PAGE 1 OF 1
SUBJECT: APPROVAL OF DIRECTOR'S TRANSACTIONS	APPROVAL: 

INTENT: to set accountability and control standards for the review and approval of the director's financial transactions.

AUTHORITY: Oregon Accounting Manual (OAM) Policy No. 10.90.00.PO

POLICY: As delegated by the Environmental Quality Commission, the Management Services Division administrator will review and approve the Director's monthly time reports, requests for vacation payoff, use of exceptional performance leaves, travel expense reimbursement claims, and Small Purchase Order Transaction System (SPOTS) card purchases. This review will be performed in accordance with OAM 10.90.00.PO.

Annually, at the time of the Director's evaluation, the Commission will review the transactions approved as delegated. These post transaction reviews and approvals will be documented in the minutes of the Commission meeting.

Summary of Director's Financial Transactions
as defined by OAM 10.90.00.PO
1/01/06 - 12/31/06

TIME REPORTING

Summary of leave taken:

Exceptional Performance Leave	none
Governor's Leave	8 hours
Holiday	72 hours
Personal Business	30 hours
Sick Leave	62 hours
Vacation	189 hours

VACATION LEAVE PAYOFF: None

USE OF SMALL PURCHASE ORDER TRANSACTION SYSTEM (SPOTS) PURCHASING CARD: None

TRAVEL EXPENSE REIMBURSEMENTS

Date	Destination	Reason for Travel	Total Cost	Amount Reimbursed	Net Cost to DEQ	
1/9 - 1/10/06	Boise, ID	Northwest Region Agriculture Forum	$444.41	$0.00	$444.41	
1/21 - 1/24/06	Denver, CO	EPA Innovations and Results Symposium	$566.82	$316.61	$250.21	*
2/22/06	Medford, OR	Strategic Planning Brownbag	$227.61	$0.00	$227.61	
2/26 - 2/28/06	Washington, DC	ECOS Officer's Meeting	$511.48	$511.48	$0.00	*
3/1 - 3/3/06	Salem, OR	EQC Meeting	$190.50	$0.00	$190.50	
3/6/06	Bend, OR	Strategic Planning Brownbag	$231.60	$0.00	$231.60	
3/19 - 3/23/06	Charleston, SC	ECOS Spring Meeting	$886.02	$886.02	$0.00	*
4/16 - 4/18/06	Washington, DC	2008 Budget Hearing Meeting	$1,914.57	$1,914.57	$0.00	*
4/27 - 4/28/06	Hermiston, OR	EQC Meeting	$84.90	$0.00	$84.90	
5/1 - 5/2/06	Medford, OR	Economic Revitalization Team field trip to Western Region	$152.60	$0.00	$152.60	
5/31 - 6/2/06	Pendleton and Klamath Falls, OR	EQC/DEQ Town Hall Meeting, toured several areas in region with Dick Nichols, ER WQ manager	$245.41	$0.00	$245.41	

Summary of Director's Financial Transactions
as defined by OAM 10.90.00.PO
1/01/06 - 12/31/06

TRAVEL EXPENSE REIMBURSEMENTS (continued)

Date	Destination	Reason for Travel	Amount	Amount Reimbursed	Net Cost to DEQ
5/10 - 5/14/06	Victoria, Canada	Pacific Northwest Director's Summer meeting	$703.04	$0.00	$703.04
6/6 - 6/7/06	Bend, OR	Economic Revitalization Team field trip to Eastern Region	$149.60	$0.00	$149.60
6/13/06	Seattle, WA	Northwest Region Agricultural Forum	$302.30	$0.00	$302.30
6/14 - 6/15/06	Medford, OR	EQC/DEQ Town Hall Meeting	$482.60	$0.00	$482.60
8/1/06	Pendleton, OR	Economic Revitalization Team field trip	$133.65	$0.00	$133.65
8/9 - 8/11/06	Canyonville, OR	EQC Meeting	$186.24	$0.00	$186.24
10/4 - 10/6/06	Astoria, OR	EQC Meeting	$277.40	$0.00	$277.40
10/13/06	Medford, OR	Meet with Senator Bates	$303.60	$0.00	$303.60
12/12 - 12/13/06	Canyonville, OR	9th Annual State-Tribal Summit	$108.75	$0.00	$108.75
		TOTAL:	**$8,103.10**	**$3,628.68**	**$4,474.42**

* Reimbursement from the Environmental Council of the States (ECOS)

FORM # AD1743

OREGON STATE PAYROLL SYSTEM

EMPLOYEE MONTHLY TIMESHEET

FINAL COPY

SHEET # 008

PAYROLL AGENCY #	PERSONNEL AGENCY #	SHIFT	CHECK DISTRIBTN		EMPLOYEE ID #	CONC JOB	POSITION #	CLASS	PAY BASIS	APPT TYPE	WORK SCHED
34000	34000	1	11000	CUMMINS, STEPHANIE H	OR0084689	1	0000001	MESN Z7014	S	P	AA7

START TIME	O/T	BEN PKG	COST CENTER DISTRIBUTION				PERIOD ENDING
0000	NE	XX	074100414010 100.00 %	%	%	%	01/31/0

LINE	1 SU	2 MO	3 TU	4 WE	5 TH	6 FR	7 SA	8 SU	9 MO	10 TU	11 WE	12 TH	13 FR	14 SA	15 SU	16 MO	17 TU	18 WE	19 TH	20 FR	21 SA	22 SU	23 MO	24 TU	25 WE	26 TH	27 FR	28 SA	29 SU	30 MO	31 TU	DATE - DAY	PAY TYPE	REG HRS	LWOP	MISC HRS
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PRELIMINARY AND FINAL TOTALS

OTHER ADJUSTMENTS, BASED ON NUMBER OF INCIDENTS:

LEAVE BALANCES AS OF:

OF DAYS WORKED: FORECAST 20 PRELIM FINAL

TIME SHEET START DATE 01/01/06 END DATE 01/31/06 FULL TIME HOURS 176.0

SIGNED, CERTIFYING TRUE AND ACCURATE

EMPLOYEE: [signature]

SUPERVISOR: [signature]

ORM # AD1743

OREGON STATE PAYROLL SYSTEM

EMPLOYEE MONTHLY TIMESHEET

FINAL COPY

PAYROLL AGENCY #	PERSONNEL AGENCY #	SHIFT	CHECK DISTRIBTN		EMPLOYEE ID #	CONC JOB	POSITION #	CLASS	PAY BASIS	APPT TYPE	WORK SCHED	TIME SHEET #
34000	34000	1	11000	CUMMINS, STEPHANIE H	OR0084689	1	0000001	MESN Z7014	S	P	AA7	2-0

START TIME	O/T	BEN PKG	COST CENTER DISTRIBUTION	PERIOD ENDING
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OTHER ADJUSTMENTS, BASED ON NUMBER OF INCIDENTS:

LEAVE BALANCES AS OF:				# OF DAYS WORKED:	FORECAST 19	PRELIM	FINAL
TIME SHEET	START DATE 02/01/06	END DATE 02/28/06	FULL TIME HOURS 160.0	EMPLOYEE:	SIGNED, CERTIFYING TRUE AND ACCURATE	SUPERVISOR:	

FORM # AD1743

OREGON STATE PAYROLL SYSTEM

EMPLOYEE MONTHLY TIMESHEET

FINAL COPY

PAYROLL AGENCY #	PERSONNEL AGENCY #	SHIFT	CHECK DISTRIBTN		EMPLOYEE ID #	CONC JOB	POSITION #	CLASS	PAY BASIS	APPT TYPE	WORK SCHED	TIME SHEET
34000	34000	1	11000	Cummins, Stephanie H	OR00084689	1	0000001	MESN 27014	S	P	AA7	2-0 H

START TIME	O/T	BEN PKG	COST CENTER DISTRIBUTION				PERIOD ENDING
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OTHER ADJUSTMENTS, BASED ON NUMBER OF INCIDENTS:

LEAVE BALANCES AS OF:				# OF DAYS WORKED:	FORECAST	PRELIM	FINAL
TIME SHEET	START DATE 3/1/06	END DATE 3/31/06	FULL TIME HOURS 184.0		23		

EMPLOYEE: SIGNED, CERTIFYING TRUE AND ACCURATE

SUPERVISOR:

FORM # ~~AD1745~~

OREGON STATE PAYROLL SYSTEM

EMPLOYEE MONTHLY TIMESHEET

FINAL COPY

PAYROLL AGENCY #	PERSONNEL AGENCY #	SHIFT	CHECK DISTRIBTN		EMPLOYEE ID #	CONC JOB	POSITION #	CLASS	PAY BASIS	APPT TYPE	WORK SCHED	TIME SHEET
34000	34000	1	11000	CUMMINS, STEPHANIE H	OR0084689	1	0000001	MESN Z7014	S	P	AA7	1-(

START TIME	O/T	BEN PKG	COST CENTER DISTRIBUTION				PERIOD ENDING
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OTHER ADJUSTMENTS, BASED ON NUMBER OF INCIDENTS:

LEAVE BALANCES AS OF:				# OF DAYS WORKED:	FORECAST 20	PRELIM	FINAL
TIME SHEET	START DATE 04/01/06	END DATE 04/30/06	FULL TIME HOURS 160.0	EMPLOYEE:	SIGNED, CERTIFYING TRUE AND ACCURATE	SUPERVISOR:	

FORM # AD1743

OREGON STATE PAYROLL SYSTEM

EMPLOYEE MONTHLY TIMESHEET

FINAL COPY 2 of 2

PAYROLL AGENCY #	PERSONNEL AGENCY #	SHIFT	CHECK DISTRIBTN		EMPLOYEE ID #	CONC JOB	POSITION #	CLASS	PAY BASIS	APPT TYPE	WORK SCHED	TIME SHT
34000	34000	1	11000	CUMMINS, STEPHANIE H	OR0084689	1	0000001	MESN Z7014	S	P	AA7	1-

START TIME	O/T	BEN PKG	COST CENTER DISTRIBUTION	PERIOD ENDING
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PRELIMINARY AND FINAL TOTALS

OTHER ADJUSTMENTS, BASED ON NUMBER OF INCIDENTS:

VA/PB LEAVE ADJUSTED 6/30/06 PER ATT EMAIL SJ

LEAVE BALANCES AS OF:

# OF DAYS WORKED:	FORECAST	PRELIM	FINAL
	22		

TIME SHEET	START DATE	END DATE	FULL TIME HOURS
	05/01/06	05/31/06	184.0

SIGNED, CERTIFYING TRUE AND ACCURATE

EMPLOYEE: [signature]

SUPERVISOR: [signature]

FORM # AD1743

OREGON STATE PAYROLL SYSTEM

EMPLOYEE MONTHLY TIMESHEET

FINAL COPY 013

PAYROLL AGENCY #	PERSONNEL AGENCY #	SHIFT	CHECK DISTRIBTN		EMPLOYEE ID #	CONC JOB	POSITION #	CLASS	PAY BASIS	APPT TYPE	WORK SCHED	TIME SHEET
34000	34000	1	11000	CUMMINS, STEPHANIE H	OR0084689	1	0000001	MESN Z7014	S	P	AA7	1-[illegible]

START TIME	O/T	BEN PKG	COST CENTER DISTRIBUTION				PERIOD ENDING
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OTHER ADJUSTMENTS, BASED ON NUMBER OF INCIDENTS:

LEAVE BALANCES AS OF:				# OF DAYS WORKED:	FORECAST 22	PRELIM	FINAL
TIME SHEET	START DATE 06/01/06	END DATE 06/30/06	FULL TIME HOURS 176.0	EMPLOYEE:	SIGNED, CERTIFYING TRUE AND ACCURATE	SUPERVISOR:	

FORM # AD1743

N STATE PAYROLL SYSTEM

EMPLOYEE MONTHLY TIMESHEET

FINAL COPY

PAYROLL AGENCY #	PERSONNEL AGENCY #	SHIFT	CHECK DISTRIBTN	EMPLOYEE ID #	CONC JOB	POSITION #	CLASS	PAY BASIS	APPT TYPE	WORK SCHED	TIME SHEET #
34000	34000	1	11000	CUMMINS, STEPHANIE H	OR0084689	1	0000001	MESN Z7014	S	P	AA7	1-

START TIME	O/T	BEN PKG	COST CENTER DISTRIBUTION	PERIOD ENDING
000	NE	XX	074100414010 100.00 % % % %	07/31/0

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THER ADJUSTMENTS, BASED ON NUMBER OF INCIDENTS:

VE BALANCES OF:					# OF DAYS WORKED:	FORECAST	PRELIM	FINAL
ME SHEET	START DATE 7/01/06	END DATE 07/31/06	FULL TIME HOURS 168.0	SIGNED, CERTIFYING TRUE AND ACCURATE EMPLOYEE: Stephanie Cummins		20		

SUPERVISOR: Rose-Marie Huss

FORM # AD1743

OREGON STATE PAYROLL SYSTEM

EMPLOYEE MONTHLY TIMESHEET

FINAL COPY 015

PAYROLL AGENCY #	PERSONNEL AGENCY #	SHIFT	CHECK DISTRIBTN		EMPLOYEE ID #	CONC JOB	POSITION #	CLASS	PAY BASIS	APPT TYPE	WORK SCHED	TIME SHEET #
34000	34000	1	11000	CUMMINS, STEPHANIE H	OR0084689	1	0000001	MESN Z7014	S	P	AA7	1-

START TIME	O/T	BEN PKG	COST CENTER DISTRIBUTION	PERIOD ENDING
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PRELIMINARY AND FINAL TOTALS

OTHER ADJUSTMENTS, BASED ON NUMBER OF INCIDENTS:

LEAVE BALANCES AS OF:	# OF DAYS WORKED:	FORECAST	PRELIM	FINAL
		23		

TIME SHEET	START DATE	END DATE	FULL TIME HOURS	SIGNED, CERTIFYING TRUE AND ACCURATE
	8/01/06	08/31/06	184.0	EMPLOYEE: [signature] SUPERVISOR: [signature]

FORM # AD1743

OREGON STATE PAYROLL SYSTEM

EMPLOYEE MONTHLY TIMESHEET

FINAL COPY 610

PAYROLL AGENCY #	PERSONNEL AGENCY #	SHIFT	CHECK DISTRIBTN		EMPLOYEE ID #	CONC JOB	POSITION #	CLASS	PAY BASIS	APPT TYPE	WORK SCHED	TIME SHEET #

START TIME	O/T	BEN PKG	COST CENTER DISTRIBUTION											PERIOD ENDING
34000			34000	1	11000	CUMMINS, STEPHANIE H	OR0084689	1	0000001	MESN Z7014	S	P	AA7	1-0

000 NE XX 074100414010 100.00 09/30/06

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PRELIMINARY AND FINAL TOTALS

OTHER ADJUSTMENTS, BASED ON NUMBER OF INCIDENTS:

LEAVE BALANCES AS OF:			# OF DAYS WORKED:	FORECAST	PRELIM	FINAL
				20		

TIME SHEET	START DATE	END DATE	FULL TIME HOURS	SIGNED, CERTIFYING TRUE AND ACCURATE
	09/01/06	09/30/06	168.0	EMPLOYEE: Stephanie Cummins SUPERVISOR: Paul Mac Mann

FORM # AD1743

OREGON STATE PAYROLL SYSTEM

EMPLOYEE MONTHLY TIMESHEET

FINAL COPY

PAYROLL AGENCY #	PERSONNEL AGENCY #	SHIFT	CHECK DISTRIBTN		EMPLOYEE ID #	CONC JOB	POSITION #	CLASS	PAY BASIS	APPT TYPE	WORK SCHED	TIME SHEET #
34000	34000	1	11000	CUMMINS, STEPHANIE H	OR0084689	1	0000001	MESN Z7014	S	P	AA7	2-

START TIME	O/T	BEN PKG	COST CENTER DISTRIBUTION			PERIOD ENDING
0000	NE	XX	074100414010 100.00 %	%	%	10/31/0

LINE	1 SU	2 MO	3 TU	4 WE	5 TH	6 FR	7 SA	8 SU	9 MO	10 TU	11 WE	12 TH	13 FR	14 SA	15 SU	16 MO	17 TU	18 WE	19 TH	20 FR	21 SA	22 SU	23 MO	24 TU	25 WE	26 TH	27 FR	28 SA	29 SU	30 MO	31 TU	DATE - DAY PAY TYPE	REG HRS	LWOH	MISC HRS
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**													PRELIMINARY AND FINAL TOTALS																			— —			

OTHER ADJUSTMENTS, BASED ON NUMBER OF INCIDENTS:

LEAVE BALANCES AS OF:

# OF DAYS WORKED:	FORECAST	PRELIM	FINAL

TIME SHEET	START DATE	END DATE	FULL TIME HOURS

SIGNED, CERTIFYING TRUE AND ACCURATE

EMPLOYEE: Stephanie Cummins

SUPERVISOR: Rand-Marie Simon

FORM # AD1743

OREGON STATE PAYROLL SYSTEM

EMPLOYEE MONTHLY TIMESHEET

FINAL COPY

PAYROLL AGENCY #	PERSONNEL AGENCY #	SHIFT	CHECK DISTRIBTN		EMPLOYEE ID #	CONC JOB	POSITION #	CLASS	PAY BASIS	APPT TYPE	WORK SCHED	TIME SHEET #
34000	34000	1	11000	CUMMINS, STEPHANIE H	OR0084689	1	0000001	MESN Z7014	S	P	AA7	1-

START TIME	O/T	BEN PKG	COST CENTER DISTRIBUTION				PERIOD ENDING
000	NE	XX	074100414010 100.00 %	%	%	%	11/30/0

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	DATE - DAY	PAY TYPE	REG HRS	LWOP	MISC HRS
WE	TH	FR	SA	SU	MO	TU	WE	TH	FR	SA	SU	MO	TU	WE	TH	FR	SA	SU	MO	TU	WE	TH	FR	SA	SU	MO	TU	WE	TH			RG			
																																HO			
																																CTSS			
																																RG			
									8													8									HO	16		
																																CTSS			
																				3	4		8								VA	15		
					2							2																				SL	4		
																																CTL			
																2			2												PB	4		
																																LO			
																																OT			
																																HP			
																																SDE			
																																CTA			

PRELIMINARY AND FINAL TOTALS

ER ADJUSTMENTS, BASED ON NUMBER OF INCIDENTS:

BALANCES				# OF DAYS WORKED:	FORECAST	PRELIM	FINAL
SHEET	START DATE 10/01/06	END DATE 11/30/06	FULL TIME HOURS 176.0		20		

EMPLOYEE: Stephanie Harlock SIGNED, CERTIFYING TRUE AND ACCURATE

SUPERVISOR: René-Marc Mano

FORM # AD1743

OREGON STATE PAYROLL SYSTEM

EMPLOYEE MONTHLY TIMESHEET

FINAL 610

PAYROLL AGENCY #	PERSONNEL AGENCY #	SHIFT	CHECK DISTRIBTN		EMPLOYEE ID #	CONC JOB	POSITION #	CLASS	PAY BASIS	APPT TYPE	WORK SCHED	TIME SHEET
34000	34000	1	11000	CUMMINS, STEPHANIE H	OR0084689	1	0000001	MESN Z7014	S	P	AA7	2-

START TIME	O/T	BEN PKG	COST CENTER DISTRIBUTION				PERIOD ENDING
0000	NE	XX	074100414010 100.00 %	%	%	%	12/31/0

LINE	1 FR	2 SA	3 SU	4 MO	5 TU	6 WE	7 TH	8 FR	9 SA	10 SU	11 MO	12 TU	13 WE	14 TH	15 FR	16 SA	17 SU	18 MO	19 TU	20 WE	21 TH	22 FR	23 SA	24 SU	25 MO	26 TU	27 WE	28 TH	29 FR	30 SA	31 SU	DATE - DAY PAY TYPE	REG HRS	LWOP	MISC HRS
01																																RG			
02																																HO			
03																																CTS			
04																																RG			
05																									8							HO	8		
06																																CTS			
07																																			
08																											8		^			VA	8		
09				2														3	3	8									3			SL	18		
10																																CTL			
11																																PB			
12																										8						GL	8		
13																																			
14																																LO			
15																																			
16																																OT			
17																																HP			
18																																SDE			
19																																CTA			
20																																			
* *														PRELIMINARY AND FINAL TOTALS																			— —			

OTHER ADJUSTMENTS, BASED ON NUMBER OF INCIDENTS:

LEAVE BALANCES AS OF:

# OF DAYS WORKED:	FORECAST	PRELIM	FINAL
	20		

TIME SHEET	START DATE	END DATE	FULL TIME HOURS
	12/01/06	12/31/06	168.0

SIGNED, CERTIFYING TRUE AND ACCURATE

EMPLOYEE: [signature]

SUPERVISOR: [signature]

STATE OF OREGON
TRAVEL EXPENSE DETAIL SHEET

314/VPT22016

1. Name of Employee	2. Agency	3. Period (Month and Year)
10R 00844689 Stephanie Hallock Cummins	DEQ	January-06
Official Station	**5. Division/ Work Unit**	**6. Regular Schedule Work Shift**
OD		8:00 am - 5:00 X pm Other to

7. Unrepresented ☐ Management Service ☐ Executive Service X Board/Commission ☐ Volunteer ☐

Bargaining Unit Name ☐ AFSCME Other ☐

8. Date	9. Time of Departure	10. Time of Arrival	11. Destination	12. Per Diem/ Hourly Allowance	Individual Meal Reimbursement Breakfast	Lunch	Dinner	13. Lodging	14. Total Meals and Lodging
01/09/06	3:30 PM		Boise, ID	24.50	N/A	N/A	24.50	73.00	97.50
01/10/06		7:30 PM	Portland, OR	36.75	Provided	12.25	24.50	N/A	36.75
			15. **Totals**			12.25	49.00	73.00	**$134.25**

Accounting Codes		17. Date	18. Miscellaneous Expenses Fares, Private Mileage, Room Tax, Telephone, Other Expenses	19. Training Related?	20 Rate Per Mile	21. Private Car Miles	22. Amount
07- 14010-41004			Personal Vehicle Mileage		0.485		
		01/09/06	Parking @ PDX				3.00
4151	142.28	01/09/06	Rental Car				~~37.03~~ 34.73
4153	37.73	01/09/06	Hotel tax				8.03
Totals	180.01				**23. Section Total**		45.76 ~~$48.06~~

24. **I did/will____ did not/will not** X accept travel awards as a result of, or associated with this state business trip. Completion of this block is mandatory. Travel expense reimbursement claims will not be processed if this block is left blank. Travel awards included, but may not be limited to , airline frequent flyer miles and hotel or car rental frequent customer awards or miles. Review instructions on reverse of the form.

25. REASON FOR TRAVEL: (Be specific.)
Trip to Boise ID for Northwest Region Agriculture Forum

26. Grand Total Amount 180.01 ~~$182.31~~

27. Travel Advance Amount

28. Amount Due Employee/State 180.01 ~~$182.31~~

29. Received Training Conducted Training

I certify that all reimbursements claimed reflect actual duty required expenses or allowances entitled; that no part thereof has been heretofore claimed or will be ed from any other source.

30. Signature of Employee Stephanie Hallock

31. Title Director Date 1-16-05

I certify that the above claimed expenses are authorized duty required expenses. Funds for payment of this claim are available in the approved budget for the period covered and have been allotted for expenditure.

32. Approved By

33. Title MSD Admin Date 1-18-05

\Travel Expense Claim.xlt - Revised May 2005 by Dale Chipman

020

1/19 e-mailed, OSA to Sally

Itinerary Detail - Combined

Azumano Travel Est. 1949

Back Office Data

STATE OF OREGON

Trip Departures from 01/09/2006 to 01/10/2006

Report Parameters: Passenger = CUMMINS

CUMMINS/STEPHANIE H

Actual:	$206.40	Savings:	$0.00	Val Carrier: ALASKA AIR (AS)	Account: OR State Dept. of Enviromental
Lowest:	$206.40	Lost Amt:	$0.00	Ticket #: 1545380394	Break 1: 34000
Service Fees:	$29.00			Invoice #: 575343573	Break 2: DAY
Exception:	GOVERNMENT CITY PAIR USED			Inv Date: 12/12/2005	Break 3: 5032295990

Itinerary				Airline	Flt #	Class
PORTLAND,OR	BOISE,ID	1/10/2006	06:05-08:16	ALASKA AIR (AS)	2311	L
BOISE,ID	PORTLAND,OR	1/10/2006	18:05-18:24	ALASKA AIR (AS)	2358	L

Car Rentals		Rental Date	Days	Daily Rate & Type	Car Type	Mileage Cost	Confirmation #
ENTERPRISE	BOISE, ID	1/10/2006	1	$29.00 DAY	SCAR		FKZ0WH

Total Cost of Trip: ***$264.40***

CUMMINS/STEPHANIE H ** This is an "Exchange" record. Original Ticket # was 1545380394

Actual:	$0.00	Savings:	$0.00	Val Carrier: ALASKA AIR (AS)	Account: OR State Dept. of Enviromental
Lowest:	$0.00	Lost Amt:	$0.00	Ticket #: 1546282175	Break 1: 34000
Service Fees:	$29.00			Invoice #: 575344403	Break 2: DAY
Exception:	EXCHANGE (ADD/COLLECT/EVEN)			Inv Date: 12/23/2005	Break 3: 5032295990

Itinerary				Airline	Flt #	Class
PORTLAND,OR	BOISE,ID	1/9/2006	16:07-18:18	ALASKA AIR (AS)	2423	L
BOISE,ID	PORTLAND,OR	1/10/2006	18:05-18:24	ALASKA AIR (AS)	2358	L

Total Cost of Trip: ***$29.00***

Report Totals

Air Totals		Car Rental Totals		Hotel Booking Totals	
# of Air Trips:	2	# of Rentals:	1	# of Stays:	0
Air Charges:	$206.40 ✓	# of Days Rented:	1	# of Room Nights:	0
Avg Cost per Trip:	$103.20	Car Rental Charges:	$29.00	Hotel Booking Charges:	$0.00
Total Svc Fees:	$58.00 ✓	Avg # of Days Rented:	1.00	Avg # of Nights:	0.00
		Avg Booked Rate:	29.00	Avg Booked Rate:	$0.00
Total All Charges:	**$293.40**	Avg Cost per Day:	$29.00	Avg Cost/RoomNight:	$0.00

OREGON DEPT OF ENVIRONMENTAL QUALITY
OUT-OF-STATE TRAVEL AUTHORIZATION

1. NAME OF EMPLOYEE:	2. AGENCY/OFFICIAL STATION:	3. REQUEST #:
Stephanie Hallock	DEQ / Portland	Z06-06 X

4. AGENCY ACCOUNTING INFORMATION:	5. TRAVEL JUSTIFICATION E-MAIL SENT?
07-14010-41004	☐ Yes ☐ No

PURPOSE OF TRIP: (Be specific, include dates/times of meeting or conference)
Attend annual Agricultural Forum in Boise, ID with other NW environmental directors and staff on January 10, 2006. REVISED AUTHORIZATION TO INCLUDE OVERNIGHT STAY

7. ITINERARY:

Destination city/state: Boise, ID

Departure date/time: January 9, 2006 3:30 PM

Return date/time: January 10, 2006 7:30 PM

8. TRANSPORTATION: (Airfare, train fare or state motor pool vehicle (circle one). For rental cars, see #10, for misc. ground transportation, see #11)

TOTAL: $293.40

9. LODGING: Lodging per diem rate: $73.00

Amount per night:	73.00
Room tax per night:	8.03
# of nights:	1
TOTAL:	$81.03

10. MEALS: Daily meal per diem rate: $49.00

	Rate	# Meals	Total
Breakfast: (25%)	12.25		0.00
Lunch: (25%)	12.25	1	12.25
Dinner: (50%)	24.50	2	49.00
		TOTAL:	$61.25

11. CAR RENTAL: (See OAM 40.10.00.PO, section .115. The state has a price agreement with Enterprise Rent-A-Car. Optional insurance will not be reimbursed).

1 **Days @ $28 plus tax, gas** TOTAL: $34.73

12. MISCELLANEOUS COSTS: (Identify specific expenses - taxis, shuttles, phone, vehicle mileage, etc.)

a. Private vehicle mileage	(# of miles)	0.00
b. Shuttle		
c. Other (specify below)		3.00
	TOTAL:	$3.00

13. TRAINING RELATED? (if yes, attach agenda)

☐ Yes ☑ No

14. STATUS:

☑ Executive/Mgmt Svc:
☐ AFSCME:
☐ Other: *Explain:* _____

15. TRAVEL AWARDS: Agencies are mandated to maintain records on employee accumulation of travel awards as reported on their travel expense detail sheets. Travel awards include, but may not be limited to airline frequent flyer miles and hotel or car rental frequent customer awards or miles.

16. ESTIMATED COST OF TRIP:

Transportation:	**$293.40**
Lodging:	**$81.03**
Meals:	**$61.25**
Car Rental:	**$34.73**
Misc:	**$3.00**
TOTAL:	**$473.41**

17. I certify that this trip is necessary and essential to the normal discharge of DEQ responsibilites; that required monies are budgeted and alloted for expenditure; that the trip meets all the requirements mandated by ORS 292.230, OAM Policy 40.10.00, and DEQ policy.

18. EMPLOYEE SIGNATURE: Stephanie Hallock **DATE:** 1-19-06

19. SUPERVISOR SIGNATURE: **DATE:**

20. DA/EMT SIGNATURE: **DATE:**

21. MSD DA SIGNATURE: Sally Puent **DATE:** 1/20/06

300/VPT 22077

STATE OF OREGON
TRAVEL EXPENSE DETAIL SHEET

1. Name of Employee 10R0084689	2. Agency	3. Period (Month and Year)
~~[illegible]~~ Hallock, Stephanie	DEQ	January-06
4. Official Station: Director's Office	5. Division/ Work Unit: OD	6. Regular Schedule Work Shift: 8:00 am - 5:00 X pm; Other _ to _

7. Unrepresented ☐ Management Service ☐ Executive Service ☐ Board/Commission ☐ Volunteer ☐

Bargaining Unit Name ☐ AFSCME Other ☐

8. Date	9. Time of Departure	10. Time of Arrival	11. Destination	12. Per Diem/ Hourly Allowance	Individual Meal Reimbursement: Breakfast	Lunch	Dinner	13. Lodging	14. Total Meals and Lodging
01/21/06	11:30		Denver, CO			~~12.25~~	~~24.50~~		~~36.75~~
19 01/22/06			personal travel		~~12.25~~	~~12.25~~	~~24.50~~		~~49.00~~
19 01/22/06					~~12.25~~	~~12.25~~	~~24.50~~		~~49.00~~
01/23/06				49.00	12.25	12.25	24.50	119.00	168.00
01/24/06		8 PM	Portland, OR	49.00	12.25	12.25	24.50		49.00
			15. **Totals**	98.00	~~49.00~~	~~61.25~~	~~122.50~~	119.00	~~$351.75~~ 217.00

Accounting Codes		17. Date	18. Miscellaneous Expenses Fares, Private Mileage, Room Tax, Telephone, Other Expenses	19. Training Related?	20 Rate Per Mile	21. Private Car Miles	22. Amount
14010 - 41004			Personal Vehicle Mileage		0.485	34.92	~~16.94~~ 15.54
			Hotel tax		.445		17.67
4151	250.21						
						35 ✓	
Totals	250.21				23. Section Total		33.21 ~~$34.61~~

24. **I did/will_____ did not/will not** _SH_ accept travel awards as a result of, or associated with this state business trip. Completion of this block is mandatory. Travel expense reimbursement claims will not be processed if this block is left blank. Travel awards included, but may not be limited to, airline frequent flyer miles and hotel or car rental frequent customer awards or miles. Review instructions on reverse of the form.

25. REASON FOR TRAVEL: (Be specific.)
EPA Innovations and Results Symposium. Stephanie was a speaker.

26. Grand Total Amount 250.21 ~~$386.36~~

27. Travel Advance Amount

28. Amount Due Employee/State 250.21 ~~$386.36~~

29. Received Training Conducted Training

I certify that all reimbursements claimed reflect actual duty required expenses or allowances entitled; that no part thereof has been heretofore claimed or will be claimed from any other source.

30. Signature of Employee: Stephanie Hallock
31. Title: Director Date: 1-25-06

I certify that the above claimed expenses are authorized duty required expenses. Funds for payment of this claim are available in the approved budget for the period covered and have been allotted for expenditure.

32. Approved By: [signature]
33. Title: MSD Admin Date: 1-26-06

:\Travel Expense Claim.xlt - Revised May 2005 by Dale Chipman

023

130 [illegible], 4151 [illegible] 21 [illegible]

Itinerary Detail - Combined

Azumano Travel
Est. 1949

Back Office Data
STATE OF OREGON
Trip Departures from 01/21/2006 to 01/24/2006
Report Parameters: Passenger = CUMMINS

CUMMINS/STEPHANIE H

Actual:	-$258.41	Savings:	$0.00	Val Carrier:	ALASKA AIR (AS)	Account:	OR State Dept. of Enviromental
Lowest:	-$258.41	Lost Amt:	$0.00	Ticket #:	1545781289	Break 1:	34000
Service Fees:	$29.00			Invoice #:	575343993	Break 2:	DAYM
Exception:	GOVERNMENT CITY PAIR USED			Inv Date:	1/4/2006	Break 3:	5032295990

Itinerary				Airline	Flt #	Class
PORTLAND,OR	DENVER,CO	1/21/2006	13:30-16:50	ALASKA AIR (AS)	0508	L
DENVER,CO	PORTLAND,OR	1/24/2006	17:30-19:19	ALASKA AIR (AS)	0521	L

Total Cost of Trip: ***-$229.41***

CUMMINS/STEPHANIE H

Actual:	$258.41	Savings:	$437.99	Val Carrier:	ALASKA AIR (AS)	Account:	OR State Dept. of Enviromental
Lowest:	$258.41	Lost Amt:	$0.00	Ticket #:	1545781289	Break 1:	34000
Service Fees:	$0.00			Invoice #:	575343993	Break 2:	DAYM
Exception:	GOVERNMENT CITY PAIR USED			Inv Date:	12/19/2005	Break 3:	5032295990

Itinerary				Airline	Flt #	Class
PORTLAND,OR	DENVER,CO	1/21/2006	13:30-16:50	ALASKA AIR (AS)	0508	L
DENVER,CO	PORTLAND,OR	1/24/2006	17:30-19:19	ALASKA AIR (AS)	0521	L

Total Cost of Trip: ***$258.41***

CUMMINS/STEPHANIE H

Actual:	$258.61	Savings:	$267.99	Val Carrier:	ALASKA AIR (AS)	Account:	OR State Dept. of Enviromental
Lowest:	$258.61	Lost Amt:	$0.00	Ticket #:	1547883062	Break 1:	34000
Service Fees:	$29.00			Invoice #:	675327216	Break 2:	TONE
Exception:	GOVERNMENT CITY PAIR USED			Inv Date:	1/20/2006	Break 3:	5032295990

Itinerary				Airline	Flt #	Class
PORTLAND,OR	DENVER,CO	1/21/2006	13:30-16:50	ALASKA AIR (AS)	0508	L
DENVER,CO	PORTLAND,OR	1/24/2006	17:30-19:19	ALASKA AIR (AS)	0521	L

Total Cost of Trip: ***$287.61***

Report Totals

Air Totals		Car Rental Totals		Hotel Booking Totals	
# of Air Trips:	1	# of Rentals:	0	# of Stays:	0
Air Charges:	$258.61	# of Days Rented:	0	# of Room Nights:	0
Avg Cost per Trip:	$258.61	Car Rental Charges:	$0.00	Hotel Booking Charges:	$0.00
Total Svc Fees:	$58.00	Avg # of Days Rented:	0.00	Avg # of Nights:	0.00
Total All Charges:	**$316.61**	Avg Booked Rate:	0.00	Avg Booked Rate:	$0.00
		Avg Cost per Day:	$0.00	Avg Cost/RoomNight:	$0.00

ECOS TRAVEL REIMBURSEMENT FORM

BUSINESS ADDRESS	
Name	Stephanie Hallock
Organization	Oregon Dept. of Environmental Quality
Address	811 SW Sixth Avenue
City/State/ZIP	Portland, OR 97204-1390
Phone	(503) 229-5300
Fax	(503) 229-6762
Email	

Instructions:
Please type in the requested information. Calculations will be done automatically. Please mail a signed hard copy of this completed form and corresponding receipts to ECOS for reimbursement.
Mail to:
ECOS
444 North Capitol Street, NW
Suite 445
Washington, DC 20001 Phone: (202) 624-3660

Work Group Affiliation (specify): EPA Innovations and Results Symposium
Meeting Location and Dates (specify): Denver, CO, January 23 - 24, 2006
Travel Start and End Dates and Times (specify): January 21 - 11:30 AM - January 24 - 8:00 PM

	Day 1 Enter Date:	Day 2 Enter Date:	Day 3 Enter Date:	Day 4 Enter Date:	Day 5 Enter Date:	Day 6 Enter Date:	Day 7 Enter Date:	Day 8 Enter Date:	Day 9 Enter Date:	TOTALS
Dates of Trip (m/d/y):	1/23/2006	1/24/2006								
TRANSPORTATION										
Air/Train Fare	316.61									316.61
Personal Car Mileage										0.00
Mileage Charges* (above	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Taxi/Van/Metro										0.00
Airport Parking										0.00
Transportation Subtotal										316.61
MEALS AND INCIDENTALS (M&I): *See the GSA travel page for per diem rates:*					http://policyworks.gov/org/main/mt/homepage/mtt/perdiem/travel.shtml					
Breakfast										0.00
Lunch										0.00
Dinner										0.00
Incidentals										0.00
M&I Subtotal										0
HOTEL AND OTHER *(Please specify "other" charges)*										
Hotel										0.00
Other (hotel taxes)										0.00
Other										0.00
Hotel and Other Subtotal										0.00
GRAND TOTAL AMOUNT OWED										$316.61

* current rate is $0.345 per mile

I certify that the above claim is correct and in accordance with ECOS Travel Policy *(Please sign and date)*: Stephanie Hallock 2/3/06

Make Check Payable To: Oregon Dept. of Environmental Quality

Mail Check to : ☒ Organization Above or ☐ Home Address Below

If applicable, please enter home address information below:

Name: _____

Address 1: _____

Address 2: _____

City/State/ZIP: _____

ECOS

OFFICE USE ONLY
APPROVED
CODE
CHECK #

(ECOS Form: 02E-TVL; Feb 2001)

025

OREGON DEPT OF ENVIRONMENTAL QUALITY
OUT-OF-STATE TRAVEL AUTHORIZATION

1. NAME OF EMPLOYEE:	2. AGENCY/OFFICIAL STATION:	3. REQUEST #:
Stephanie Hallock	DEQ / Portland	207-06

4. AGENCY ACCOUNTING INFORMATION: 14010 41002

5. TRAVEL JUSTIFICATION E-MAIL SENT? ☐ Yes ☐ No

6. PURPOSE OF TRIP: (Be specific, include dates/times of meeting or conference)
Attend EPA/ ECOS Symposium on Environmental Innovation and Results in Denver, Colorado
On personal travel on Sat/Sun. - Business travel Sun - pm through return

7. ITINERARY:

Destination city/state:	Denver, CO
Departure date/time:	1/21/2005 13:40 Sat
Return date/time:	1/24/2005 21:00 Tu

8. TRANSPORTATION: (Airfare, train fare or state motor pool vehicle (circle one). For rental cars, see #10, for misc. ground transportation, see #11)

TOTAL: $300.00

9. LODGING: Lodging per diem rate: $119.00 Sun / Mon

Amount per night:	119.00	25.00
Room tax per night:	13.00	
# of nights:	1	1
TOTAL:	$132.00	25.00

10. MEALS: Daily meal per diem rate: $49.00

	Rate	# Meals	Total
Breakfast: (25%)	12.25	2	24.50
Lunch: (25%)	12.25	2	24.50
Dinner: (50%)	24.50	2 3	49.00
TOTAL:			~~$98.00~~ 122.50

11. CAR RENTAL: (See OAM 40.10.00.PO, section .115. The state has a price agreement with Enterprise Rent-A-Car. Optional insurance will not be reimbursed).
___ **Days @ $28 plus tax, gas** TOTAL: ~~$40.00~~

12. MISCELLANEOUS COSTS: (Identify specific expenses - taxis, shuttles, phone, vehicle mileage, etc.)

a. Private vehicle mileage	(# of miles)	0.00
b. Shuttle		60.00
c. Other (specify below)		
TOTAL:		$60.00

13. TRAINING RELATED? (if yes, attach agenda)
☐ Yes ☑ No

14. STATUS:
☑ Executive/Mgmt Svc:
☐ AFSCME:
☐ Other: *Explain:* _____

15. TRAVEL AWARDS: Agencies are mandated to maintain records on employee accumulation of travel awards as reported on their travel expense detail sheets. Travel awards include, but may not be limited to airline frequent flyer miles and hotel or car rental frequent customer awards or miles.

16. ESTIMATED COST OF TRIP:

Transportation:	**$300.00**
Lodging:	**~~$132.00~~** 157.00
Meals:	**~~$98.00~~** 122.50
Car Rental:	**~~$40.00~~**
Misc:	**$60.00**
TOTAL:	**~~$630.00~~** $639.50

17. I certify that this trip is necessary and essential to the normal discharge of DEQ responsibilites; that required monies are budgeted and alloted for expenditure; that the trip meets all the requirements mandated by ORS 292.230, OAM Policy 40.10.00, and DEQ policy.

18. EMPLOYEE SIGNATURE: Stephanie Hallock **DATE:** 12-12-05

19. SUPERVISOR SIGNATURE: **DATE:**

20. DA/EMT SIGNATURE: **DATE:**

21. MSD DA SIGNATURE: **DATE:** 12405

2113 c-mgmt 516.82

STATE OF OREGON
TRAVEL EXPENSE DETAIL SHEET

308/VPT22249

1. Name of Employee	2. Agency	3. Period (Month and Year)
IDR00841689 Stephanie Hallock	DEQ	February-06
4. Official Station	**5. Division/ Work Unit**	**6. Regular Schedule Work Shift**
HQ	OD	8:00 am - 5:00 x pm Other _ to _

7. Unrepresented [ ] Management Service [ ] Executive Service [X] Board/Commission [ ] Volunteer [ ]
Bargaining Unit Name [ ] AFSCME Other [ ]

8. Date	9. Time of Departure	10. Time of Arrival	11. Destination	12. Per Diem/ Hourly Allowance	Individual Meal Reimbursement Breakfast	Lunch	Dinner	13. Lodging	14. Total Meals and Lodging
02/22/06	8 AM		Medford, OR		N/A	~~11.00~~	*22.00	N/A	~~33.00~~ 22.00
02/22/06		8:00 PM	Portland, OR						
			* taxable meal allowance						
			15. **Totals**			11.00	22.00		~~$33.00~~ 22.00

Accounting Codes		17. Date	18. Miscellaneous Expenses Fares, Private Mileage, Room Tax, Telephone, Other Expenses	19. Training Related?	20 Rate Per Mile	21. Private Car Miles	22. Amount
14010 - 41004			Personal Vehicle Mileage		0.445		
			Parking				8.00
4101	22.00						
4103	8.00						
Totals	30.00				23. Section Total		30.00 ~~$8.00~~

24. **I did/will_____ did not/will not** ~~X~~ accept travel awards as a result of, or associated with this state business trip. Completion of this block is mandatory. Travel expense reimbursement claims will not be processed if this block is left blank. Travel awards included, but may not be limited to , airline frequent flyer miles and hotel or car rental frequent customer awards or miles. Review instructions on reverse of the form.

25. REASON FOR TRAVEL: (Be specific.)
DEQ Stragic Planning Brownbag at the Medford DEQ office.

26. Grand Total Amount 30.00 ~~$41.00~~

27. Travel Advance Amount

28. Amount Due Employee/State 30.00 ~~$41.00~~

29. Received Training Conducted Training

I certify that all reimbursements claimed reflect actual duty required expenses or allowances entitled; that no part thereof has been heretofore claimed or will be ed from any other source.

30. Signature of Employee Stephanie Hallock

31. Title Director Date 3-9-06

I certify that the above claimed expenses are authorized duty required expenses. Funds for payment of this claim are available in the approved budget for the period covered and have been allotted for expenditure.

32. Approved By

33. Title MSD ADMIN. Date 3/7/06

027

./ for now

Azumano Travel — Travel Services Representative

ELECTRONIC TICKET RECEIPT
Review your itinerary details & advise us of any discrepancies within 24hrs.
Click Here to view your Online Itinerary, or go to wwww.viewtrip.com / Reservation ID: XLMFXM

Passenger: CUMMINS/STEPHANIE H 34000.TONE.5032295990

Prepared on: 02/08/06 11:05:03 by Agent: Bonnie

AIR • **Alaska Airlines** • **Flight: 2159** confirmed in L • **Seat: 06B**
22FEB WED
Depart: Portland, OR 950A
Arrive: Medford, OR 1052A
Equipment: DH8 • Elapsed Time: 1:02 nonstop

NON-SMOKING
OPERATED BY HORIZON AIR
PDX PASSENGER CHECK-IN WITH QX

AIR • **Alaska Airlines** • **Flight: 2226** confirmed in L • **Seat: 09B**
Depart: Medford, OR 625P
Arrive: Portland, OR 724P
Equipment: DH8 • Elapsed Time: :59 nonstop

NON-SMOKING
OPERATED BY HORIZON AIR
MFR PASSENGER CHECK-IN WITH QX

Ticket Information

Total Fare Quoted	Base Fare	US Taxes	Other Taxes	Ticketing Date	Reservation #
USD 197.61	USD 137.68	USD 10.33	USD 20.60	08FEB	XLMFXM

The total fare above includes a service fee of: $ 29.00.

Important Reservation Information

TRAVEL AWARDS ACCEPTED BY STATE EMPLOYEES
BECOME THE PROPERTY OF THE STATE OF OREGON.
YOU MUST NOTIFY YOUR AGENCY OF ANY AWARDS RECEIVED.
*** PTKT:TKT/ORI/INV TO TVL ARR * INCL GOVT PARK PASS
HORIZON AIR 800-547-9308
RESERVATION BOOKED WITH BONNIE BY TONEASHA
AMOUNT OF AZUMANO SERVICE FEE: $29.00 / 8909521071442
..
ALASKA AIRLINES RECORD LOCATOR: LCZSNQ
..
ALASKA AIRLINES TICKET NUMBER/AMOUNT: 027154942929 5$168.61

Agency phone 503-370-7442/800-289-2959
EMERGENCY AFTER HOURS 877-840-0183
Present code 1010Q to Thrifty Parking for discount.

Receipt
Ace Parking
PO Box 55176
Portland, OR 97238

Economy Lot - Exit Lane 22 (EV222)
Audit#:

in: 02/22/06 08:33:11
out: 02/22/06 19:39

Amount Paid: $ 8.00
Visa
CUMMINS/STEPHANIE H
xxxx xxxx xxxx 7410

028

STATE OF OREGON
TRAVEL EXPENSE DETAIL SHEET

310/VPT 22257

1. Name of Employee	2. Agency	3. Period (Month and Year)
10R0084689 Stephanie Hallock Cummins	DEQ	February-06
Official Station	**5. Division/ Work Unit**	**6. Regular Schedule Work Shift**
HQ	OD	8:00 am - 5:00 x pm Other to

7. Unrepresented ☐ Management Service ☐ Executive Service X Board/Commission ☐ Volunteer ☐

Bargaining Unit Name ☐ AFSCME Other ☐

8. Date	9. Time of Departure	10. Time of Arrival	11. Destination	12. Per Diem/ Hourly Allowance	Individual Meal Reimbursement Breakfast	Lunch	Dinner	13. Lodging	14. Total Meals and Lodging
02/26/06	7:00 PM AM		Washington DC	48.00	N/A	16.00	32.00	143.00	191.00
02/27/06				64.00	16.00	16.00	32.00	143.00	207.00
02/28/06		2:30 PM	Portland, OR	48.00	16.00	16.00	16.00	N/A	~~32.00~~ 48.00
			15. **Totals**		32.00	48.00	64.00	286.00	~~$430.00~~ 446.00

Accounting Codes		17. Date	18. Miscellaneous Expenses Fares, Private Mileage, Room Tax, Telephone, Other Expenses	19. Training Related?	20 Rate Per Mile	21. Private Car Miles	22. Amount
10001 · 42004	M20000		Personal Vehicle Mileage		0.445		
			Parking				24.00
4151	487.48	2/26-27	Room tax				41.48
4153	24.00						
Totals	511.48					23. Section Total	65.48 ~~$24.00~~

24. **I did/will_____ did not/will not** ~~X~~ accept travel awards as a result of, or associated with this state business trip. Completion of this block is mandatory. Travel expense reimbursement claims will not be processed if this block is left blank. Travel awards included, but may not be limited to , airline frequent flyer miles and hotel or car rental frequent customer awards or miles. Review instructions on reverse of the form.

25. REASON FOR TRAVEL: (Be specific.)
EQCO Officers' meeting, Stephanie is President of EQOS and her attendanceat this meeting was required

26. Grand Total Amount 511.48 ~~$454.00~~

27. Travel Advance Amount

28. Amount Due Employee/State ~~470.00~~ ~~$454.00~~

29. Received Training Conducted Training 511.48

I certify that all reimbursements claimed reflect actual duty required expenses or allowances entitled; that no part thereof has been heretofore claimed or will be claimed from any other source.

30. Signature of Employee Stephanie Hallock

31. Title Director Date 3-7-06

I certify that the above claimed expenses are authorized duty required expenses. Funds for payment of this claim are available in the approved budget for the period covered and have been allotted for expenditure.

32. Approved By

33. Title Date

029

\Travel Expense Claim.xlt - Revised Jan. 2006 by Dale Chipman

3/8 reimb mailed, J for dump

ECOS TRAVEL REIMBURSEMENT FORM

ADDRESS	
Name	Stephanie Hallock
Organization	Oregon Dept. of Environmental Quality
Address	811 SW Sixth Avenue
City/State/ZIP	Portland, OR 97204-1390
Phone	(503) 229-5300
Fax	(503) 229-6762
Email	

Instructions:

***********PLEASE COMPLETE ELECTRONICALLY***********

Type in the requested information. Calculations will be done automatically.

Please mail a signed hard copy of this completed form and corresponding original receipts for all items $25 and more to ECOS for reimbursement.

Mail to:

ECOS
444 North Capitol Street, NW
Suite 445
Washington, DC 20001 Phone: (202) 624-3660

Meeting Name (specify): ECOS Officer's Meeting

Meeting Location and Dates (specify): Washington DC, February 27, 2006

Travel Start and End Dates and Times (specify): February 26 (7:00 AM) - February 28 (2:30 PM)

	Day 1 Enter Date	Day 2 Enter Date	Day 3 Enter Date	Day 4 Enter Date	Day 5 Enter Date	Day 6 Enter Date	Day 7 Enter Date	Day 8 Enter Date	Day 9 Enter Date	TOTALS
Dates of Trip (m/d/y)	2/26/2006	2/27/2006	2/28/2006							
TRANSPORTATION										
Air/Train Fare										-
Personal Car Mileage										-
Mileage Charges*	-	-	-	-	-	-	-	-	-	-
Taxi/Van/Metro										-
Airport Parking	8.00	8.00	8.00							24.00
Transportation Subtotal	8.00	8.00	8.00	-	-	-	-	-	-	$ 24.00
MEALS & INCIDENTALS (M&IE): *See GSA page for per diem rates:*				http://www.gsa.gov/Portal/gsa/ep/contentView.do?programId=9704&channelId						
Breakfast		16.00	16.00							32.00
Lunch	16.00	16.00	16.00							48.00
Dinner	32.00	32.00	16.00							80.00
Incidentals										-
M&IE Subtotal	48.00	64.00	48.00	-	-	-	-	-	-	$ 160.00
HOTEL AND OTHER *(Please specify "other" charges)*										
Hotel	163.74	163.74								327.48
Other										-
Other										-
Hotel and Other Subtotal	163.74	163.74	-	-	-	-	-	-	-	$ 327.48
GRAND TOTAL AMOUNT OWED										**$ 511.48**

* current rate is $ 0.445 per mile

I certify that the above claim is correct and in accordance with ECOS Travel Policy *(Please sign and date)*: Stephanie Hallock 3-9-06

Make Check Payable To: Oregon Dept. of Environmental Quality

Mail Check to : ☐ Address on File or ☐ Above Address (NEW USERS ONLY)

M&IE Breakdown	$39	$44	$49	$54	$59	$64
Breakfast	7	8	9	10	11	12
Lunch	11	12	13	15	16	18
Dinner	18	21	24	26	29	31
Incidentals	3	3	3	3	3	3

ECOS

OFFICE USE ONLY	
APPROVED	
CODE	
CHECK #	

030

OREGON DEPT OF ENVIRONMENTAL QUALITY
OUT-OF-STATE TRAVEL AUTHORIZATION

1. NAME OF EMPLOYEE:	2. AGENCY/OFFICIAL STATION:	3. REQUEST #:
Stephaine Hallock	OD	259-04 1

4. AGENCY ACCOUNTING INFORMATION: ~~07-14010-41004~~ 10001-42004 M20000/00

5. TRAVEL JUSTIFICATION E-MAIL SENT? ☐ Yes ☑ No

6. PURPOSE OF TRIP: (Be specific, include dates/times of meeting or conference)
ECOS Officers' Meeting, depart PDX on 2/26 - Meeting will be held at 2PM on 2/27, Depart DC mid-morning on 2/28
S. Hallock is ECOS Pres.

7. ITINERARY:

Destination city/state: Washington DC

Departure date/time: Morning of 2/26/2006 Sun

Return date/time: Evening of 2/28/2006 Tu

8. TRANSPORTATION: (Airfare, train fare or state motor pool vehicle (circle one). For rental cars, see #10, for misc. ground transportation, see #11)

Paid directly by ECOS

TOTAL: $0.00

9. LODGING: Lodging per diem rate: ~~$153.00~~ 150.00

Amount per night:	153.00
Room tax per night:	14.50
# of nights:	2
TOTAL:	$335.00

10. MEALS: Daily meal per diem rate: $64.00

	Rate	# Meals	Total
Breakfast: (25%)	16.00	3	48.00
Lunch: (25%)	16.00	3	48.00
Dinner: (50%)	32.00	3	96.00
		TOTAL:	$192.00

11. CAR RENTAL: (See OAM 40.10.00.PO, section .115. The state has a price agreement with Enterprise Rent-A-Car. Optional insurance will not be reimbursed).

___ **Days @ $28 plus tax, gas** TOTAL:

12. MISCELLANEOUS COSTS: (Identify specific expenses - taxis, shuttles, phone, vehicle mileage, etc.)

a. Private vehicle mileage	(# of miles)	0.00
b. Shuttle		20.00
c. Other (specify below)		20.00

PDX airport parking

TOTAL: $40.00

13. TRAINING RELATED? (if yes, attach agenda)

☐ Yes ☑ No

14. STATUS:

☑ Executive/Mgmt Svc:
☐ AFSCME:
☐ Other: *Explain:* _____

15. TRAVEL AWARDS: Agencies are mandated to maintain records on employee accumulation of travel awards as reported on their travel expense detail sheets. Travel awards include, but may not be limited to airline frequent flyer miles and hotel or car rental frequent customer awards or miles.

16. ESTIMATED COST OF TRIP:

Transportation:	**$0.00**
Lodging:	**$335.00**
Meals:	**$192.00**
Car Rental:	**$0.00**
Misc:	**$40.00**
TOTAL:	**$567.00**

17. I certify that this trip is necessary and essential to the normal discharge of DEQ responsibilites; that required monies are budgeted and alloted for expenditure; that the trip meets all the requirements mandated by ORS 292.230, OAM Policy 40.10.00, and DEQ policy.

18. EMPLOYEE SIGNATURE: Stephaine Hallock **DATE:** 1-25-06

19. SUPERVISOR SIGNATURE: **DATE:**

20. DA/EMT SIGNATURE: **DATE:**

21. MSD DA SIGNATURE: **DATE:** 1-26-06

511.48 Y/SD e-m and

STATE OF OREGON
TRAVEL EXPENSE DETAIL SHEET

1. Name of Employee	2. Agency	3. Period (Month and Year)
Stephanie Hallock	DEQ	March 1-3
4. Official Station: HQ	5. Division/ Work Unit: OD	6. Regular Schedule Work Shift: 8:00 am - 5:00 x pm Other to

7. Unrepresented ☐ Management Service ☐ Executive Service X Board/Commission ☐ Volunteer ☐
Bargaining Unit Name ☐ AFSCME Other ☐

8. Date	9. Time of Departure	10. Time of Arrival	11. Destination	12. Per Diem/ Hourly Allowance	Individual Meal Reimbursement: Breakfast	Lunch	Dinner	13. Lodging	14. Total Meals and Lodging
03/01/06	6 AM		Salem OR	9.75	~~9.75~~	9.75	Provided	60.00	~~79.50~~ 69.75
3/2/06			Salem OR	19.50	Provided	Provided	~~Provided~~	60.00	~~60.00~~ 79.50
03/03/06		2 PM	Portland OR	29.25	9.75	9.75	~~N/A~~ 9.75	N/A	~~10.50~~ 29.25
			15. Totals		19.50	19.50		120.00	~~$150.00~~ 148.50

16. Accounting Codes		17. Date	18. Miscellaneous Expenses: Fares, Private Mileage, Room Tax, Telephone, Other Expenses	19. Training Related?	20 Rate Per Mile	21. Private Car Miles	22. Amount
14010 - 41004			Personal Vehicle Mileage		0.445		
			Hotel Tax @ 10%				12.00
4101	190.50						
Totals	190.50				23. Section Total		$12.00

24. **I did/will_____ did not/will not** XM accept travel awards as a result of, or associated with this state business trip. Completion of this block is mandatory. Travel expense reimbursement claims will not be processed if this block is left blank. Travel awards included, but may not be limited to , airline frequent flyer miles and hotel or car rental frequent customer awards or miles. Review instructions on reverse of the form.

25. REASON FOR TRAVEL: (Be specific.)
EQC meeting held in Salem, Oregon. Director Hallock attendance is required

26. Grand Total Amount: ~~$171.00~~ 190.50

27. Travel Advance Amount:

28. Amount Due Employee/State: ~~$171.00~~ 190.50

29. Received Training ☐ Conducted Training ☐

I certify that all reimbursements claimed reflect actual duty required expenses or allowances entitled; that no part thereof has been heretofore claimed or will be claimed from any other source.

30. Signature of Employee: Stephanie Hallock

31. Title: Director Date: 3-7-06

I certify that the above claimed expenses are authorized duty required expenses. Funds for payment of this claim are available in the approved budget for the period covered and have been allotted for expenditure.

32. Approved By: [signature]

33. Title: ADMIN Date: 3/7/06

\Travel Expense Claim.xlt - Revised Jan. 2006 by Dale Chipman

✓ for amt

STATE OF OREGON
TRAVEL EXPENSE DETAIL SHEET

1. Name of Employee	2. Agency	3. Period (Month and Year)
Stephanie Hallock	DEQ	March-06

4. Official Station	5. Division/ Work Unit	6. Regular Schedule Work Shift
HQ	OD	8:00 am - 5:00 X pm Other _ to _

7. Unrepresented [ ] Management Service [ ] Executive Service [X] Board/Commission [ ] Volunteer [ ]

Bargaining Unit Name [ ] AFSCME Other [ ]

8. Date	9. Time of Departure	10. Time of Arrival	11. Destination	12. Per Diem/ Hourly Allowance	Individual Meal Reimbursement: Breakfast	Lunch	Dinner	13. Lodging	14. Total Meals and Lodging
03/06/06	6:00 AM		Bend Oregon, by way of Redmond						
03/06/06		4:30 PM	Portland Oregon		✱11.00	~~11.00~~		N/A	~~22.00~~ 11.00
			* taxable meal allowance						
			15. **Totals**		11.00	11.00			~~$22.00~~ 11.00

Accounting Codes		17. Date	18. Miscellaneous Expenses: Fares, Private Mileage, Room Tax, Telephone, Other Expenses	19. Training Related?	20 Rate Per Mile	21. Private Car Miles	22. Amount
14010 -41004			Personal Vehicle Mileage		0.445		
			Parking permit, PDX airport				8.00
4101	11.00						
4103	8.00						
Totals	19.00				23. Section Total		$8.00

24. **I did/will_____ did not/will not** XM accept travel awards as a result of, or associated with this state business trip. Completion of this block is mandatory. Travel expense reimbursement claims will not be processed if this block is left blank. Travel awards included, but may not be limited to , airline frequent flyer miles and hotel or car rental frequent customer awards or miles. Review instructions on reverse of the form.

25. REASON FOR TRAVEL: (Be specific.)
Strategic Planning brownbag at the Bend DEQ office.

26. Grand Total Amount ~~$30.00~~ ~~19.00~~ 16.00

27. Travel Advance Amount

28. Amount Due Employee/State 19.00 ~~$30.00~~ ~~19.00~~ 16.00

29. Received Training Conducted Training

I certify that all reimbursements claimed reflect actual duty required expenses or allowances entitled; that no part thereof has been heretofore claimed or will be c[illegible]ed from any other source.

30. Signature of Employee: Stephanie Hallock — 31. Title: Director — Date: 3/7/06

I certify that the above claimed expenses are authorized duty required expenses. Funds for payment of this claim are available in the approved budget for the period covered and have been allotted for expenditure.

32. Approved By: [signature] — 33. Title: MSD Admin — Date: 3/7/06

033

\Travel Expense Claim.xlt - Revised Jan. 2006 by Dale Chipman

✓ for dup

For SH 3/6 folder

Azumano Travel Travel Services

ELECTRONIC TICKET RECEIPT

Review your itinerary details & advise us of any discrepancies within 24hrs.

Click Here to view your Online Itinerary, or go to wwww.viewtrip.com / Reservation ID: WQSLT2

Passenger: CUMMINS/STEPHANIE H 34000.TONE.5032295990

Prepared on: 02/22/06 11:44:18 by Agent: Bonnie

$44 per diem feat
11 for b/fast & lunch
22 for dinner

06MAR MON

AIR • Alaska Airlines • Flight: 2149 confirmed in L **• Seat: 08B**
Depart: Portland, OR 810A
Arrive: Redmond, OR 850A
Equipment: DH8 • Elapsed Time: :40 nonstop

NON-SMOKING
OPERATED BY HORIZON AIR
PDX PASSENGER CHECK-IN WITH QX

AIR • Alaska Airlines • Flight: 2128 confirmed in Y **• Seat: 08D**
Depart: Redmond, OR 315P
Arrive: Portland, OR 355P
Equipment: DH8 • Elapsed Time: :40 nonstop

NON-SMOKING
OPERATED BY HORIZON AIR
RDM PASSENGER CHECK-IN WITH QX

Ticket Information

Total Fare Quoted	Base Fare	US Taxes	Other Taxes	Ticketing Date	Reservation #
USD 212.60	USD 151.63	USD 11.37	USD 20.60	22FEB	WQSLT2

The total fare above includes a service fee of: $ 29.00.

Important Reservation Information

TRAVEL AWARDS ACCEPTED BY STATE EMPLOYEES
BECOME THE PROPERTY OF THE STATE OF OREGON.
YOU MUST NOTIFY YOUR AGENCY OF ANY AWARDS RECEIVED.
*** PTKT:TKT/ORI/INV TO TVL ARR * INCL GOVT PARK PASS
HORIZON AIR 800-547-9308
RESERVATION BOOKED WITH BONNIE BY TONEASHA
AMOUNT OF AZUMANO SERVICE FEE: $29.00 / 8909521401883
..
ALASKA AIRLINES RECORD LOCATOR: JEDLDK
..
ALASKA AIRLINES TICKET NUMBER/AMOUNT: 027155144232l$183.60
.

Agency phone 503-370-7442/800-289-2959
EMERGENCY AFTER HOURS 877-840-0183
Present code 1010Q to Thrifty Parking for discount.

Receipt
Ace Parking
PO Box 55176
Portland, OR 97238

Economy Lot - Exit Lane 21 (EV221)
Audit#:

in: 03/06/06 06:41:31
out: 03/06/06 16:28

Amount Paid: $ 8.00
Visa
CUMMINS/STEPHANIE H
xxxx xxxx xxxx 7410

STATE OF OREGON
TRAVEL EXPENSE DETAIL SHEET

3061VPT22406

1. Name of Employee	2. Agency	3. Period (Month and Year)
10R00844689 Stephanie Hallock	DEQ	March-06
4. Official Station	**5. Division/ Work Unit**	**6. Regular Schedule Work Shift**
HQ	OD	X 8:00 am - 5:00 pm Other _ to _

7. Unrepresented ☐ Management Service ☐ Executive Service X Board/Commission ☐ Volunteer ☐

Bargaining Unit Name ☐ AFSCME Other ☐

8. Date	9. Time of Departure	10. Time of Arrival	11. Destination	12. Per Diem/ Hourly Allowance	Individual Meal Reimbursement Breakfast	Lunch	Dinner	13. Lodging	14. Total Meals and Lodging
03/19/06	6 am		Charleston, NE SC.	40.50		13.50	27.00	139.00	179.50
03/20/06				13.50	13.50	Provided	Provided	139.00	152.50
03/21/06				40.50	13.50	Provided	27.00	139.00	179.50
03/22/06				27.00	Provided	Provided	27.00	139.00	166.00
03/23/06		8:30 pm	Portland, OR	54.00	13.50	13.50	27.00		54.00
			Δ See approval attached						
			15. **Totals**		40.50	27.00	108.00	556.00	**$731.50**

16. Accounting Codes		17. Date	18. Miscellaneous Expenses Fares, Private Mileage, Room Tax, Telephone, Other Expenses	19. Training Related?	20 Rate Per Mile	21. Private Car Miles	22. Amount
10001-42004	MZ0000		Personal Vehicle Mileage		0.445		
			Hotel Tax @ 12.5%				69.52
4151	80.02		Taxi				30.00
4153	95.00		Shuttle				15.00
			Airport Parking				40.00
Totals	886.02					23. Section Total	**$154.52**

24. **I did/will____ did not/will not** XXX accept travel awards as a result of, or associated with this state business trip. Completion of this block is mandatory. Travel expense reimbursement claims will not be processed if this block is left blank. Travel awards included, but may not be limited to , airline frequent flyer miles and hotel or car rental frequent customer awards or miles. Review instructions on reverse of the form.

25. REASON FOR TRAVEL: (Be specific.)
ECOS Spring Meeting

26. Grand Total Amount **$886.02**

27. Travel Advance Amount

28. Amount Due Employee/State **$886.02**

29. Received Training Conducted Training

I certify that all reimbursements claimed reflect actual duty required expenses or allowances entitled; that no r thereof has been heretofore claimed or will be d from any other source.

30. Signature of Employee Stephanie Hallock — 31. Title Director — Date 3-29-06

I certify that the above claimed expenses are authorized duty required expenses. Funds for payment of this claim are available in the approved budget for the period covered and have been allotted for expenditure.

32. Approved By — 33. Title MSD Admin — Date 3/30/06

:\Travel Expense Claim.xlt - Revised Jan. 2006 by Dale Chipman

035

ECOS TRAVEL REIMBURSEMENT FORM

ADDRESS	
Name	Stephanie Hallock
Organization	Oregon Dept. of Environmental Quality
Address	811 SW Sixth Avenue
City/State/ZIP	Portland, OR 97204-1390
Phone	(503) 229-5300
Fax	(503) 229-6762
Email	

Instructions:

************PLEASE COMPLETE ELECTRONICALLY************

Type in the requested information. Calculations will be done automatically.

Please mail a signed hard copy of this completed form and corresponding original receipts for all items $25 and more to ECOS for reimbursement.

Mail to:
ECOS
444 North Capitol Street, NW
Suite 445
Washington, DC 20001 Phone: (202) 624-3660

Meeting Name (specify): ECOS Spring Meeting

Meeting Location and Dates (specify): Charleston, SC - March 20 - 22, 2006

Travel Start and End Dates and Times (specify): March 19 (6:00 AM) - March 23 (8:30 PM)

	Day 1 Enter Date	Day 2 Enter Date	Day 3 Enter Date	Day 4 Enter Date	Day 5 Enter Date	Day 6 Enter Date	Day 7 Enter Date	Day 8 Enter Date	Day 9 Enter Date	TOTALS
Dates of Trip (m/d/y)	3/19/2006	3/20/2006	3/21/2006	3/22/2006	3/23/2006					
TRANSPORTATION										
Air/Train Fare										-
Personal Car Mileage										-
Mileage Charges*	-	-	-	-	-	-	-	-	-	-
Taxi/Van/Metro	15.00				30.00					45.00
Airport Parking	8.00	8.00	8.00	8.00	8.00					40.00
Transportation Subtotal	23.00	8.00	8.00	8.00	38.00	-	-	-	-	$ 85.00
MEALS & INCIDENTALS (M&IE): *See GSA page for per diem rates:*				http://www.gsa.gov/Portal/gsa/ep/contentView.do?programId=9704&channelId						
Breakfast		13.50	13.50	<provided>	13.50					40.50
Lunch	13.50	<provided>	<provided>	<provided>	13.50					27.00
Dinner	27.00	<provided>	27.00	27.00	27.00					108.00
Incidentals										-
M&IE Subtotal	40.50	13.50	40.50	27.00	54.00	-	-	-	-	$ 175.50
HOTEL AND OTHER *(Please specify "other" charges)*										
Hotel	156.38	156.38	156.38	156.38						625.52
Other										-
Other										-
Hotel and Other Subtotal	156.38	156.38	156.38	156.38	-	-	-	-	-	$ 625.52
GRAND TOTAL AMOUNT OWED										**$ 886.02**

* current rate is $ **0.445** per mile

I certify that the above claim is correct and in accordance with ECOS Travel Policy *(Please sign and date)*: Stephanie Hallock

Make Check Payable To: Oregon Dept. of Environmental Quality

Mail Check to : ☐ Address on File or ☐ Above Address (NEW USERS ONLY)

M&IE Breakdown	$39	$44	$49	$54	$59	$64
Breakfast	7	8	9	10	11	12
Lunch	11	12	13	15	16	18
Dinner	18	21	24	26	29	31
Incidentals	3	3	3	3	3	3

ECOS

OFFICE USE ONLY
APPROVED
CODE
CHECK #

036

OREGON DEPT OF ENVIRONMENTAL QUALITY
OUT-OF-STATE TRAVEL AUTHORIZATION

1. NAME OF EMPLOYEE:	2. AGENCY/OFFICIAL STATION:	3. REQUEST #:
Hallock, Stephanie	DEQ-HQ-OD	345-06

4. AGENCY ACCOUNTING INFORMATION: 07-1001-42004-M 20000

5. TRAVEL JUSTIFICATION E-MAIL SENT? ☑ Yes ☐ No

6. PURPOSE OF TRIP: (Be specific, include dates/times of meeting or conference)
Director Hallock is the president of the Environmental Council to the States ~~and she will be meeting with Government officals to discuss the Presidents budget proposal~~ ECOS Spring meeting

7. ITINERARY:

Destination city/state:	Charleston, SC
Departure date/time:	3/19, 6 am Sun
Return date/time:	3/23, 9 pm Th

8. TRANSPORTATION: (Airfare, train fare or state motor pool vehicle (circle one). For rental cars, see #11, for misc. ground transportation, see #12)
ECOS purchased plane ticket

TOTAL: $0.00

9. LODGING: Lodging per diem rate: $89.00

Amount per night:	139.00 Δ
Room tax per night:	17.38
# of nights:	4
TOTAL:	$625.52

Δ See reverse side

10. MEALS: Daily meal per diem rate: $54.00

	Rate	# Meals	Total
Breakfast: (25%)	13.50	3	40.50
Lunch: (25%)	13.50	2	27.00
Dinner: (50%)	27.00	4	108.00
		TOTAL:	$175.50

11. CAR RENTAL: (See OAM 40.10.00.PO, section .115. The state has a price agreement with Enterprise Rent-A-Car. Optional insurance will not be reimbursed).
___ **Days @ $28 plus tax, gas** TOTAL: N/A

12. MISCELLANEOUS COSTS: (Identify specific expenses - taxis, shuttles, phone, vehicle mileage, etc.)

a. Private vehicle mileage	___ (# of miles)	0.00
b. Shuttle		15.00
c. Other (specify below)		70.00

Taxi in SC & PDX airport parking

TOTAL: $85.00

13. TRAINING RELATED? (if yes, attach agenda)
☐ Yes ☑ No

14. STATUS:
☑ Executive/Mgmt Svc:
☐ AFSCME:
☐ Other: *Explain:* _____

15. TRAVEL AWARDS: Agencies are mandated to maintain records on employee accumulation of travel awards as reported on their travel expense detail sheets. Travel awards include, but may not be limited to airline frequent flyer miles and hotel or car rental frequent customer awards or miles.

16. ESTIMATED COST OF TRIP:

Transportation:	**$0.00**
Lodging:	**$625.52**
Meals:	**$175.50**
Car Rental:	**N/A**
Misc:	**$85.00**
TOTAL:	**$886.02**

17. I certify that this trip is necessary and essential to the normal discharge of DEQ responsibilites; that required monies are budgeted and alloted for expenditure; that the trip meets all the requirements mandated by ORS 292.230, OAM Policy 40.10.00, and DEQ policy.

18. EMPLOYEE SIGNATURE: Stephanie Hallock **DATE:** 3-29-06

19. SUPERVISOR SIGNATURE: **DATE:**

20. DA/EMT SIGNATURE: **DATE:**

21. MSD DA SIGNATURE: [signature] **DATE:** 3/31/06

300/VPT22541

STATE OF OREGON
TRAVEL EXPENSE DETAIL SHEET

1. Name of Employee 10R0084689 Stephanie Hallock Cummins	2. Agency DEQ	3. Period (Month and Year) April-06
4. Official Station HQ	5. Division/ Work Unit OD	6. Regular Schedule Work Shift X 8:00 am - 5:00 pm Other _ to _

7. Unrepresented ☐ Management Service ☐ Executive Service ☐ Board/Commission ☐ Volunteer ☐

Bargaining Unit Name ☐ AFSCME Other ☐

8. Date	9. Time of Departure	10. Time of Arrival	11. Destination	12. Per Diem/ Hourly Allowance	Individual Meal Reimbursement Breakfast	Lunch	Dinner	13. Lodging	14. Total Meals and Lodging
04/16/06	7:30 am		Washington DC	48.00		16.00	32.00	153.00	201.00
4/17/06				64.00	16.00	16.00	32.00	153.00	217.00
04/18/06		9 PM	Pltd-flight delayed due to storm	64.00	16.00	16.00	32.00		64.00
			15. **Totals**		32.00	48.00	96.00	306.00	**$482.00**

(Margin notes: Su, Mo, Tu)

Accounting Codes		17. Date	18. Miscellaneous Expenses Fares, Private Mileage, Room Tax, Telephone, Other Expenses	19. Training Related?	20. Rate Per Mile	21. Private Car Miles	22. Amount
10001 - 42004	M20000		Personal Vehicle Mileage		0.445		
			hotel tax @ 14.5%				44.38
4151	526.38		Airport parking				24.00
4152	1326.19		taxis in DC				35.00
4153	62.00		Metro in DC				3.00
			Airfare Portland to DC round trip				1,326.19
Totals	1914.57				23. **Section Total**		**$1,432.57**

24. **I did/will_____ did not/will not** XX accept travel awards as a result of, or associated with this state business trip. Completion of this block is mandatory. Travel expense reimbursement claims will not be processed if this block is left blank. Travel awards included, but may not be limited to, airline frequent flyer miles and hotel or car rental frequent customer awards or miles. Review instructions on reverse of the form.

25. REASON FOR TRAVEL: (Be specific.)
As ECOS president, Stephanie met with government officials to discuss President's budget proposal; 2008 Budget Hearing meeting

26. Grand Total Amount **$1,914.57**

27. Travel Advance Amount

28. Amount Due Employee/State **$1,914.57**

29. Received Training Conducted Training

I certify that all reimbursements claimed reflect actual duty required expenses or allowances entitled; that no part thereof has been heretofore claimed or will be claimed from any other source.

30. Signature of Employee: Stephanie Hallock
31. Title: Director
Date: 4-19-06

I certify that the above claimed expenses are authorized duty required expenses. Funds for payment of this claim are available in the approved budget for the period covered and have been allotted for expenditure.

32. Approved By: Sally [signature]
33. Title: MSD Admin.
Date: 4/19/06

\Travel Expense Claim.xlt - Revised Jan. 2006 by Dale Chipman

4/20 Allowance above host, ... 4/20 ...

State of Oregon

Department of Environmental Quality Memorandum

To: **Laurie Hunter**
Business Office

Date: 4/19/08

From: **Toneasha Kelly**
Director's Office

Subject: **Explanation for Director Hallock purchasing airfare**

Due to my error, Director Hallock purchased her own e-ticket at Portland International Airport on April 16, 2006.

Since Director Hallock is the President of ECOS her flight arrangements are made directly through ECOS. I receive several flight quotes from ECOS. After Director Hallock chooses the best option for her, I should delete all quotes. I inadvertently provided Director Hallock with a quote rather than the actual e-ticket that ECOS provided me. When Director Hallock went to the airport with the wrong information and presented the e-ticket to the airline, they had no record of her flight. Since this trip occurred on a Sunday, Director Hallock had no way to contact me to find out what had happened.

Director Hallock's trip to DC was required. She met with several members of Congress and the US Senate and/or their staff to discuss federal funding and other issues. Since this trip was required, she had to purchase a different ticket on her personal credit card in order to travel to DC. ECOS has agreed to fully reimburse DEQ in the amount of $1326.00 the cost of the ticket.

If you have any questions, please contact me at 503.229.5990

08/05 PRINTED IN CANADA BY MERCURY GRAPHICS ••• Rev. 7-04

05

PASSENGER TICKET AND BAGGAGE CHECK
SUBJECT TO CONDITIONS OF CONTRACT

ISSUED BY: NORTHWEST AIRLINES

ETKT

PASSENGER RECEIPT 1OF 1

DATE OF ISSUE: 16APR06 | ISS. OFF. CODE: C3800183Z | ISS. SEQ. NO. | ISO: US

ISS. AGT. ID.: PD1/TR | PLACE OF ISSUE: PORTLAND OR

NAME OF PASSENGER: CUMMINS/STEPHANIEH

TRANSFER FROM: | TRANSFER TO: | FARE BASIS: BBF | TOUR CODE | E.T.: S

FROM: CUMMINS/STEPHANIEH

CARRIER / FLIGHT | CLASS / DATE | TIME | RES. | NVB/BEFORE | NVA/AFTER

TO: **NOT VALID FOR** | REVALIDATION: **THIS IS YOUR RECEIPT**

TRANSPORTATION

ENDORSEMENTS/RESTRICTIONS

PNR CODE: Z3VPAN/NW

ORIGINAL ISSUE: | ISSUED IN EXCHANGE FOR: | CONJ. TKT. NO.:

FARE CALCULATION

PDX NW X/MSP NW WAS597.67NW X/MSP NW PDX597.67USD1195.34 END NW ZPPDXMSPDCAMSP XT 10
.00AY18.00XF PDX4.5MSP4.5DCA4.5MSP4.5

FARE: USD 1195.34	EQUIV. FARE PD:	FORM OF PAYMENT: CCVI 4730 7710 0051 4597 P0706 046232											
TAX/FEE/CHARGE: XT 28.00	RCPS	GR. WT.	UNCK. WT.	SEQ. NO.	ALLOW.	POS	CKI WT.	UNCK. WT.	PCS	GR. WT.	UNCK. WT.	PCS	GR. WT.	UNCK. WT.
TAX/FEE/CHARGE: US 89.66	STOCK CONTROL NUMBER: TX 0120260264812 3												
TAX/FEE/CHARGE: ZP 13.20	DOCUMENT NUMBER: 012 2131799956 5												
TOTAL: USD 1326.19	DO NOT MARK OR WRITE IN THE WHITE AREA ABOVE												

ADDITIONAL SEAT INFORMATION

BAGGAGE ID NO.: NOT VALID FOR TRAVEL

DOCUMENT NUMBER: 012 2131799956 5

PRINTED BY MERCURY GRAPHICS ••• REV. 7-96

ELECTRONIC TICKET

PAGE 1 OF 1

ITINERARY FOR
CUMMINS/STEPHANIEH

DAY	DATE		CITY		AIRLINE		CLASS	MEAL
SU	16APR	LV	PORTLAND ORE	900A	NORTHWEST	0592	B	
		AR	MINNEAPOLS/STPAUL	217P	NON-STOP			
SU	16APR	LV	MINNEAPOLS/STPAUL	303P	NORTHWEST	1714	B	
		AR	WAS/R.REAGAN NATL	618P	NON-STOP			
TU	18APR	LV	WAS/R.REAGAN NATL	230P	NORTHWEST	0673	B	
		AR	MINNEAPOLS/STPAUL	415P	NON-STOP			
TU	18APR	LV	MINNEAPOLS/STPAUL	521P	NORTHWEST	0595	B	
		AR	PORTLAND ORE	654P	NON-STOP			

ECOS TRAVEL REIMBURSEMENT FORM

ADDRESS	
Name	Stephanie Hallock
Organization	Oregon Dept. of Environmental Quality
Address	811 SW Sixth Avenue
City/State/ZIP	Portland, OR 97204-1390
Phone	(503) 229-5300
Fax	(503) 229-6762
Email	

Instructions:

************PLEASE COMPLETE ELECTRONICALLY************

Type in the requested information. Calculations will be done automatically. Please mail a signed hard copy of this completed form and corresponding original receipts for all items $25 and more to ECOS for reimbursement.

Mail to:
ECOS
444 North Capitol Street, NW
Suite 445
Washington, DC 20001 Phone: (202) 624-3660

Meeting Name (specify): 2008 Budget Hearing Meeting

Meeting Location and Dates (specify): Washington DC - April 17 - 18, 2006

Travel Start and End Dates and Times (specify): April 17 (7:30 AM) - April 18 (9:00 PM)

	Day 1 Enter Date	Day 2 Enter Date	Day 3 Enter Date	Day 4 Enter Date	Day 5 Enter Date	Day 6 Enter Date	Day 7 Enter Date	Day 8 Enter Date	Day 9 Enter Date	TOTALS
Dates of Trip (m/d/y):	4/16/2006	4/17/2006	4/18/2006							
TRANSPORTATION										
Air/Train Fare	1,326.19									1,326.19
Personal Car Mileage										-
Mileage Charges*	-	-	-	-	-	-	-	-	-	-
Taxi/Van/Metro	15.00	3.00	20.00							38.00
Airport Parking	8.00	8.00	8.00							24.00
Transportation Subtotal	1,349.19	11.00	28.00	-	-	-	-	-	-	$ 1,388.19
MEALS & INCIDENTALS (M&IE): *See GSA page for per diem rates:*				http://www.gsa.gov/Portal/gsa/ep/contentView.do?programId=9704&channelId						
Breakfast		16.00	16.00							32.00
Lunch	16.00	16.00	16.00							48.00
Dinner	32.00	32.00	32.00							96.00
Incidentals										-
M&IE Subtotal	48.00	64.00	64.00	-	-	-	-	-	-	$ 176.00
HOTEL AND OTHER *(Please specify "other" charges)*										
Hotel	175.19	175.19								350.38
Other										-
Other										-
Hotel and Other Subtotal	175.19	175.19	-	-	-	-	-	-	-	$ 350.38
GRAND TOTAL AMOUNT OWED										**$ 1,914.57**

* current rate is $ **0.445** per mile

I certify that the above claim is correct and in accordance with ECOS Travel Policy *(Please sign and date)*: Stephanie Hallock

Make Check Payable To: Oregon Dept. of Environmental Quality

Mail Check to : ☐ Address on File or ☐ Above Address (NEW USERS ONLY)

M&IE Breakdown	$39	$44	$49	$54	$59	$64
Breakfast	7	8	9	10	11	12
Lunch	11	12	13	15	16	18
Dinner	18	21	24	26	29	31
Incidentals	3	3	3	3	3	3

ECOS

OFFICE USE ONLY
APPROVED
CODE
CHECK #

041

OREGON DEPT OF ENVIRONMENTAL QUALITY
OUT-OF-STATE TRAVEL AUTHORIZATION

Revised OSA to include cost of airfare.

1. NAME OF EMPLOYEE:	2. AGENCY/OFFICIAL STATION:	3. REQUEST #:
Stephanie Hallock	DEQ - HQ - Office of the Director	335(s) - 06 of

4. AGENCY ACCOUNTING INFORMATION:	5. TRAVEL JUSTIFICATION E-MAIL SENT?
07-10001-42004 M20000/00	☐ Yes ☐ No

6. PURPOSE OF TRIP: (Be specific, include dates/times of meeting or conference)
As president of the Environmental Council of States (ECOS), Director Hallock with be attending the 2008 Budget Hearing meeting and meeting with government officials to discuss the President's budget proposal. Travel reimbursed by ECOS.

7. ITINERARY:

Destination city/state:	Washington DC
Departure date/time:	4/16/2006 7:30
Return date/time:	4/18/2006 21:00

8. TRANSPORTATION: (Airfare, train fare or state motor pool vehicle (circle one). For rental cars, see #11, for misc. ground transportation, see #12)
NW Airlines - see attached

TOTAL: $1,326.19

9. LODGING: Lodging per diem rate: $180.00

Amount per night:	153.00
Room tax per night:	22.19
# of nights:	2
TOTAL:	$350.38

10. MEALS: Daily meal per diem rate: $64.00

	Rate	# Meals	Total
Breakfast: (25%)	16.00	2	32.00
Lunch: (25%)	16.00	3	48.00
Dinner: (50%)	32.00	3	96.00
		TOTAL:	$176.00

11. CAR RENTAL: (See OAM 40.10.00.PO, section .115. The state has a price agreement with Enterprise Rent-A-Car. Optional insurance will not be reimbursed).
___ **Days @ $28 plus tax, gas** TOTAL:

12. MISCELLANEOUS COSTS: (Identify specific expenses - taxis, shuttles, phone, vehicle mileage, etc.)

a. Private vehicle mileage	(# of miles)	0.00
b. Shuttle		
c. Other (specify below)		62.00

airport parking, taxi and metro fares

TOTAL: $62.00

13. TRAINING RELATED? (if yes, attach agenda)
☐ Yes ☐ No

14. STATUS:
☑ Executive/Mgmt Svc:
☐ AFSCME:
☐ Other: *Explain:* _____

15. TRAVEL AWARDS: Agencies are mandated to maintain records on employee accumulation of travel awards as reported on their travel expense detail sheets. Travel awards include, but may not be limited to airline frequent flyer miles and hotel or car rental frequent customer awards or miles.

16. ESTIMATED COST OF TRIP:

Transportation:	**$1,326.19**
Lodging:	**$350.38**
Meals:	**$176.00**
Car Rental:	**$0.00**
Misc:	**$62.00**
TOTAL:	**$1,914.57**

17. I certify that this trip is necessary and essential to the normal discharge of DEQ responsibilites; that required monies are budgeted and alloted for expenditure; that the trip meets all the requirements mandated by ORS 292.230, OAM Policy 40.10.00, and DEQ policy.

18. EMPLOYEE SIGNATURE: Stephanie Hallock **DATE:** 4-26-06

SUPERVISOR SIGNATURE: **DATE:**

20. DA/EMT SIGNATURE: **DATE:**

21. MSD DA SIGNATURE: **DATE:**

311/VPT 22598

STATE OF OREGON
TRAVEL EXPENSE DETAIL SHEET

1. Name of Employee 10R00846?? Stephanie Hallock	2. Agency DEQ	3. Period (Month and Year) April-06
4. Official Station OD	5. Division/ Work Unit HQ	6. Regular Schedule Work Shift 8:00 am - 5:00 X pm Other _ to _

7. Unrepresented ☐ Management Service ☐ Executive Service ☒ Board/Commission ☐ Volunteer ☐

Bargaining Unit Name ☐ AFSCME Other ☐

8. Date	9. Time of Departure	10. Time of Arrival	11. Destination	12. Per Diem/ Hourly Allowance	Individual Meal Reimbursement Breakfast	Lunch	Dinner	13. Lodging	14. Total Meals and Lodging
04/27/06	7:30 AM		Hermiston, Oregon	19.50	N/A	provided	19.50	60.00	79.50
04/28/06		3 PM	Portland, Oregon	—	provided	provided	N/A		—
			15. Totals				19.50	60.00	$79.50

Accounting Codes		17. Date	18. Miscellaneous Expenses Fares, Private Mileage, Room Tax, Telephone, Other Expenses	19. Training Related?	20 Rate Per Mile	21. Private Car Miles	22. Amount
14010 - 41004			Personal Vehicle Mileage		0.445		
			Hotel Tax @ 9%				5.40
4101	84.90						
Totals	84.90				23. Section Total		$5.40

24. I did/will_____ did not/will not SH accept travel awards as a result of, or associated with this state business trip. Completion of this block is mandatory. Travel expense reimbursement claims will not be processed if this block is left blank. Travel awards included, but may not be limited to, airline frequent flyer miles and hotel or car rental frequent customer awards or miles. Review instructions on reverse of the form.

25. REASON FOR TRAVEL: (Be specific.)
Stephanie Hallock attended the Environmental Quality Commission meeting that was held in Hermiston Oregon to report recent agency events and/or agency changes. Her participation is required.

26. Grand Total Amount $84.90

27. Travel Advance Amount

28. Amount Due Employee/State $84.90

29. Received Training Conducted Training

2 claims
$257.50

... actual ... that no ... will be

30. Signature of Employee [signature] | 31. Title Director | Date 5-3-06

... horized ... of this ... for the ... diture.

32. Approved By [signature] | 33. Title MSD ADMIN | Date

5/5/06

STATE OF OREGON
TRAVEL EXPENSE DETAIL SHEET

1. Name of Employee	2. Agency	3. Period (Month and Year)
Hallock Stephanie	DEQ	May-06

4. Official Station	5. Division/ Work Unit	6. Regular Schedule Work Shift
OD	HQ	8:00 am - 5:00 x pm Other to

7. Unrepresented ☐ Management Service ☐ Executive Service ☐ Board/Commission ☐ Volunteer ☐
Bargaining Unit Name ☐ AFSCME Other ☐

8. Date	9. Time of Departure	10. Time of Arrival	11. Destination	12. Per Diem/ Hourly Allowance	Individual Meal Reimbursement Breakfast	Lunch	Dinner	13. Lodging	14. Total Meals and Lodging
05/01/06	6:30 am		Medford Oregon	33.00	11.00	11.00	22.00	70.00	114.00 ~~103.00~~
05/02/06		8 pm	Portland Oregon	44.00	11.00	11.00	22.00		44.00
			15. Totals	77.00	22.00	22.00	44.00	70.00	$158.00 ~~147.00~~

Accounting Codes		17. Date	18. Miscellaneous Expenses Fares, Private Mileage, Room Tax, Telephone, Other Expenses	19. Training Related?	20 Rate Per Mile	21. Private Car Miles	22. Amount
14010 - 41004			Personal Vehicle Mileage		0.445		
			Hotel tax @ 8%				5.60
4101	152.60						
Totals	152.60				23. Section Total		$5.60

24. I did/will ____ did not/will not ~~X~~ accept travel awards as a result of, or associated with this state business trip. Completion of this block is mandatory. Travel expense reimbursement claims will not be processed if this block is left blank. Travel awards included, but may not be limited to , airline frequent flyer miles and hotel or car rental frequent customer awards or miles. Review instructions on reverse of the form.

25. REASON FOR TRAVEL: (Be specific.)
Director Hallock is a ERT member. This was the 1 of many ERT field trips Director Hallock will attend. The ERT team focuses state agencies on working together at local level to increase economic opportunity & help local governments, business, property owners bring industrial sites to "shovel ready" status

26. Grand Total Amount 152.60 ~~$163.60~~
27. Travel Advance Amount
28. Amount Due Employee/State 152.60 ~~$163.60~~
29. Received Training Conducted Training

I certify that all reimbursements claimed reflect actual duty required expenses or allowances entitled; that no part thereof has been heretofore claimed or will be claimed from any other source.

30. Signature of Employee: Stephanie Hallock
31. Title: Director Date: 5-5-06

I certify that the above claimed expenses are authorized duty required expenses. Funds for payment of this claim are available in the approved budget for the period covered and have been allotted for expenditure.

32. Approved By: [signature]
33. Title: MSD ADMIN Date: 5-8-06

ATravel Expense Claim.xlt - Revised Jan. 2006 by Dale Chipman

044

STATE OF OREGON
TRAVEL EXPENSE DETAIL SHEET

315/VPTZ2783

1. Name of Employee	2. Agency	3. Period (Month and Year)
10K00841689 Stephanie Hallock	DEQ	May - June 2006

4. Official Station	5. Division/ Work Unit	6. Regular Schedule Work Shift
HQ	OD	8:00 am - 5:00 X pm Other _ to _

7. Unrepresented [ ] Management Service [ ] Executive Service [X] Board/Commission [ ] Volunteer [ ]
Bargaining Unit Name [ ] AFSCME Other [ ]

8. Date	9. Time of Departure	10. Time of Arrival	11. Destination	12. Per Diem/ Hourly Allowance	Individual Meal Reimbursement Breakfast	Lunch	Dinner	13. Lodging	14. Total Meals and Lodging
05/31/06	8:30 am		Pendleton, Oregon	29.25		9.75	19.50	60.00	89.25
06/01/06			Klamath Falls, Oregon	39.00	9.75	9.75	19.50	68.00	107.00
06/02/06		6:30 pm	Portland, Oregon	39.00	9.75	9.75	19.50		39.00
			15. Totals		19.50	29.25	58.50	128.00	$235.25

Accounting Codes		17. Date	18. Miscellaneous Expenses Fares, Private Mileage, Room Tax, Telephone, Other Expenses	19. Training Related?	20 Rate Per Mile	21. Private Car Miles	22. Amount
14010-41004			Personal Vehicle Mileage		0.445		
			Hotel tax @ 10%			JL	4.76
4101	245.41		Hotel tax @ 9%				5.40
Totals	245.41					23. Section Total	10.16

24. I did/will____ did not/will not Jl accept travel awards as a result of, or associated with this state business trip. Completion of this block is mandatory. Travel expense reimbursement claims will not be processed if this block is left blank. Travel awards included, but may not be limited to , airline frequent flyer miles and hotel or car rental frequent customer awards or miles. Review instructions on reverse of the form.

25. REASON FOR TRAVEL: (Be specific.)
On May 31, Director Hallock traveled to Pendleton, for several meetings including an EQC/DEQ town hall meeting. On 6/1-2 she traveled to several areas in the region road trip with Dick Nichols, DEQ ER WQ manager

26. Grand Total Amount 245.41 JL

27. Travel Advance Amount

28. Amount Due Employee/State JL 245.41 JL

29. Received Training Conducted Training

I certify that all reimbursements claimed reflect actual duty required expenses or allowances entitled; that no part thereof has been heretofore claimed or will be [illegible]ed from any other source.

30. Signature of Employee: Stephanie Hallock — 31. Title: Director — Date: 6-8-05

I certify that the above claimed expenses are authorized duty required expenses. Funds for payment of this claim are available in the approved budget for the period covered and have been allotted for expenditure.

32. Approved By: René-Marc Mongeau — 33. Title: MSD Administrator — Date

STATE OF OREGON
TRAVEL EXPENSE DETAIL SHEET

1. Name of Employee	2. Agency	3. Period (Month and Year)
Stephanie Hallock	DEQ	May-06
4. Official Station	**5. Division/ Work Unit**	**6. Regular Schedule Work Shift**
HQ	OD	8:00 am - 5:00 x pm Other _ to _

7. Unrepresented ☐ Management Service ☐ Executive Service x Board/Commission ☐ Volunteer ☐

Bargaining Unit Name ☐ AFSCME Other ☐

8. Date	9. Time of Departure	10. Time of Arrival	11. Destination	12. Per Diem/ Hourly Allowance	Individual Meal Reimbursement Breakfast	Lunch	Dinner	13. Lodging	14. Total Meals and Lodging
05/10/06	9 am		Victoria Cananda		N/A	N/A	N/A	N/A	
05/11/06				58.50	N/A	N/A	58.50	~~95.00~~ 86.51	153.50 145.09
05/12/06				117.00	29.25	29.25	58.50	~~95.00~~ 86.59	212.00 203.59
05/13/06					N/A	N/A	N/A	N/A	
05/14/06		6 PM	Portland, Oregon		N/A	N/A	N/A	N/A	
			* converted to US currency using exchange rate of 1.0971 per credit card statement						
								173.18	
			15. Totals	175.50	29.25	29.25	117.00	~~190.00~~	~~$365.50~~ 348.68

Accounting Codes		17. Date	18. Miscellaneous Expenses Fares, Private Mileage, Room Tax, Telephone, Other Expenses	19. Training Related?	20 Rate Per Mile	21. Private Car Miles	22. Amount
14010-41004			Personal Vehicle Mileage		0.445	472.5	210.26
			Hotel tax -				
4155	318.12		Goods & Service tax @ 7% $6.06 x 2				+ 13.30 12.12
4157	324.92		Provincial Sales tax @ 8% $6.93 x 2				+ 15.20 13.86
			Municipal Sales tax @ 2% $1.73 x 2				+ 3.80 3.46
			Parking fee $6.38 x 2				+ 14.00 12.76
			Goods & Service tax @ 7% (parking) .45 x 2				0.98 .90
			Ferry Cost - round trip - one - Kaitlin			473 ✓	101.00
Totals	703.04					23. Section Total	354.36 $358.54

24. I did/will_____ did not/will not ~~will~~ accept travel awards as a result of, or associated with this state business trip. Completion of this block is mandatory. Travel expense reimbursement claims will not be processed if this block is left blank. Travel awards included, but may not be limited to, airline frequent flyer miles and hotel or car rental frequent customer awards or miles. Review instructions on reverse of the form.

25. REASON FOR TRAVEL: (Be specific.)

Director Hallock met with several PNW Director's & EPA officials from different states to discuss environmental issues & strategic planning

26. Grand Total Amount 703.04 ~~$724.04~~

27. Travel Advance Amount

28. Amount Due Employee/State 703.04 ~~$724.04~~

29. Received Training Conducted Training

I certify that all reimbursements claimed reflect actual duty required expenses or allowances entitled; that no part thereof has been heretofore claimed or will be claimed from any other source.

30. Signature of Employee Stephanie Hallock

31. Title Director Date 5-17-06

I certify that the above claimed expenses are authorized duty required expenses. Funds for payment of this claim are available in the approved budget for the period covered and have been allotted for expenditure.

32. Approved By

33. Title MSO ADMIN Date

5/18 current, 5/20 cum for ck request

5/18/06

OREGON DEPT OF ENVIRONMENTAL QUALITY
OUT-OF-STATE TRAVEL AUTHORIZATION

1. NAME OF EMPLOYEE:	2. AGENCY/OFFICIAL STATION:	3. REQUEST #:
Stephanie Hallock	DEQ-HQ-OD	359-06 ✓

4. AGENCY ACCOUNTING INFORMATION: ~~07-1001-42004-M 20000~~ 44010 - 41004 (indirect)

5. TRAVEL JUSTIFICATION E-MAIL SENT? ☑ Yes ☐ ~~No~~

6. PURPOSE OF TRIP: (Be specific, include dates/times of meeting or conference)
PNW Director's Summer meeting located in Victoria BC and sponsord by Ross & Associates. - May 11-12, 2006

7. ITINERARY:

Destination city/state: Victoria, BC

Departure date/time: May 10, morning of ✓

Return date/time: May 15, evening of ✓

5/10 - 5/13 business 5/13 - 5/15 personal

8. TRANSPORTATION: (Airfare, train fare or state motor pool vehicle (circle one). For rental cars, see #11, for misc. ground transportation, see #12)

see below and e-m attached

TOTAL: $0.00

9. LODGING: Lodging per diem rate: $199.00 ✓

Amount per night:	95.00
Room tax per night:	33.83
# of nights:	3 2
TOTAL:	~~$257.66~~ 286.49

10. MEALS: Daily meal per diem rate: $117.00 ✓

	Rate	# Meals	Total
Breakfast: (25%)	29.25	2 4	58.50
Lunch: (25%)	29.25	2 4	58.50
Dinner: (50%)	58.50	X 4	58.50
			468.00 ✓
		TOTAL:	~~$175.50~~

11. CAR RENTAL: (See OAM 40.10.00.PO, section .115. The state has a price agreement with Enterprise Rent-A-Car. Optional insurance will not be reimbursed).

____ **Days @ $28 plus tax, gas** TOTAL: ____

12. MISCELLANEOUS COSTS: (Identify specific expenses - taxis, shuttles, phone, vehicle mileage, etc.)

a. Private vehicle mileage	472 (# of miles)	210.04 ✓
b. Shuttle		50.00 ✓
c. Other (specify below)		105 ~~100.00~~
Ferry, taxis, etc.		365.04
	TOTAL:	~~$360.04~~

13. TRAINING RELATED? (if yes, attach agenda)

☐ Yes ☑ No

14. STATUS:

☑ Executive/Mgmt Svc:
☐ AFSCME:
☐ Other: *Explain:* _____

15. TRAVEL AWARDS: Agencies are mandated to maintain records on employee accumulation of travel awards as reported on their travel expense detail sheets. Travel awards include, but may not be limited to airline frequent flyer miles and hotel or car rental frequent customer awards or miles.

16. ESTIMATED COST OF TRIP:

Transportation:	**$0.00** See misc.
Lodging:	**~~$257.66~~** 286.49
Meals:	**~~$175.50~~** 468.00
Car Rental:	**$0.00**
Misc:	**~~$360.04~~** 365.04 ✓
TOTAL:	**~~$793.20~~** 1219.53

17. **I certify that this trip is necessary and essential to the normal discharge of DEQ responsibilites; that required monies are budgeted and alloted for expenditure; that the trip meets all the requirements mandated by ORS 292.230, OAM Policy 40.10.00, and DEQ policy.**

18. EMPLOYEE SIGNATURE: Stephanie Hallock **DATE:** 4-3-06

19. SUPERVISOR SIGNATURE: **DATE:**

20. DA/EMT SIGNATURE: **DATE:** 4/28/06

21. MSD DA SIGNATURE: **DATE:**

STATE OF OREGON
TRAVEL EXPENSE DETAIL SHEET

320/VPTZ2806

1. Name of Employee	2. Agency	3. Period (Month and Year)
10R00846B9 Stephanie Hallock	DEQ	June-06

4. Official Station	5. Division/ Work Unit	6. Regular Schedule Work Shift
HQ	OD	8:00 am - 5:00 X pm Other to

7. Unrepresented ☐ Management Service ☐ Executive Service X Board/Commission ☐ Volunteer ☐

Bargaining Unit Name ☐ AFSCME Other ☐

8. Date	9. Time of Departure	10. Time of Arrival	11. Destination	12. Per Diem/ Hourly Allowance	Individual Meal Reimbursement Breakfast	Lunch	Dinner	13. Lodging	14. Total Meals and Lodging
06/06/06	6 am		Bend Oregon	33.00		11.00	22.00	66.00	99.00
06/07/06		7 pm	Portland Oregon	44.00	11.00	11.00	22.00		44.00
			15. Totals		11.00	22.00	44.00	66.00	$143.00

Accounting Codes		17. Date	18. Miscellaneous Expenses Fares, Private Mileage, Room Tax, Telephone, Other Expenses	19. Training Related?	20 Rate Per Mile	21. Private Car Miles	22. Amount
14010 - 41004			Personal Vehicle Mileage		0.445		
4101	149.60		Hotel Tax @ 10%				6.60
Totals	149.60					23. Section Total	$6.60

24. I did/will_____ did not/will not JM accept travel awards as a result of, or associated with this state business trip. Completion of this block is mandatory. Travel expense reimbursement claims will not be processed if this block is left blank. Travel awards included, but may not be limited to , airline frequent flyer miles and hotel or car rental frequent customer awards or miles. Review instructions on reverse of the form.

25. REASON FOR TRAVEL: (Be specific.)
Director Hallock attened an Economic Revitalization Team (ERT) Field trip to Eastern Region. Her participation was required.

26. Grand Total Amount $149.60

27. Travel Advance Amount

28. Amount Due Employee/State $149.60

29. Received Training Conducted Training

2 claims
$852.64

I actual that no will be

30. Signature of Employee Stephanie Hallock

31. Title Director Date 6-8-06

Authorized t of this for the period covered and have been allotted for expenditure.

32. Approved By René MacNary

33. Title MSD, Administrator Date

\Travel Expense Claim.xlt - Revised Jan. 2006 by Dale Chipman

STATE OF OREGON
TRAVEL EXPENSE DETAIL SHEET

329/VPT 22851

1. Name of Employee	2. Agency	3. Period (Month and Year)
10R0084689 Stephanie Hallock	DEQ	June-06

4. Official Station	5. Division/ Work Unit	6. Regular Schedule Work Shift
HQ	OD	8:00 am - 5:00 X pm Other to

7. Unrepresented ☐ Management Service ☐ Executive Service X Board/Commission ☐ Volunteer ☐

Bargaining Unit Name ☐ AFSCME Other ☐

8. Date	9. Time of Departure	10. Time of Arrival	11. Destination	12. Per Diem/ Hourly Allowance	Individual Meal Reimbursement Breakfast	Lunch	Dinner	13. Lodging	14. Total Meals and Lodging
06/13/06	6 am		Seattle, Washington	~~33.00~~	N/A	~~11~~16.00	~~11~~32.00	70.00	~~118.00~~ 102.00
06/14/06		8 pm	Medford, Oregon	~~44.00~~				70.00	70.00 ~~114.00~~
06/15/06		10:30 am	Portland, Oregon	~~22.00~~	~~11~~9.75	~~11~~ 9.75			~~19.50~~ 22.00
			15. Totals	99.00	~~9.75~~	~~25~~.75	~~32~~.00	140.00	~~$207.50~~ 239.00

Accounting Codes		17. Date	18. Miscellaneous Expenses Fares, Private Mileage, Room Tax, Telephone, Other Expenses	19. Training Related?	20 Rate Per Mile	21. Private Car Miles	22. Amount
14010-41004			Personal Vehicle Mileage		0.445		
4151	33.00		airport parking				24.00
4153	8.00		hotel tax @ 10%				14.00
4101	220.00						
4103	16.00						
Totals	277.00				23. Section Total		$38.00

24. I did/will_____ did not/will not ~~X~~ accept travel awards as a result of, or associated with this state business trip. Completion of this block is mandatory. Travel expense reimbursement claims will not be processed if this block is left blank. Travel awards included, but may not be limited to , airline frequent flyer miles and hotel or car rental frequent customer awards or miles. Review instructions on reverse of the form.

25. REASON FOR TRAVEL: (Be specific.)
On 6/13/06 Director Hallock attended an Agriculture Forum in Seattle Washington. At 6 pm on 6/13 Director Hallock flew from Seattle to Medford to attend an EQC/DEQ Town Hall meeting the following evening on 6/14. While in Medford on 6/14 - 15, Director Hallock had several appointments. Please review the attached detailed itinerary.

26. Grand Total Amount 277.00 ~~$245.50~~

27. Travel Advance Amount

28. Amount Due Employee/State 277.00 ~~$245.50~~

29. Received Training Conducted ~~Training~~

I certify that all reimbursements claimed reflect actual duty required expenses or allowances entitled; that no part thereof has been heretofore claimed or will be ~~c~~d from any other source.

30. Signature of Employee Stephanie Hallock

31. Title Director Date 6-19-06

I certify that the above claimed expenses are authorized duty required expenses. Funds for payment of this claim are available in the approved budget for the period covered and have been allotted for expenditure.

32. Approved By René Marc Mangi

33. Title Administrator, MSD Date

Itinerary Detail - Combined

Azumano Travel
Est. 1949

Back Office Data
STATE OF OREGON
Trip Departures from 06/13/2006 to 06/30/2006
Report Parameters: Passenger = CUMMINS

CUMMINS/STEPHANIE H

Actual:	$94.30	Savings:	$91.00	Val Carrier:	ALASKA AIR (AS)
Lowest:	$94.30	Lost Amt:	$0.00	Ticket #:	1557090277
Service Fees:	$29.00			Invoice #:	675339722
Exception:	GOVERNMENT CITY PAIR USED			Inv Date:	5/9/2006

Account:	OR State Dept. of Environmental					
Break 1:	34000					
Break 2:	TONEASHA					
Break 3:	5032295990					

Itinerary				Airline	Flt #	Class
MEDFORD,OR	PORTLAND,OR	6/15/2006	09:15-10:14	ALASKA AIR (AS)	2150	Y

Total Cost of Trip: ***$123.30***

CUMMINS/STEPHANIE H

Actual:	$355.60	Savings:	$0.00	Val Carrier:	ALASKA AIR (AS)
Lowest:	$355.60	Lost Amt:	$0.00	Ticket #:	1558811574
Service Fees:	$29.00			Invoice #:	675340053
Exception:	LOWEST FARE ACHIEVED			Inv Date:	5/11/2006

Account:	OR State Dept. of Environmental				
Break 1:	34000				
Break 2:	TONEASHA				
Break 3:	5032295990				

Itinerary				Airline	Flt #	Class
PORTLAND,OR	SEATTLE TACOMA,WA	6/13/2006	07:00-07:55	ALASKA AIR (AS)	2290	Y
SEATTLE TACOMA,WA	MEDFORD,OR	6/13/2006	17:55-19:25	ALASKA AIR (AS)	2285	B

Total Cost of Trip: ***$384.60***

Report Totals

Air Totals	
# of Air Trips:	2
Air Charges:	$449.90
Avg Cost per Trip:	$224.95
Total Svc Fees:	$58.00
Total All Charges:	**$507.90**

Car Rental Totals	
# of Rentals:	0
# of Days Rented:	0
Car Rental Charges:	$0.00
Avg # of Days Rented:	0.00
Avg Booked Rate:	0.00
Avg Cost per Day:	$0.00

Hotel Booking Totals	
# of Stays:	0
# of Room Nights:	0
Hotel Booking Charges:	$0.00
Avg # of Nights:	0.00
Avg Booked Rate:	$0.00
Avg Cost/RoomNight:	$0.00

OREGON DEPT OF ENVIRONMENTAL QUALITY
OUT-OF-STATE TRAVEL AUTHORIZATION

1. NAME OF EMPLOYEE:	2. AGENCY/OFFICIAL STATION:	3. REQUEST #:
Stephanie Hallock	DEQ-OD	HO7-Dec 4

4. AGENCY ACCOUNTING INFORMATION: 7-14010-41004

5. TRAVEL JUSTIFICATION E-MAIL SENT? ☑ Yes ☐ No

6. PURPOSE OF TRIP: (Be specific, include dates/times of meeting or conference)
To attend an Agriculture Forum located in Seattle WA with several other agency Directors from Oregon and Washington

7. ITINERARY:

Destination city/state: Seattle WA

Departure date/time: 6/13, 6:30 am AM

Return date/time: 6/21/2006, 8 pm

8. TRANSPORTATION: (Airfare, train fare or state motor pool vehicle (circle one). For rental cars, see #11, for misc. ground transportation, see #12)

PDX - Seattle - meeting

TOTAL: 384.6

9. LODGING: Lodging per diem rate: _____

Amount per night: _____

Room tax per night: _____

# of nights: _____

TOTAL: $0.00

10. MEALS: Daily meal per diem rate: $64.00

	Rate	# Meals	Total
Breakfast: (25%)	16.00		0.00
Lunch: (25%)	16.00	1	16.00
Dinner: (50%)	32.00	1	32.00

TOTAL: $48.00

11. CAR RENTAL: (See OAM 40.10.00.PO, section .115. The state has a price agreement with Enterprise Rent-A-Car. Optional insurance will not be reimbursed).

_____ **Days @ $28 plus tax, gas** TOTAL: _____

12. MISCELLANEOUS COSTS: (Identify specific expenses - taxis, shuttles, phone, vehicle mileage, etc.)

a. Private vehicle mileage _____ (# of miles) 0.00
b. Shuttle _____
c. Other (specify below) _____

TOTAL: $0.00

13. TRAINING RELATED? (if yes, attach agenda)

☐ Yes ☑ No

14. STATUS:

☑ Executive/Mgmt Svc:
☐ AFSCME:
☐ Other: *Explain:* _____

15. TRAVEL AWARDS: Agencies are mandated to maintain records on employee accumulation of travel awards as reported on their travel expense detail sheets. Travel awards include, but may not be limited to airline frequent flyer miles and hotel or car rental frequent customer awards or miles.

16. ESTIMATED COST OF TRIP:

Transportation:	$384.60
Lodging:	$0.00
Meals:	$48.00
Car Rental:	$0.00
Misc:	$0.00
TOTAL:	$432.60

17. I certify that this trip is necessary and essential to the normal discharge of DEQ responsibilites; that required monies are budgeted and alloted for expenditure; that the trip meets all the requirements mandated by ORS 292.230, OAM Policy 40.10.00, and DEQ policy.

18. EMPLOYEE SIGNATURE: Stephanie Hallock **DATE:** 6-20-06

19. SUPERVISOR SIGNATURE: **DATE:**

20. DA/EMT SIGNATURE: **DATE:**

21. MSD DA SIGNATURE: René-Marc Mongeon **DATE:** 6/21/06

NL560

STATE OF OREGON
TRAVEL EXPENSE DETAIL SHEET

314/VPT 23182

1. Name of Employee	2. Agency	3. Period (Month and Year)
10K0084689 Stephanie Hallock Cummings	DEQ	August-06

4. Official Station	5. Division/ Work Unit	6. Regular Schedule Work Shift
HQ	OD	8:00 am - 5:00 X pm Other to

7. Unrepresented ☐ Management Service ☐ Executive Service X Board/Commission ☐ Volunteer ☐

Bargaining Unit Name ☐ AFSCME Other ☐

8. Date	9. Time of Departure	10. Time of Arrival	11. Destination	12. Per Diem/ Hourly Allowance	Individual Meal Reimbursement: Breakfast	Lunch	Dinner	13. Lodging	14. Total Meals and Lodging
08/01/06	6:30 am		Pendleton, Oregon	29.25		9.75	19.50	60.00	89.25
08/02/06		6:30 pm	Portland, Oregon	39.00	9.75	9.75	19.50		39.00
			15. Totals		9.75	19.50	39.00	60.00	$128.25

Accounting Codes		17. Date	18. Miscellaneous Expenses: Fares, Private Mileage, Room Tax, Telephone, Other Expenses	19. Training Related?	20 Rate Per Mile	21. Private Car Miles	22. Amount
14010 - 41004			Personal Vehicle Mileage		0.445		
		81	Room tax (.60 + 4.80)				5.40
4101	13365						
Totals	13365				23. Section Total		5.40 $0.00

24. I did/will____ did not/will not ~~will~~ accept travel awards as a result of, or associated with this state business trip. Completion of this block is mandatory. Travel expense reimbursement claims will not be processed if this block is left blank. Travel awards included, but may not be limited to, airline frequent flyer miles and hotel or car rental frequent customer awards or miles. Review instructions on reverse of the form.

25. REASON FOR TRAVEL: (Be specific.)
Director Hallock is a member of Oregon Economic Revitalization Team Directors (ERT) and participates on field trips with the other Directors to various regions and counties in Oregon to meet with local government officials and business to promote working together at the local level to increase economic opportunity.

26. Grand Total Amount 13365 $128.25

27. Travel Advance Amount

28. Amount Due Employee/State 13365 $128.25 to

29. Received Training Conducted Training

I certify that all reimbursements claimed reflect actual duty required expenses or allowances entitled; that no part thereof has been heretofore claimed or will be ed from any other source.

30. Signature of Employee: Stephanie Hallock

31. Title: Director Date: 8-9-06

I certify that the above claimed expenses are authorized duty required expenses. Funds for payment of this claim are available in the approved budget for the period covered and have been allotted for expenditure.

32. Approved By: Rene Marc Mangin

33. Title: MSD Administrator Date: 8-9-06

STATE OF OREGON
TRAVEL EXPENSE DETAIL SHEET

330/VPT23261

1. Name of Employee	2. Agency	3. Period (Month and Year)
10R00841689 Stephanie Hallock Cummins	DEQ	August-06

4. Official Station	5. Division/ Work Unit	6. Regular Schedule Work Shift
HQ	OD	8:00 am - 5:00 X pm Other to

7. Unrepresented ☐ Management Service ☐ Executive Service X Board/Commission ☐ Volunteer ☐

Bargaining Unit Name ☐ AFSCME Other ☐

8. Date	9. Time of Departure	10. Time of Arrival	11. Destination	12. Per Diem/ Hourly Allowance	Individual Meal Reimbursement Breakfast	Lunch	Dinner	13. Lodging	14. Total Meals and Lodging
08/09/06	1 pm		Canyonville, Oregon	19.50			19.50	60.00	79.50
08/10/06				21.25	Δ 7.75	provided	19.50	60.00	87.25
08/11/06		1:30 pm	Portland, Oregon	+1 7.50	Δ 7.75	9.75			17.50
			Δ $2 b-fast coupon provided by hotel						
			* See attached e-mail						
			15. Totals		15.50	9.75	39.00	120.00	$184.25

Accounting Codes		17. Date	18. Miscellaneous Expenses Fares, Private Mileage, Room Tax, Telephone, Other Expenses	19. Training Related?	20 Rate Per Mile	21. Private Car Miles	22. Amount
14010 - 41004			Personal Vehicle Mileage		0.445		
		8/9/06	Telephone call				1.99
4101	186.24						
Totals	186.24				23. Section Total		1.99 $0.00

24. I did/will_____ did not/will not X accept travel awards as a result of, or associated with this state business trip. Completion of this block is mandatory. Travel expense reimbursement claims will not be processed if this block is left blank. Travel awards included, but may not be limited to , airline frequent flyer miles and hotel or car rental frequent customer awards or miles. Review instructions on reverse of the form.

25. REASON FOR TRAVEL: (Be specific.)
Director Hallock participation is required at EQC meetings. She also met with Rep. Morgan on Friday, 8/11/06 in Roseburg Oregon.

26. Grand Total Amount 186.24 ~~$184.25~~

27. Travel Advance Amount

28. Amount Due Employee/State 186.24 ~~$184.25~~ 00

29. Received Training Conducted Training

I certify that all reimbursements claimed reflect actual duty required expenses or allowances entitled; that no part thereof has been heretofore claimed or will be claimed from any other source.

30. Signature of Employee Stephanie Hallock 31. Title Director Date 8-22-06

I certify that the above claimed expenses are authorized duty required expenses. Funds for payment of this claim are available in the approved budget for the period covered and have been allotted for expenditure.

32. Approved By René-Marc Mongo 33. Title MSD administrator Date 8-23-06

\Travel Expense Claim.xlt - Revised Jan. 2006 by Dale Chipman

053

8/24 Exp Unit

STATE OF OREGON
TRAVEL EXPENSE DETAIL SHEET

318/VPT 23552

1. Name of Employee	2. Agency	3. Period (Month and Year)
10R0084689 Stephanie Hallock Cummins	DEQ	October-06

4. Official Station	5. Division/ Work Unit	6. Regular Schedule Work Shift
HQ	OD	8:00 am - 5:00 X pm Other _ to _

7. Unrepresented ☐ Management Service ☐ Executive Service X Board/Commission ☐ Volunteer ☐

Bargaining Unit Name ☐ AFSCME Other ☐

8. Date	9. Time of Departure	10. Time of Arrival	11. Destination	12. Per Diem/ Hourly Allowance	Individual Meal Reimbursement: Breakfast	Lunch	Dinner	13. Lodging	14. Total Meals and Lodging
10/04/06	3 pm		Astoria Oregon	27.00	N/A	N/A	27.00	77.00	104.00
11/54				40.50	13.50	Provided	27.00	77.00	117.50
10/06/06		7 pm	Portland Oregon	40.50	13.50	Provided	27.00		13.50 40.50
			15. Totals	108.00	27.00		54.00	154.00	$235.00 262.00

Accounting Codes		17. Date	18. Miscellaneous Expenses: Fares, Private Mileage, Room Tax, Telephone, Other Expenses	19. Training Related?	20 Rate Per Mile	21. Private Car Miles	22. Amount
17010 - 41004			Personal Vehicle Mileage		0.445		
			Hotel Tax @ 10% for 2 days lodging				15.40
4101	277.40						
Totals	277.40				23. Section Total		$15.40

24. I did/will_____ did not/will not XM accept travel awards as a result of, or associated with this state business trip. Completion of this block is mandatory. Travel expense reimbursement claims will not be processed if this block is left blank. Travel awards included, but may not be limited to , airline frequent flyer miles and hotel or car rental frequent customer awards or miles. Review instructions on reverse of the form.

25. REASON FOR TRAVEL: (Be specific.)
Director Hallock participated at the EQC meeting held in Astoria Oregon on 10/5-6/06 and an additional meeting with CTUIR on 10/5/06

26. Grand Total Amount 277.40 $250.40

27. Travel Advance Amount

28. Amount Due Employee/State 277.40 $250.40

29. Received Training Conducted Training

I certify that all reimbursements claimed reflect actual duty required expenses or allowances entitled; that no part thereof has been heretofore claimed or will be [illegible]d from any other source.

30. Signature of Employee: Stephanie Hallock

31. Title: Director Date: 10-10-06

I certify that the above claimed expenses are authorized duty required expenses. Funds for payment of this claim are available in the approved budget for the period covered and have been allotted for expenditure.

32. Approved By: Rene Marc Mongi

33. Title: MSD Administrator Date: 10/11/06

Amount

STATE OF OREGON
TRAVEL EXPENSE DETAIL SHEET

325/VPT23589

1. Name of Employee	2. Agency	3. Period (Month and Year)
10R00246689 Stephanie Hallock Cummings	DEQ	October-06
4. Official Station	**5. Division/ Work Unit**	**6. Regular Schedule Work Shift**
HQ	OD	8:00 am - 5:00 X pm Other to

7. Unrepresented ☐ Management Service ☐ Executive Service X Board/Commission ☐ Volunteer ☐

Bargaining Unit Name ☐ AFSCME Other ☐

8. Date	9. Time of Departure	10. Time of Arrival	11. Destination	12. Per Diem/ Hourly Allowance	Individual Meal Reimbursement Breakfast	Lunch	Dinner	13. Lodging	14. Total Meals and Lodging
10/13/06	8:30am		Medford Oregon				~~19.50~~		~~19.50~~
10/13/06		8:30	Portland Oregon				~~22.00~~		22.00
			* taxable meal allowance						
			15. Totals				19.50		~~$19.50~~ 22.00

Accounting Codes		17. Date	18. Miscellaneous Expenses Fares, Private Mileage, Room Tax, Telephone, Other Expenses	19. Training Related?	20 Rate Per Mile	21. Private Car Miles	22. Amount
14010 - 41004			Personal Vehicle Mileage		0.445		
			Airport Parking				8.00
4101	22.00						
4103	8.00						
Totals	30.00				23. Section Total		$8.00

24. I did/will_____ did not/will not ~~do~~ accept travel awards as a result of, or associated with this state business trip. Completion of this block is mandatory. Travel expense reimbursement claims will not be processed if this block is left blank. Travel awards included, but may not be limited to , airline frequent flyer miles and hotel or car rental frequent customer awards or miles. Review instructions on reverse of the form.

25. REASON FOR TRAVEL: (Be specific.)
Director Hallock traveled to Medford to meet with Senator Bates to update him regarding our Strategic Directions and budget proposal. FYI Director Hallock was scheduled to meet with Senator Atkinson too, but he cancelled 1 day prior to flight.

26. Grand Total Amount 30.00 ~~$27.50~~ $8.00

27. Travel Advance Amount

28. Amount Due Employee/State 30.00 ~~$27.50~~ 0

29. Received Training Conducted Training

I certify that all reimbursements claimed reflect actual duty required expenses or allowances entitled; that no part thereof has been heretofore claimed or will be claimed from any other source.

30. Signature of Employee: Stephanie Hallock — 31. Title: Director — Date: 10-17-06

I certify that the above claimed expenses are authorized duty required expenses. Funds for payment of this claim are available in the approved budget for the period covered and have been allotted for expenditure.

32. Approved By: René Marc Mongin — 33. Title: MSD Admin. — Date: 10/19/06

\Travel Expense Claim.xlt - Revised Jan. 2006 by Dale Chipman

✓ for AMP

Itinerary Detail - Combined

Azumano Travel
Est. 1949

Buck Office Data
STATE OF OREGON
Trip Departures from 10/13/2006 to 10/13/2006
Report Parameters: Passenger = CUMMINS

CUMMINS/STEPHANIE H

Actual:	$176.60	Savings:	$338.01	Val Carrier: ALASKA AIR (AS)	Account: OR State Dept. of Environmental
Lowest:	$176.60	Lost Amt:	$0.00	Ticket #: 7612143256	Break 1: 34000
Service Fees:	$29.00			Invoice #: 675354119	Break 2: TONEASHA
Exception:	GOVERNMENT CITY PAIR USED			Inv Date: 10/6/2006	Break 3: 5032295990

Itinerary				Airline	Flt #	Class
PORTLAND,OR	MEDFORD,OR	10/13/2006	07:45-08:47	ALASKA AIR (AS)	2125	L
MEDFORD,OR	PORTLAND,OR	10/13/2006	16:00-16:59	ALASKA AIR (AS)	2164	L

Total Cost of Trip: ***$205.60***

CUMMINS/STEPHANIE H ** This is an "Exchange" record. Original Ticket # was 7612143256

Actual:	$10.00	Savings:	$0.00	Val Carrier: ALASKA AIR (AS)	Account: OR State Dept. of Environmental
Lowest:	$10.00	Lost Amt:	$0.00	Ticket #: 7612143716	Break 1: 34000
Service Fees:	$29.00			Invoice #: 675354613	Break 2: TONEASHA
Exception:	EXCHANGE (ADD/COLLECT/EVEN)			Inv Date: 10/10/2006	Break 3: 5032295990

Itinerary				Airline	Flt #	Class
PORTLAND,OR	MEDFORD,OR	10/13/2006	07:45-08:47	ALASKA AIR (AS)	2125	L
MEDFORD,OR	PORTLAND,OR	10/13/2006	18:15-19:15	ALASKA AIR (AS)	2226	Y

Total Cost of Trip: ***$39.00***

CUMMINS/STEPHANIE H ** This is an "Exchange" record. Original Ticket # was 7612143716

Actual:	$0.00	Savings:	$0.00	Val Carrier: ALASKA AIR (AS)	Account: OR State Dept. of Environmental
Lowest:	$0.00	Lost Amt:	$0.00	Ticket #: 7612143931	Break 1: 34000
Service Fees:	$29.00			Invoice #: 675354852	Break 2: TONEASHA
Exception:	EXCHANGE (ADD/COLLECT/EVEN)			Inv Date: 10/12/2006	Break 3: 5032295990

Itinerary				Airline	Flt #	Class
PORTLAND,OR	MEDFORD,OR	10/13/2006	09:55-10:57	ALASKA AIR (AS)	2159	L
MEDFORD,OR	PORTLAND,OR	10/13/2006	18:15-19:15	ALASKA AIR (AS)	2226	Y

Total Cost of Trip: ***$29.00***

Report Totals

Air Totals		Car Rental Totals		Hotel Booking Totals	
# of Air Trips:	3	# of Rentals:	0	# of Stays:	0
Air Charges:	$186.60	# of Days Rented:	0	# of Room Nights:	0
Avg Cost per Trip:	$62.20	Car Rental Charges:	$0.00	Hotel Booking Charges:	$0.00
Total Svc Fees:	$87.00	Avg # of Days Rented:	0.00	Avg # of Nights:	0.00
		Avg Booked Rate:	0.00	Avg Booked Rate:	$0.00
Total All Charges:	**$273.60**	Avg Cost per Day:	$0.00	Avg Cost/RoomNight:	$0.00

STATE OF OREGON
TRAVEL EXPENSE DETAIL SHEET

316 VPT23913

1. Name of Employee	2. Agency	3. Period (Month and Year)
10R00846891000 Stephanie Hallock RA	DEQ	December-06

4. Official Station	5. Division/ Work Unit	6. Regular Schedule Work Shift
HQ	OD	8:00 am - 5:00 x pm Other to

7. Unrepresented ☐ Management Service ☐ Executive Service x Board/Commission ☐ Volunteer ☐

Bargaining Unit Name ☐ AFSCME Other ☐

8. Date	9. Time of Departure	10. Time of Arrival	11. Destination	12. Per Diem/ Hourly Allowance	Individual Meal Reimbursement: Breakfast	Lunch	Dinner	13. Lodging	14. Total Meals and Lodging
12/13/06	2 pm		Canyonville, Oregon	19.50			19.50	60.00	79.50
12/14/06		5 pm	Portland, Oregon	29.25	9.75	9.75	9.75		29.25
13									
			15. Totals	48.75	9.75	9.75	29.25	60.00	$108.75

Accounting Codes		17. Date	18. Miscellaneous Expenses: Fares, Private Mileage, Room Tax, Telephone, Other Expenses	19. Training Related?	20 Rate Per Mile	21. Private Car Miles	22. Amount
14010-41004			Personal Vehicle Mileage		0.445		
4101	108.75		no hotel tax charged				
Totals	108.75				23. Section Total		$0.00

24. I did/will_____ did not/will not x/N accept travel awards as a result of, or associated with this state business trip. Completion of this block is mandatory. Travel expense reimbursement claims will not be processed if this block is left blank. Travel awards included, but may not be limited to , airline frequent flyer miles and hotel or car rental frequent customer awards or miles. Review instructions on reverse of the form.

25. REASON FOR TRAVEL: (Be specific.)
Director Hallock participated at the 9th Annual State-Tribal Summit along with many agency heads and the Governor Kulongoski

26. Grand Total Amount $108.75

27. Travel Advance Amount

28. Amount Due Employee/State $108.75

29. Received Training Conducted Training

I certify that all reimbursements claimed reflect actual duty required expenses or allowances entitled; that no part thereof has been heretofore claimed or will be d from any other source.

30. Signature of Employee: Stephanie Hallock — 31. Title: Director — Date: 12-18-06

I certify that the above claimed expenses are authorized duty required expenses. Funds for payment of this claim are available in the approved budget for the period covered and have been allotted for expenditure.

32. Approved By: René-Marc Mongé — 33. Title: MSD Adm — Date: 12/20/06

\Travel Expense Claim.xlt - Revised Jan. 2006 by Dale Chipman

State of Oregon

Department of Environmental Quality Memorandum

Date: January 22, 2007

To: Environmental Quality Commission

From: Stephanie Hallock, Director S. Hallock

Subject: Agenda Item J, Annual Performance Measures Report to Legislature
February 22, 2007 EQC Meeting

Why This is Important

This update on DEQ performance measure results marks DEQ's first semi-annual report to the Environmental Quality Commission. DEQ has committed to providing semi-annual review of agency Executive Measures as part of its efforts to meaningfully involve the Commission in high-level policy and planning efforts and as a "best practice" for the EQC.

This review will provide an update on DEQ's *Key Performance Measures* (KPMs). The Key Performance Measures consist of those agency Executive Measures that are reported externally to the Oregon Legislature, the Department of Administrative Services, and the public. [DEQ will report on the *internal* Executive Measures that support the agency's Strategic Directions during its second semi-annual report to the Commission in September of this year.]

DEQ's Key Performance Measures provide public accountability for agency performance and are used by the Legislative Ways and Means Committee to evaluate and make decisions regarding the agency's requested budget.

During this February update DEQ will review the 2005 Annual Performance Progress Report, which provides data on DEQ's performance progress and key challenges related to our performance on work measured by the KPMs.

Background

All state agencies are required to establish performance measures that relate progress toward the agency's mission, goals and objectives.

DEQ's performance measurement system includes at the highest level several Oregon Benchmarks related to the quality of Oregon's air, water and land. Oregon Benchmarks are the high level outcome indicators that support Oregon Shines, the State's strategic plan for improving the quality of life in Oregon, specifically through the

provision of quality jobs, safe, caring and engaged communities, and healthy, sustainable surroundings. Benchmark data is reported to the Progress Board, the agency responsible for implementing Oregon Shines.

The next tier of performance measures in DEQ's measurement system are the Executive Measures. DEQ's Executive Measures reflect the highest priorities of the agency. These measures support achievement of our Strategic Directions and provide overall public accountability for DEQ performance. The Executive Measures include both the Key Performance Measures that are committed to and reported to the Oregon Legislature, Department of Administrative Services, and the public, and a set of internal, primarily administrative/programmatic Strategic Direction measures.

All state agencies are required to establish KPMs that capture the agency's mission and scope, and provide an overview of agency performance. Agency KPMs provide outputs and intermediate outcomes that best represent agency performance expectations related to the agency's mission and environmental goals. The KPMs serve as the primary measures of public accountability. DEQ establishes its Key Performance Measures with approval of the Oregon Legislature.

Each year in September DEQ prepares an annual Performance Progress Report that relates the agency's performance on the Key Performance Measures for the previous calendar year. The report is submitted to the Oregon Legislature and the State Department of Administrative Services, and is published on DEQ's website.

During the February Commission meeting we will review agency progress on the Key Performance Measures, as reported in the 2005 Annual Performance Progress Report submitted in September, 2006. In 2005 DEQ substantially met the performance targets for 11 out of 14 Key Performance Measures. KPMs that DEQ did not meet targets for include measures of air quality permit timeliness, water quality TMDLs and issuance of watershed-based permits. Overall the agency's performance results are very positive.

DEQ's performance measurement system includes continuous improvement of the measures themselves. Each biennium DEQ evaluates its Key Performance Measures to ensure that the measures accurately reflect agency priority work and performance outcomes. Recommendations regarding revisions, deletions or additions to DEQ's KPMs are reviewed by the Oregon Legislature; those that are approved

are adopted by the agency. For the 2007-09 biennium, DEQ has recommended several revisions, deletions and additions to its Key Performance Measures.

In addition to these high level agency performance measures, DEQ also establishes program and regional performance measures. This set of measures is used to evaluate the effectiveness of strategies adopted at the program and regional level of the organization. Program measures are typically included in the agency's Performance Partnership Agreement with the Environmental Protection Agency to demonstrate results related to federally-delegated programs.

In September, DEQ will provide a report on the internal Executive Measures.

Attachments A. 2005 Annual Performance Progress Report

Section:

Division:

Report Prepared By: Karen Whisler

Phone: 503-229-5082

Attachment A
Agenda Item J, Annual Performance Measures Report to Legislature
February 22-23, 2007 EQC Meeting

DEPARTMENT OF ENVIRONMENTAL QUALITY
Annual Performance Progress Report (APPR)
for Fiscal Year 2005-06 (July 1, 2005 – June 30, 2006)

2007-09 Budget Form 107BF04c

Due: September 30, 2006
Submitted: September 30, 2006

To obtain additional copies of this report, contact DEQ at (503) 229-5630, 811 SW Sixth Avenue, Portland, OR 97204, or visit http://www.oregon.gov/DAS/OPB/GOVresults.shtml#Annual Performance Reports.

Agency Mission

To be a leader in restoring, maintaining and enhancing the quality of Oregon's air, water and land.

Table of Contents

ABOUT THIS REPORT

Purpose of Report

The purpose of this report is to summarize the Department of Environmental Quality's (DEQ's) performance for the reporting period (2005), to document how performance data are used and to analyze agency performance for each key performance measure legislatively approved for the 2005-07 biennium. The intended audience includes agency managers, legislators, fiscal and budget analysts and interested citizens.

1. PART I: EXECUTIVE SUMMARY defines the scope of work addressed by this report and summarizes agency progress, challenges and resources used.
2. PART II: USING PERFORMANCE DATA identifies who was included in the agency's performance measure development process and how the agency is managing for results, training staff and communicating performance data.
3. PART III: KEY MEASURE ANALYSIS analyzes agency progress in achieving each performance measure target and any corrective action that will be taken. This section, the bulk of the report, shows performance data in table and chart form.

KPM = Key Performance Measure

The acronym "KPM" is used throughout to indicate **K**ey **P**erformance **M**easures. Key performance measures are those highest-level, most outcome-oriented performance measures that are used to report externally to the legislature and interested citizens. Key performance measures communicate in quantitative terms how well the agency is achieving its mission and goals. Agencies may have additional, more detailed measures for internal management. DEQ's KPMs include several Oregon Benchmarks as well as the Executive Measures associated with the agency's Strategic Priorities that reflect the highest priority, results-oriented measures of our work.

Oregon Shines

Oregon Shines is the state's strategic plan, originally adopted in 1989, which includes the goal of protecting Oregon's air and water quality. Oregon Shines was last updated in 1996 (Oregon Shines II) to focus on three broad statewide goals; many of DEQ's Key Performance Measures link to Goal 3, Healthy, sustainable surroundings, a long-term goal intended to balance the demands of a vital economy with the needs of sustainable, healthy ecosystems, as well as the broader state interest in providing and enhancing environmental protection. The state is currently setting the stage for its third update to Oregon Shines.

OBM = Oregon Benchmark Measure

The Oregon Benchmarks were established in 1991 to measure the state's progress towards its long term goals related to the quality of life in Oregon as articulated in Oregon Shines. The Oregon Benchmarks provide the means of tracking our progress in realizing the state's vision for solving economic, social and environmental problems. The Benchmarks inform a broad array of policy-

making and budget-related activities, and Oregon state agencies are required to link their key performance measures to them, where appropriate. DEQ's work is critical to the achievement of several statewide Oregon Benchmarks, and several of the state Benchmarks have been adopted as Key Performance Measures by the agency. In the FY 2007-09 biennium, DEQ proposes to adopt three additional Benchmarks as KPMs, even though the achievement of these Benchmark measures is dependant on other partners and Oregon citizens. DEQ is committed to tracking and reporting on our progress in achieving results related to Oregon's environmental Benchmarks.

HLO = High-Level Outcome

High-level outcomes are measurable indicators of societal well-being. Oregon Benchmarks represent the high-level outcomes of the state organized into seven categories: economy, education, civic engagement, social support, public safety, community development and environment. Agencies can define additional high-level outcomes pertinent to their mission. DEQ established HLO #1, Percent of Oregon stream miles impaired – Oregon's 303d list, which is supported by several Water Quality Key Performance Measures and Oregon Benchmarks.

Measures and Methods

Unless noted otherwise, performance measures and their method of measurement are consistent for all time periods reported.

DEPARTMENT OF ENVIRONMENTAL QUALITY

TABLE OF MEASURES

Agency Mission: To be a leader in restoring, maintaining and enhancing the quality of Oregon's air, water and land.

DEPARTMENT OF ENVIRONMENTAL QUALITY

I. EXECUTIVE SUMMARY

Agency Mission: To be a leader in restoring, maintaining and enhancing the quality of Oregon's air, water and land.

Contact: Karen Whisler	Phone: (503) 229-5082
Alternate: René-Marc Mangin	Phone: (503) 229-5045

1. SCOPE OF REPORT

All primary environmental programs are represented by the agency's Key Performance Measures, e.g., Land Quality, Air Quality and Water Quality, though not all sub-programs are represented.

2. THE OREGON CONTEXT

The Department of Environmental Quality's chief responsibility is restoring, maintaining and enhancing environmental conditions in Oregon. DEQ implements the federal delegated programs for Water Quality, Air Quality and Hazardous Waste, consistent with federal mandate and the Performance Partnership Agreement (PPA) negotiated between DEQ and EPA Region X. The PPA establishes priority activities and required performance tracking for these delegated programs. In addition, DEQ oversees state environmental programs including the state's Vehicle Inspection, Solid Waste, Underground Storage Tanks, Spill Response and Cleanup. Program implementation includes environmental monitoring, permitting, compliance and enforcement, technical assistance and other voluntary programs, rule-making and authorization.

DEQ has primary responsibility in achieving several Oregon Benchmarks, including OBM #10(a) *Percentage of air contaminant discharge permits issued within the target period*, OBM #10(b), *Percentage of individual wastewater discharge permits issued within 270 days*, OBM #75, *Percent of time that air is healthy to breathe for all Oregonians*, OBM #78, *Percent of monitored stream sites with* (a) *significantly increasing trends in water quality,* (b) *water quality in good to excellent condition,* and (c) *decreasing trends in water quality*, OBM#83, *Pounds of municipal solid waste landfilled or incinerated per capita*, and OBM # 84, *Percentage of identified Oregon hazardous wastes sites cleaned up*. DEQ also contributes to High Level Outcome #1, *Percent of Oregon stream miles impaired* – Oregon's 303d list.

Protecting and enhancing environmental quality requires the collaboration and involvement of many local agencies, businesses, and Oregon residents. DEQ partners with other state and local agencies, municipalities, and organizations to restore environmental conditions and to encourage individual actions that are protective of the health and beauty of this state. Additional information about DEQ partnerships can be obtained via our website at www.deq.state.or.us.

3. PERFORMANCE SUMMARY

DEQ is making progress on the high priority environmental results reflected in the agency's current Key Performance Measures, as indicated in the table below. KPM #14, the agency's former Economic Revitalization Team (ERT) measure, is not included in these results. During 2005 DEQ worked with other state agencies to develop a more meaningful performance measure as directed by the Oregon legislature. The

I. EXECUTIVE SUMMARY

Agency Mission: To be a leader in restoring, maintaining and enhancing the quality of Oregon's air, water and land.

KPM Progress Summary[1]	Key Performance Measures (KPMs) with Page References	# of KPMs
KPMs MAKING PROGRESS at or trending toward target achievement	KPM #1: Enforcement (page 7), KPM #3/ OBM 10b: Permit Timeliness (page 11), KPM #4: Water Quality TMDLs (page 13), KPM #7: Updated Permits (page 19), KPM #8: Water Reuse (page 21), KPM #9: Umatilla (page 23), KPM #10: Toxics Prevention and Reduction (page 25), KPM #11/ OBM 84: Clean-Up (page 27), KPM #12: Abandoned Mines (page 29), KPM #13: Electronic Access (page 31), KPM #15/16 Customer Satisfaction (page 33)	11
KPMs NOT MAKING PROGRESS not at or trending toward target achievement	KPM #2: Permit Timeliness (page 9), KPM #5: Water Quality TMDLs (page 15), KPM #6: Watershed Permits (page 17)	3
KPMs - PROGRESS UNCLEAR target not yet set	KPM #14: ERT (not included)	1
	Total Number of Key Performance Measures (KPMs)	15

new measure will be reported on in 2007 for FY 2006. Regarding the three Oregon Benchmarks identified above, OBM #75, #78 and #83, DEQ has reported our progress in achieving the environmental outcomes sought by these measures in this document, although at this time these benchmarks have not been adopted as Key Performance Measures (OBM #10 and #84 are already KPMs). The reason DEQ had not previously adopted these benchmarks as KPMs is that the measures do not reflect solely upon the performance of the agency; nevertheless, the data collected for these measures influences DEQ policies and strategies and for this reason, as well as to simplify duplicative reporting processes, DEQ is proposing to adopt these benchmarks as KPMs in our 2007-09 Agency Request Budget.

4. CHALLENGES

A key challenge DEQ faces in achieving performance results relates to the trend in reduced or static funding, which impacts agency fiscal and staff resources. For example, DEQ's Water Quality Program has had to make difficult decisions on how best to focus resources to ensure that the highest priority work is being done, with the result that some work cannot get done. The two KPMs that are not currently trending towards progress in the Water Quality Program largely reflect these challenges (KPM # 5 & 6); additional concerns are described along with the results (see pages 15, 17). Also, DEQ's Air Quality Program is below target for KPM #2/OBM 10a because fee revenues are insufficient to support adequate staffing levels (see page 9).

Another barrier to achieving Key Performance Measure outcomes is that sometimes the measures themselves are not as meaningful or reflective of high priority environmental results as originally intended. DEQ continues to evolve our measures to ensure that we are asking the right questions about our performance and that we collect performance data that supports effective agency decision-making. As we implement our measures we learn more about whether the data provide an accurate indicator of performance and our intended outcomes. It is appropriate for DEQ to continue its

[1] Summary includes only currently adopted KPMs.

evaluation and refinement of agency performance measures, balancing the desire to provide more meaningful measurement with the need to communicate trends in performance results.

5. RESOURCES USED AND EFFICIENCY

DEQ's biennial legislatively adopted budget for FY 2005-07 (including Emergency Board approvals through September 2006) is $329,491,565. Of this, $179,363,492 makes up DEQ's operating budget which pays for DEQ operations. Local communities and partners receive the balance from DEQ to spend on local environmental projects.

II. USING PERFORMANCE DATA

Agency Mission: To be a leader in restoring, maintaining and enhancing the quality of Oregon's air, water and land.

Contact: Karen Whisler	Phone: (503) 229-5082
Alternate: René-Marc Mangin	Phone: (503) 229-5045

The following questions indicate how performance measures and data are used for management and accountability purposes.	
1 INCLUSIVITY Describe the involvement of the following groups in the development of the agency's performance measures.	• Staff: While much of the discussion and decisions adopting performance measures occur at the executive level, staff within the programs associated with each measure have been identified as measures leads and provide input into the development and refinement of performance measures. • Elected Officials: The Oregon legislature reviews and adopts DEQ's proposed measures during the budget approval process. • Stakeholders: DEQ involves various stakeholders in the development of performance measures. For example, a stakeholder group called the Blue Ribbon Committee worked with DEQ to establish measures related to water quality permit timeliness. The Environmental Quality Commission (EQC) has also weighed in on agency performance measures, in particular those that are adopted to measure performance with our Strategic Directions. • Citizens: DEQ invites citizen input on our strategic priorities through the agency's strategic planning process. This past year DEQ and the EQC held town hall meetings across the state to listen to public concerns regarding environmental issues. DEQ's Strategic Directions 2006-2011, and measures adopted to evaluate our progress in achieving the priorities articulated in the current Strategic Directions, reflect this input.
2 MANAGING FOR RESULTS How are performance measures used for management of the agency? What changes have been made in the past year?	For several years DEQ has worked towards developing and refining meaningful performance measures and using performance measures both as a tool for evaluating our progress in achieving the agency's Strategic Directions and in decision making regarding policies and strategies to achieve results. During 2006 DEQ revised our Strategic Directions, including the development of Executive Measures that will be used to evaluate our progress for the agency's 2006-2011 priorities. DEQ also proposed modifications to several Key Performance Measures in the agency's FY 2007-09 requested budget. DEQ disbanded the Executive Measures Advisory Group (EMAG), an executive body formed to develop and oversee DEQ's performance measurement system, as part of our intention of shifting responsibility for performance measurement to the programs that use performance data to develop program strategies and enhance performance results. Ultimately, performance measures are the tool DEQ's senior managers will use to gauge agency performance and to make course corrections designed to continue progress towards meeting our goals. Increasingly, agency performance measures are being incorporated as goals in staff and/or section work agreements to build in accountability for achieving performance results. For example, workplans for permit and compliance staff incorporate expectations for permit issuance and inspections. Regional workplans incorporate measures related to core program requirements in geographic based implementation plans. Over the course of the next year DEQ anticipates increasing the frequency of executive level discussions on our progress in achieving performance measurement targets. DEQ will also be reporting to the Environmental Quality Commission on a semi-annual basis.

II. USING PERFORMANCE DATA

Agency Mission: To be a leader in restoring, maintaining and enhancing the quality of Oregon's air, water and land.

3 STAFF TRAINING What training has staff had in the past year on the practical value and use of performance measures?	DEQ's internal Measures Coordinator provides training on the agency's performance measurement system, and the context of state performance measures tracking/reporting, to staff newly assigned responsibilities in performance measurement. The Measures Coordinator also works with individual programs in our effort to continually improve and enhance the meaning and use of DEQ performance measures, and keeps executive management informed on statew and federal performance measurement requirements.
4 COMMUNICATING RESULTS How does the agency communicate performance results to each of the following audiences and for what purpose?	• Staff: Performance is measured at many levels within DEQ, including program performance measures, such as those incorporated into the agency's Performance Partnership Agreement with EPA Region X, regional implementation measures, Executive measures that support DEQ's Strategic Directions as well as the Key Performance Measures included in this report. Staff are informed of, and inform, performance measurement results, and performance data is increasingly used as a basis for developing environmental strategies and policies to continuously improve on environmental and organizational results. • Elected Officials: This Annual Performance Progress Report is provided to the Oregon legislature and posted on both the Progress Board and DEQ web sites, to provide accountability, document challenges and constraints and share successes in achieving environmental and organizational results. • Stakeholders: DEQ's Annual Performance Progress Report is posted on the agency's website to inform stakeholders of agency performance and environmental results. • Citizens: DEQ's Annual Performance Progress Report is posted on the agency's website to inform Oregonians of agency performance and environmental results.

III. KEY MEASURE ANALYSIS

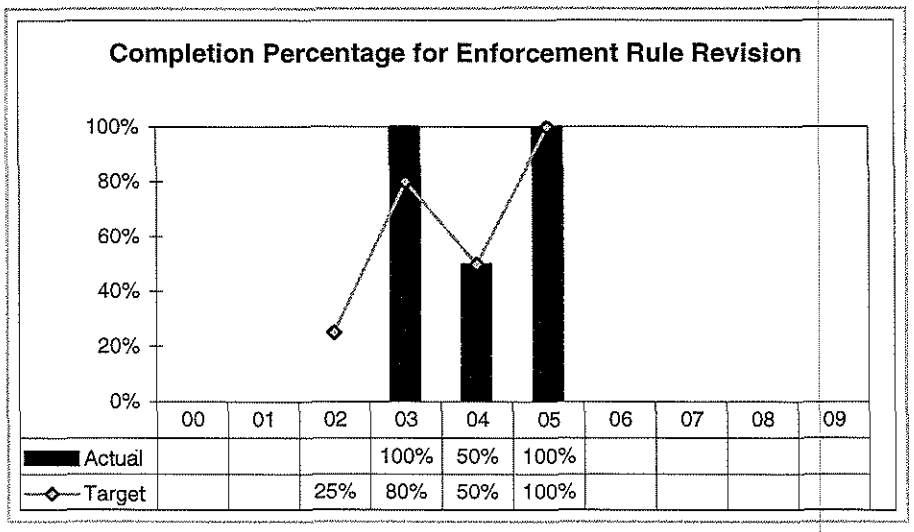
Agency Mission: To be a leader in restoring, maintaining and enhancing the quality of Oregon's air, water and land.

KPM #1	ENFORCEMENT Completion percentage for DEQ's enforcement rule revision project.	Measure since: 2002
Goal	IMPROVE OREGON'S AIR & WATER. Enforce laws and regulations.	
Oregon Context	There is no Oregon High Level Outcome related to this measure. DEQ is adopting a new Executive Measure related to enforcement in support of our Strategic Directions.	
Data source	Office of Compliance and Enforcement files.	
Owner	DEQ Office of Compliance and Enforcement. Jane Hickman (503) 229-5555	

1. **OUR STRATEGY**
   Amend rules governing formal enforcement so that the process is understandable and the civil penalties are equitable.

2. **ABOUT THE TARGETS**
   DEQ's rulemaking effort, originally scheduled to be 80% complete in 2003, was divided into two phases to allow for stakeholder involvement and thorough analysis of penalty calculation during the first phase, followed by development of rules addressing substantive violations in the second phase. Thus the targets were revised to 50% completion in 2004, and 100% completion in 2005.

3. **HOW WE ARE DOING**
   DEQ met the 2005 target for completion of enforcement rule revisions in March 2006, as anticipated and reported in DEQ's 2004 Annual Performance Progress Report.



4. **HOW WE COMPARE**
   There are no equivalent industry standards for rulemaking known by the agency. In a general sense the public "standard" for rulemaking would incorporate a goal of ensuring that regulations are clear, understandable and have met the needs of both internal and external stakeholders. DEQ received significant input from stakeholders and the rules ensure more appropriate, equitable civil penalties.

Agency Mission: To be a leader in restoring, maintaining and enhancing the quality of Oregon's air, water and land.

5. **FACTORS AFFECTING RESULTS**
   DEQ's enforcement rules cross all programs and regions of the work DEQ does and have high public visibility. For this reason DEQ engaged an external advisory committee and an internal advisory committee to help with the analyses of the rules and the drafting. We received numerous comments during the public notice period and our effort to provide a thorough response was longer, and more prolific, than anticipated, resulting in the production of a 50-page response to comment document. The new rules necessitated major revisions to DEQ's "Enforcement Guidance," the agency's internal management directive that implements the rules, which also impacted the schedule for completion of DEQ's rule revision project. The Enforcement Guidance also required cross-program coordination and approval at the highest levels of DEQ.

6. **WHAT NEEDS TO BE DONE**
   DEQ has proposed deletion of this measure in the FY 2007-09 biennium, as rule revisions are now complete.

7. **ABOUT THE DATA**
   Data is reported on a calendar year.

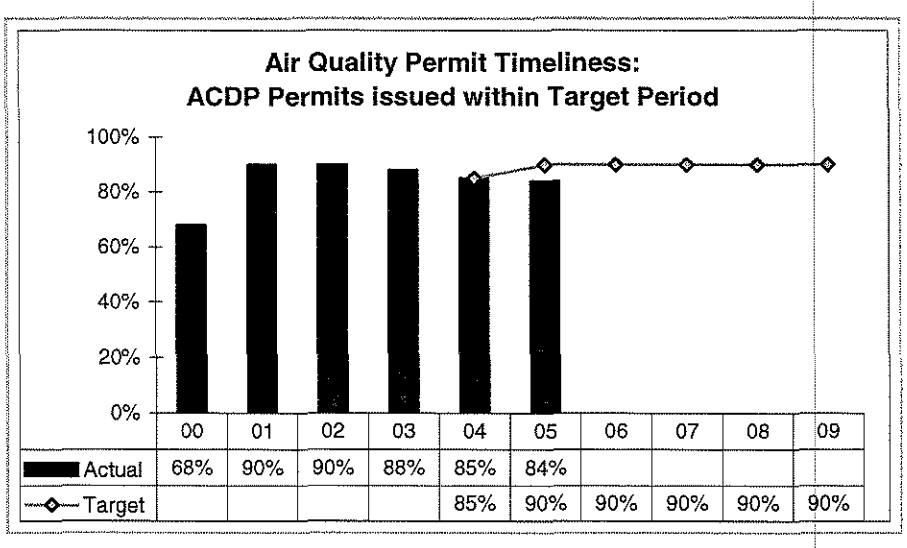
III. KEY MEASURE ANALYSIS

Agency Mission: To be a leader in restoring, maintaining and enhancing the quality of Oregon's air, water and land.

KPM #2/ OBM #10a	PERMIT TIMELINESS Percentage of air contaminant discharge permits (ACDP) issued within the target period.	Measure since: 1992
Goal	IMPROVE OREGON'S AIR AND WATER.	
Oregon Context	KPM #2 is also Oregon Benchmark #10a. It links to: (1) Oregon's Statewide Planning Goal 6: Air, water, and land resources quality (OAR 660-015-00 (06)); (2) Oregon Shines Goal 1: Quality jobs for all Oregonians, and (3) Oregon Shines Goal 3: Healthy, Sustainable surroundings.	
Data source	DEQ Air Quality Permit Tracking database.	
Owner	DEQ Air Quality Program. Margaret Oliphant, (503) 229-5687	

1. **OUR STRATEGY**

DEQ will continue to prioritize air quality permitting resources based on the applicable target period for several categories of Air Contaminant Discharge Permit (ACDP) applications, in order to ensure that permits are issued in a timely manner.



	00	01	02	03	04	05	06	07	08	09
Actual	68%	90%	90%	88%	85%	84%				
Target					85%	90%	90%	90%	90%	90%

2. **ABOUT THE TARGETS**

The target sets a high standard for issuing permits in a timely manner. Businesses need quick turn around times on permits to construct, expand or modify their operations. High percentages of permits issued in a timely manner indicate an efficient permitting program.

3. **HOW WE ARE DOING**

DEQ streamlined the ACDP process, which significantly decreased permit processing time. Accordingly, in 2001 DEQ shortened the target period for timely processing from an average of 167 days to an average of 69 days. Even with a shorter permit processing time, DEQ was able to exceed the timeliness target. However, over the last three years performance has dropped slightly and in 2005, the percent of on time permits slipped below the target.

4. **HOW WE COMPARE**

There are no formal public or private industry standards for permit issuance, although there is a clear expectation that permits be issued in a timely manner. In fact, businesses regulated by air quality permits participated in the development of the timeliness targets.

Agency Mission: To be a leader in restoring, maintaining and enhancing the quality of Oregon's air, water and land.

5. **FACTORS AFFECTING RESULTS**

ACDP permitting is funded by a combination of state General Fund, federal funds and fee revenue, with approximately 85% of the program supported by fees. Extensive ACDP permit streamlining implemented over the last five years has allowed DEQ to reduce staffing from 35.2 to 27.7 FTE (a staffing reduction of more than 20%) while maintaining service at or above the timeliness target. However, General Fund cuts and anticipated federal fund cuts, combined with increased costs and the fact that fees have not been increased since 2001 have forced the Department to take a cautious approach to hiring in 2005. The ACDP program has been operating below budgeted staffing levels, which has negatively impacted our ability to issue timely permits. Also in 2005, DEQ worked on a very controversial permit, involving litigation and extra public process, which diverted resources from maintaining permit timeliness.

6. **WHAT NEEDS TO BE DONE**

DEQ is working on two approaches to bring ACDP permit timeliness back on target. DEQ's 2007-2009 budget request includes a restoration policy package and fee increase to fully fund the FTE needed for timely permit processing. In addition, a second round of permit streamlining is in process. While this effort is focused on reducing compliance costs for permittees, it should also somewhat reduce permit processing time by 2008.

7. **ABOUT THE DATA**

The reporting cycle is a calendar year. The strength of the data is that records exist on each of the ACDP permit actions taken by DEQ during the year. This means that data can be cross-checked at the end of any reporting period. The primary weakness of the system is that the data's validity depends on accurate entry by multiple individuals. A new data system now under development will have built-in cross-checks. People interested in more details can access data bases by contacting DEQ.

III. KEY MEASURE ANALYSIS

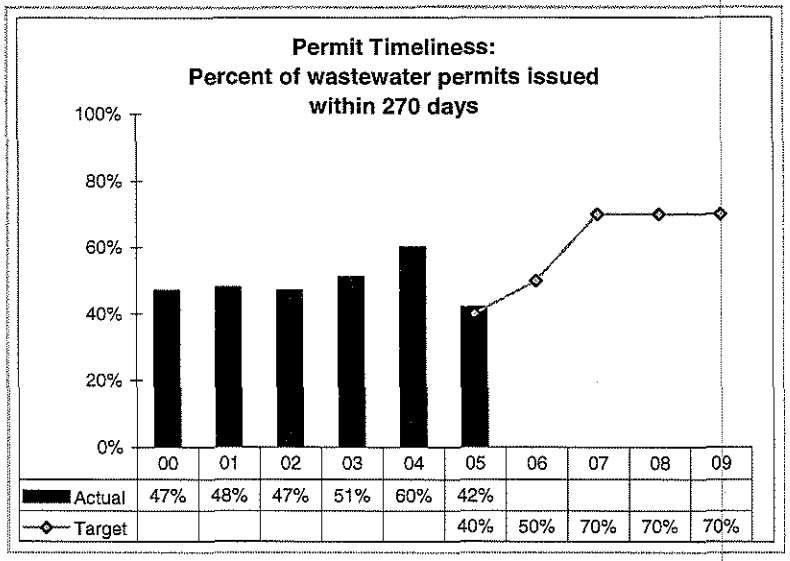
Agency Mission: To be a leader in restoring, maintaining and enhancing the quality of Oregon's air, water and land.

KPM #3/ OBM #10b	PERMIT TIMELINESS Percent of individual wastewater discharge permits issued within 270 days.	Measure since: 1992
Goal	IMPROVE OREGON'S AIR AND WATER.	
Oregon Context	KPM #3 is also Oregon Benchmark #10b. It links to: (1) Oregon's Statewide Planning Goal 6: Air, water, and land resources quality (OAR 660-015-00 (06)); (2) Oregon Shines Goal 1: Quality jobs for all Oregonians, and (3) Oregon Shines Goal 3: Healthy, Sustainable surroundings (Oregon Benchmark 78, Stream Water Quality).	
Data source	Water Quality Program database.	
Owner	DEQ Water Quality Program. Ranei Nomura, (503) 229-5657	

1. **OUR STRATEGY**
   To achieve this goal, DEQ continues to focus on timely issuance of permits and reducing the permit backlog. DEQ develops permit issuance plans based on a watershed approach, and continues to make improvements in the permitting program.

2. **ABOUT THE TARGETS**
   The target sets a standard for issuing permits in a timely manner because businesses need quick turn-around times on permits to construct, expand or modify their operations. High percentages of permits issued in a timely manner indicate an efficient program.

3. **HOW WE ARE DOING**
   DEQ met its 2005 target for timeliness. The level of timeliness for 2004 was higher due to a temporary, targeted diversion of staff to reducing the permit backlog.



	00	01	02	03	04	05	06	07	08	09
Actual	47%	48%	47%	51%	60%	42%				
Target						40%	50%	70%	70%	70%

4. **HOW WE COMPARE**
   There are no formal public or private industry standards for permit issuance, although there is a clear expectation that permits be issued in a timely manner.

5. **FACTORS AFFECTING RESULTS**
   DEQ has been working with a stakeholder group known as the "Blue Ribbon Committee" to identify long-term improvements to the wastewater permitting program. As a result, DEQ is moving to a watershed approach that will allow the agency to better plan for workload and resource

needs in the Water Quality permit program. This approach will likely delay some permit renewals because they will be rescheduled to fit into a watershed cycle. The complexities of technical and legal issues encountered during permit development also affect permit timeliness. In addition, the number of requests for new permits or major modifications of existing permits that DEQ may receive is not predictable. Similarly, permit actions are frequently subject to legal challenges that require the assistance of technical staff. These activities require resources to be pulled away from on-going permit renewal requirements causing delays.

The Blue Ribbon Committee recommended that DEQ ensure stable, ongoing funding that improves fee predictability for rate payers and revenue for budget management. This is accomplished by maintaining a mix of fee and public funding and allowing for up to a 3% annual permit fee increase to help address inflation. The initial phase of this effort increased wastewater permit fee revenue by 11% as approved by the 2005 Legislature to maintain funding for four existing permit staff and add 2.5 new positions in 2006 and 2007. These new positions will assist DEQ in more efficiently assessing compliance. In the next phase, DEQ will request approval from the 2007 Legislature to increase fee revenue by 5% and provide DEQ with additional General Funds to support further program improvements. DEQ also intends to pursue an annual inflationary fee increase in 2007 as authorized by Senate Bill 45, which would be effective for the 2008 Fiscal Year (July 1, 2007 to June 30, 2008). The amount of the annual increase may not exceed the anticipated increase in the cost of administering the permit program, or 3%, whichever is lower. Generally, DEQ's experience with fees has shown that cost increases for benefits and salaries outpace inflation, but an annual 3% fee increase will help offset these costs. Without these increases in funding, it is highly likely DEQ will not meet this goal.

6. **WHAT NEEDS TO BE DONE**
   DEQ will continue to work on long-term improvements to the wastewater permitting program by refining the watershed approach.

7. **ABOUT THE DATA**
   The reporting cycle is the calendar year. Due to the 270-day target timeline, data for each calendar year is reported at the end of the 3rd quarter the following year.

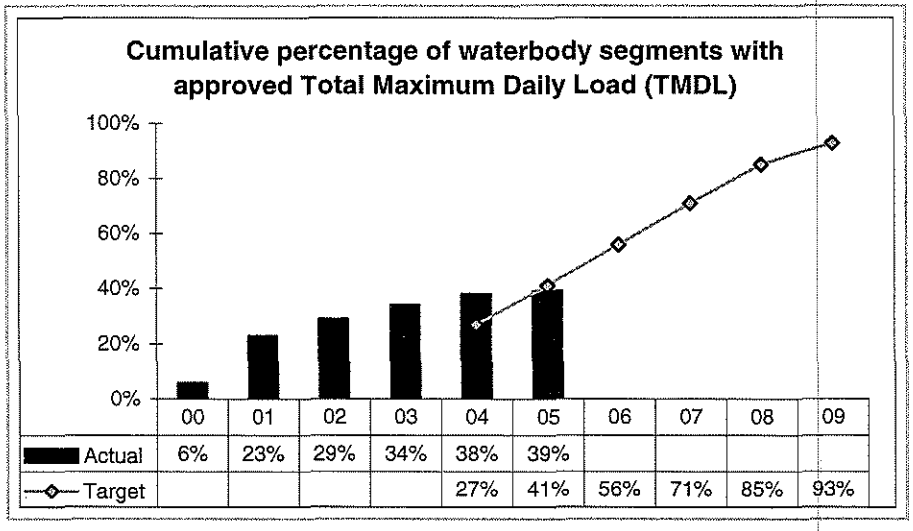
III. KEY MEASURE ANALYSIS

Agency Mission: To be a leader in restoring, maintaining and enhancing the quality of Oregon's air, water and land.

KPM #4	WATER QUALITY TMDLs Cumulative percentage of waterbody segments with approved Total Maximum Daily Load (TMDL), according to the 2000 EPA consent decree.	Measure since: 2000
Goal	IMPROVE OREGON'S AIR AND WATER.	
Oregon Context	KPM #4 links to HLO #1: Percent of Oregon stream miles impaired – Oregon's 303d list, and Oregon Benchmark #78, which reports on water quality trends in monitored streams.	
Data source	DEQ Water Quality Program files on TMDLs issued by Oregon DEQ and approved by EPA by year.	
Owner	DEQ Water Quality Program. Dan Turner, (503) 229-6982	

1. **OUR STRATEGY**
   DEQ implements the TMDL program based on a federal Consent Decree schedule established by the federal court and Water Quality Program High Priority Outcomes.

2. **ABOUT THE TARGETS**
   The target is based on a proportional projection of the annual number of completed and approved TMDLs as required to meet the number mandated by a Consent Decree binding the USEPA. The target for KPM #4 was established by the federal Consent Decree, based on the 1998 list of impaired waterbodies, as a fixed target of 1153 TMDLs. The actual number of TMDLs required to meet Clean Water Act requirements is greater than the number required for the Consent Decree.



	00	01	02	03	04	05	06	07	08	09
Actual	6%	23%	29%	34%	38%	39%				
Target					27%	41%	56%	71%	85%	93%

3. **HOW WE ARE DOING**
   DEQ has been steadily ahead of schedule in meeting TMDL targets despite the challenge of continued cuts in staff and funding. DEQ is currently slightly below its 2005 target, but expects to exceed the target for 2006, especially with the recent completion of the Willamette River Basin TMDL and the soon to be completed Umpqua Basin TMDL. Based on our progress to date, and planned work for the next two biennia, DEQ expects to meet the terms of the Consent Decree.

4. **HOW WE COMPARE**
   EPA sets national goals for water quality improvements. The completion of TMDLs is an important step towards meeting these goals. Oregon

has generally been in the forefront of TMDL development, and has often been called out as a model for how TMDLs should be developed.

5. **FACTORS AFFECTING RESULTS**
   Limited funding for staff and longer than expected schedules of completion for some TMDLs covering large land areas and many pollutants has hampered DEQ in completing this work.

6. **WHAT NEEDS TO BE DONE**
   DEQ has developed a schedule for completion of TMDLs that meets the requirements of the Consent Decree. This is a high priority for the Water Quality Program, and resource allocation will continue to reflect this priority.

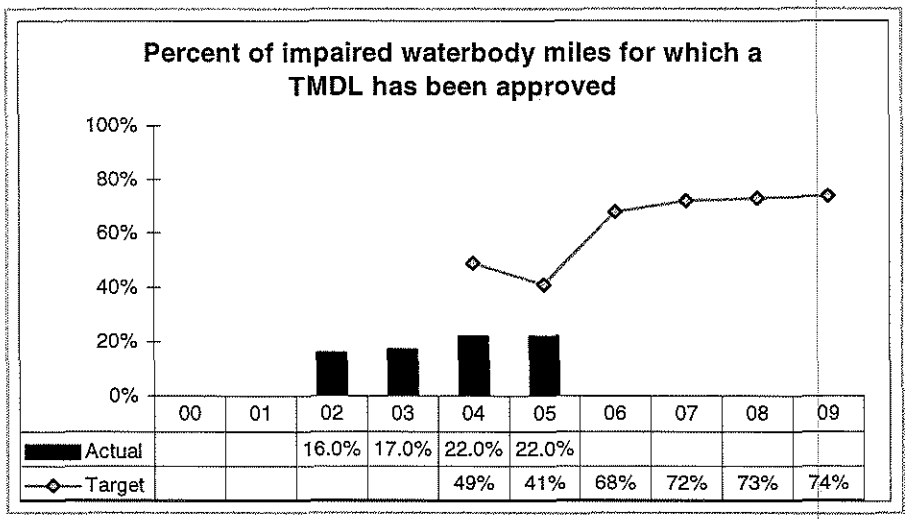
7. **ABOUT THE DATA**
   The data is reported as the number of TMDLs completed for each calendar year, although EPA sets its targets based on the federal fiscal year.

III. KEY MEASURE ANALYSIS

Agency Mission: To be a leader in restoring, maintaining and enhancing the quality of Oregon's air, water and land.

KPM #5	WATER QUALITY TMDLs Percent of impaired waterbody miles for which a TMDL has been approved.	Measure since: 2002
Goal	IMPROVE OREGON'S AIR AND WATER.	
Oregon Context	KPM #5 links to HLO #1: Percent of Oregon stream miles impaired – Oregon's 303d list, and Oregon Benchmark #78, which reports on water quality trends in monitored streams.	
Data source	DEQ Water Quality Program files on TMDLs issued by Oregon DEQ and approved by EPA, and the 2002-approved 303d list of impaired waterbodies.	
Owner	DEQ Water Quality Program. Dan Turner, (503) 229-6982	

1. **OUR STRATEGY**
   DEQ implements the TMDL program based on a federal Consent Decree schedule and Water Quality Program High Priority Outcomes.



	00	01	02	03	04	05	06	07	08	09
Actual			16.0%	17.0%	22.0%	22.0%				
Target					49%	41%	68%	72%	73%	74%

2. **ABOUT THE TARGETS**
   The targets are based on the number of stream miles for which TMDLs have been developed to address all designated pollutant impairments, relative to the total number of stream miles that are designated as not meeting water quality standards for one or more pollutants on the 2002 303d list of impaired waterbodies. This measure differs from KPM #4 in that it targets the current list of impaired waterbodies rather than the number of TMDLs required by the Consent Decree. The list of impaired waterbodies (Oregon's 303d list) is updated every two years as water quality standards change and additional data is collected. The current list contains 1726 segments that are impaired and in need of a TMDL. Thus this measure tracks our progress in issuing TMDLs as a percentage of the total number of impaired waterbodies, while KPM #4 tracks our progress in issuing TMDLs as a percent of the 1998 list of impaired waterbodies, a fixed target of 1153 TMDLs, as specified in the Consent Decree.

3. **HOW WE ARE DOING**
   Though DEQ has made good progress in developing TMDLs around the state, performance on this measure has lagged. DEQ is behind in meeting its 2005 target. The rate of TMDL completion has slowed in recent years due to staffing cuts and longer-than-expected time to

complete TMDLs for some very large basins scheduled for completion in 2006, including the Willamette River Basin TMDL and the Umpqua Basin TMDL. DEQ expects a significant improvement in meeting targets for this measure for 2006 as a result of completing these TMDLs.

4. **HOW WE COMPARE**
EPA sets national goals for water quality improvements. The completion of TMDLs is an important step towards meeting these goals. Oregon has generally been in the forefront of TMDL development, and has often been called out as a model for how TMDLs should be developed.

5. **FACTORS AFFECTING RESULTS**
The rate of TMDL completion has slowed in recent years due to staffing cuts and longer-than-expected timeframes completing TMDLs for some very large basins that are scheduled for completion in 2006.

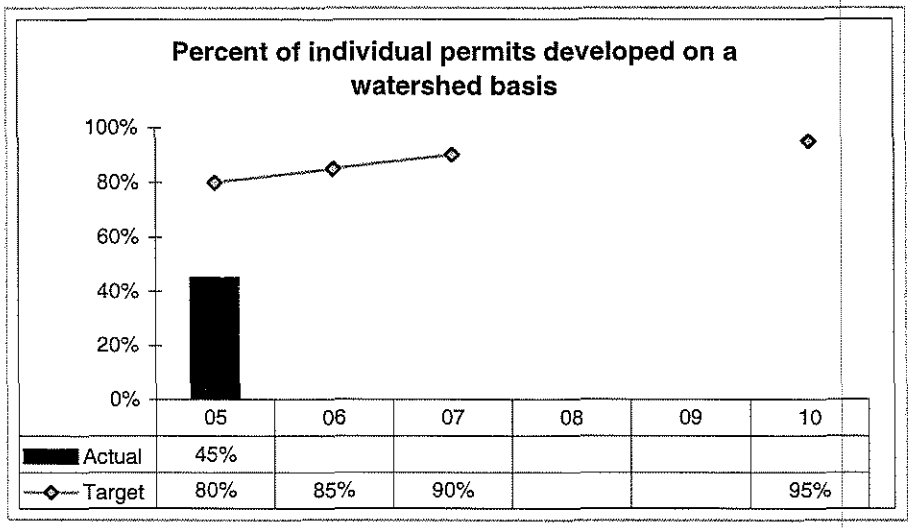
6. **WHAT NEEDS TO BE DONE**
DEQ has developed a schedule for completion of TMDLs that meets the Consent Decree (KPM #4) which will also help meet this measure. However, even after completion of the Consent Decree, additional TMDLs will need to be completed. This is a high priority for the Water Quality Program, and resource allocation will continue to reflect this priority. DEQ is assessing the best way to calculate this measure because the 303(d) list is updated every two years. This results in an ever-changing baseline reflecting the total number of impaired stream miles, making comparisons over time unclear. Because of this, DEQ will likely request to modify this performance measure in the future.

7. **ABOUT THE DATA**
The data is reported as the number of TMDLs completed for each calendar year, although EPA sets its targets based on the federal fiscal year. The number of river miles is determined based on the most recently approved 303d list of impaired waterbodies, approved by EPA in 2002.

Agency Mission: To be a leader in restoring, maintaining and enhancing the quality of Oregon's air, water and land.

KPM #6	WATERSHED PERMITS Percent of individual permits developed on a watershed basis.	Measure since: 2002
Goal	IMPROVE OREGON'S AIR AND WATER.	
Oregon Context	KPM #6 does not directly link to a High Level Outcome, but supports Oregon Shines Goal 3: Healthy, Sustainable Surroundings (Oregon Benchmark 78, Stream Water Quality).	
Data source	DEQ "Water Quality Source Information System" database for permit issuance plans.	
Owner	DEQ Water Quality Program. Ranei Nomura, (503) 229-5657	

1. **OUR STRATEGY**
   DEQ will continue to issue permits using a watershed approach. Permit issuance plans based on watersheds were developed in 2005. This approach will enhance DEQ's ability to consider the cumulative impact of permits on local watersheds and to work with watershed based stakeholders, to better protect Oregon's waters.



2. **ABOUT THE TARGETS**
   DEQ has been working with a stakeholder group known as the "Blue Ribbon Committee" in identifying long-term improvements to the wastewater permitting program. As a result, a target of 95% permits developed on a watershed basis by the end of calendar year 2010 was developed. High percentages are desirable because they indicate more permits are being issued on a watershed basis. Due to the complexity and length of time required to get both the permit backlog reduced and permits issued on a watershed approach, interim targets for FY 2007-09 have not been developed. In addition, some permits have lagged pending the completion of TMDLs that impact individual permit limits.

3. **HOW WE ARE DOING**
   DEQ developed permit issuance plans based on a watershed approach to achieve the 2010 target. The plans are adapted to respond to the technical and legal issues that arise during permit development as well as the need to reduce the permit backlog.

4. **HOW WE COMPARE**
   There are no applicable or commensurate public or private industry standards.

5. **FACTORS AFFECTING RESULTS**
   DEQ is moving to a watershed approach that will allow the agency to better plan for workload and resource needs in the Water Quality permit program. This effort will likely delay some permit renewals because they will be rescheduled to fit into the cycle of watershed-based permit issuance. The complexities of technical and legal issues encountered during permit development also affect these results.

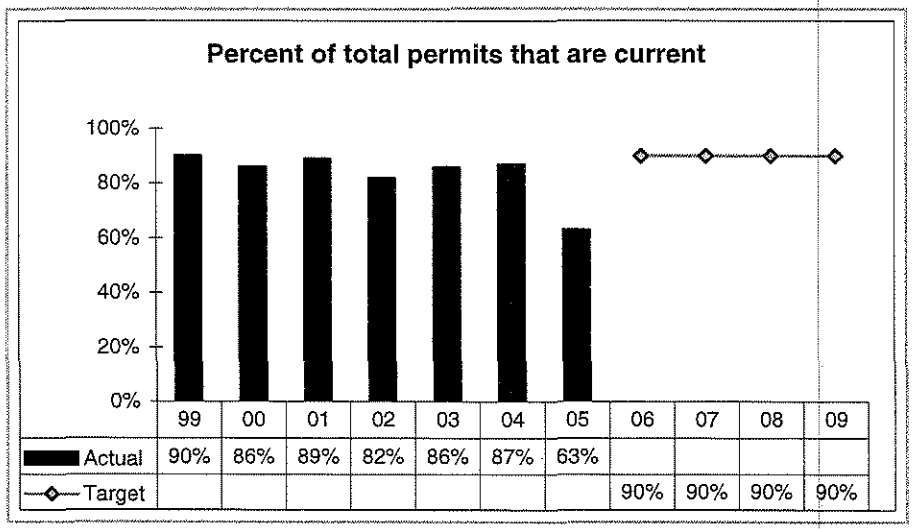
6. **WHAT NEEDS TO BE DONE**
   DEQ will continue to work on long-term improvements to the wastewater permitting program by refining the watershed approach.

7. **ABOUT THE DATA**
   The reporting cycle is the calendar year; however, overall progress will the 2010 target will be measured over a five-year period from 2005 through 2009.

Agency Mission: To be a leader in restoring, maintaining and enhancing the quality of Oregon's air, water and land.

KPM #7	UPDATED PERMITS Percent of total permits that are current.	Measure since: 1999
Goal	IMPROVE OREGON'S AIR AND WATER.	
Oregon Context	KPM #7 links to: (1) Oregon's Statewide Planning Goal 6: Air, water, and land resources quality (OAR 660-015-00 (06)); (2) Oregon Shines Goal 1: Quality jobs for all Oregonians, and (3) Oregon Shines Goal 3: Healthy, Sustainable surroundings (Oregon Benchmark 78, Stream Water Quality).	
Data source	DEQ "Water Quality Source Information System" database for permit issuance data.	
Owner	DEQ Water Quality Program. Ranei Nomura, (503) 229-5657	

1. **OUR STRATEGY**
   To achieve this goal, DEQ continues to focus on timely issuance of water quality permits and reducing the permit backlog.



	99	00	01	02	03	04	05	06	07	08	09
Actual	90%	86%	89%	82%	86%	87%	63%				
Target								90%	90%	90%	90%

2. **ABOUT THE TARGETS**
   Higher percentages of current permits are desirable because renewed permits incorporate current water quality standards to better protect water quality in Oregon. Targets were revised in response to DEQ's work with the "Blue Ribbon Committee," a group of stakeholders who collaborated with DEQ to identify long-term improvements to the wastewater permitting program. As a result, DEQ established a target for individual permits of "90% current" by the end of calendar year 2007. The target for general permits is lower, at "70% current," due to resource constraints. While the 2006 target is still listed, it was developed prior to DEQ engaging in a two-year planning process, initiated in 2005, to identify high priority outcomes. This process has focused DEQ resources on meeting the 2007 goal.

3. **HOW WE ARE DOING**
   The percent of current general and individual permits decreased because of the renewal process for two general permits: the Columbia Slough storm water runoff general permit for industries and construction site runoff general permit. The renewal of the Columbia Slough general permit was postponed from 2004 to 2006 due to complex legal and implementation issues resulting from litigation and a

settlement agreement. The construction general permit was renewed prior to its expiration date of December 31, 2005, but due to the large number of renewal applications, not all were processed by the end of 2005. Note: DEQ administratively extended permit coverage to applicants that submitted renewal applications, but still count them as "expired" for this report.

4. **HOW WE COMPARE**
There are no applicable or commensurate public or private industry standards.

5. **FACTORS AFFECTING RESULTS**
DEQ is moving to a watershed approach that will allow the agency to better plan for workload and resource needs in the Water Quality permit program. This effort will likely delay some permit renewals because they will be rescheduled to fit into cycle of watershed-based permit issuance. The complexities of technical and legal issues encountered during permit development also affect these results. In addition, the number of requests for new permits or major modifications of existing permits that DEQ may receive are not predictable. Similarly, permit actions are frequently subject to legal challenges that require the assistance of technical staff. These activities require resources to be pulled away from permit renewals, causing delays in renewal.

The Blue Ribbon Committee recommended that DEQ ensure stable, ongoing funding that improves fee predictability for rate payers and revenue for budget management. This is accomplished by maintaining a mix of fee and public funding and allowing for up to a 3% annual permit fee increase to help address inflation. The initial phase of this effort increased wastewater permit fee revenue by 11%, as approved by the 2005 Legislature, to maintain funding for four existing permit staff and add 2.5 new positions in 2006 and 2007. These new positions will assist DEQ in more efficiently assessing compliance. In the next phase, DEQ will request approval from the 2007 Legislature to increase fee revenue by 5% and increase General Fund appropriations to support additional program improvements. DEQ intends to request an annual inflationary fee increase in 2007, as authorized by Senate Bill 45, effective in FY 2008 (July 1, 2007 to June 30, 2008). (The amount of the annual increase may not exceed the anticipated increase in the cost of administering the permit program or 3%, whichever is lower. Generally, DEQ's experience with fees has shown that cost increases for benefits and salaries outpace inflation, but an annual 3% fee increase will help offset these costs.) Without these increases in funding, DEQ may not meet this goal.

6. **WHAT NEEDS TO BE DONE**
DEQ will continue to focus on timely permit issuance and reducing the backlog, while moving to a watershed approach to renewing existing permits. The watershed approach will allow DEQ to better plan for workload and resource needs in the permit program; however, this approach may temporarily increase the number of expired permits, as renewals of some permits are delayed to fit into the new watershed-based permit cycle.

7. **ABOUT THE DATA**
The reporting cycle is the calendar year.

III. KEY MEASURE ANALYSIS

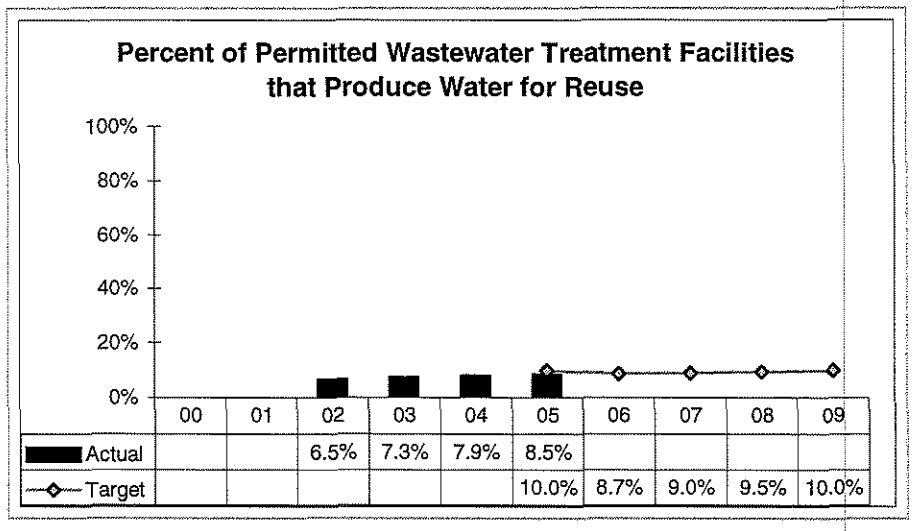
Agency Mission: To be a leader in restoring, maintaining and enhancing the quality of Oregon's air, water and land.

KPM #8	WATER REUSE Percent of permitted wastewater treatment facilities that produce water for reuse.	Measure since: 2002
Goal	PROMOTE SUSTAINABLE PRACTICES. This is one of DEQ's identified sustainability measures.	
Oregon Context	There are no established Oregon Benchmarks or High Level Outcomes associated with this measure. This is an agency Executive Measure supporting DEQ's Strategic Directions.	
Data source	DEQ's Wastewater Permits Database and DEQ regional water quality staff.	
Owner	Water Quality Program. Judy Johndohl, (503) 229-6896.	

1. **OUR STRATEGY**

Senate Bill 820, passed by the 2003 Legislature, required DEQ to work in consultation with interested parties and state agencies to examine the opportunities and barriers associated with water reuse in urban areas. DEQ completed a report to the 2005 Legislature containing recommendations for policies and procedures to improve incentives for water reuse and eliminate barriers to reuse, while protecting public health and the environment.

In March 2005, the Governor signed Executive Order 05-04 declaring water reuse a state priority and directing applicable state agencies to review agency policies and rules, as they are revised, to remove impediments to reuse. DEQ is working with affected state agencies, a task force for rulemaking, and the Oregon Association of Clean Water Agencies in this effort.



	00	01	02	03	04	05	06	07	08	09
Actual			6.5%	7.3%	7.9%	8.5%				
Target						10.0%	8.7%	9.0%	9.5%	10.0%

2. **ABOUT THE TARGETS**

The targets are based on continued interest from wastewater treatment facilities to reuse water for beneficial purposes. The target number is affected by the number of water quality permits issued that may encompass water reuse as an option for managing wastewater. Actual percentage increase indicates a growing number of water reuse projects.

Agency Mission: To be a leader in restoring, maintaining and enhancing the quality of Oregon's air, water and land.

3. **HOW WE ARE DOING**

The number of water reuse activities in Oregon shows a steady annual increase. DEQ expects this trend to continue as the state works towards encouraging water reuse. As water quality permits are renewed and non-discharge options are considered in light of more stringent water quality criteria, some facilities will likely find water reuse a more cost effective option, and the actual number of water reuse activities will continue to grow. The trend is not expected to increase at rates originally targeted based on planning considerations for reuse projects and DEQ's rulemaking schedule.

4. **HOW WE COMPARE**

Oregon has not been as aggressive in encouraging water reuse as some other states, such as California, Arizona and Florida. These states have acute water supply difficulties as a result of either growth or climate. Oregon's performance is comparable to states that do not have water supply difficulties, although Oregon in the past has encountered drought conditions and with an increasing population growth will face water supply difficulties. There are no applicable or commensurate public or private industry standards.

5. **FACTORS AFFECTING RESULTS**

As water quality permits are renewed, an increase in reuse activities is expected as facilities determine non-discharge options. DEQ anticipates the rulemaking effort and associated work (e.g., Internal Management Directive and web page) to generate more interest in the viability of water reuse. Increased interest among other state agencies will also allow more reuse projects to be workable.

6. **WHAT NEEDS TO BE DONE**

DEQ initiated a rulemaking process in 2005 to revise existing regulations to encourage water reuse. An Internal Management Directive will be written to address program implementation issues. Through the rulemaking process and under the Governor's Executive Order, state agencies are collaborating more and understanding issues that may be obstacles for facilities to implement water reuse programs. As facilities continue to address issues to meet water quality criteria, reuse will continue to be more of a viable option for wastewater management.

7. **ABOUT THE DATA**

The data reporting cycle is the calendar year. The number of water quality permits (industrial and domestic) used as the basis for the percentage of water reuse programs is reliably available from DEQ's Wastewater Permits Database. DEQ does not maintain a database that includes specific reuse activities for a permitted facility, thus DEQ regional offices are asked annually to update the information used in this measure. The total number of permits may fluctuate somewhat, but this should not significantly skew the trend of an increase in percentage of reuse activities.

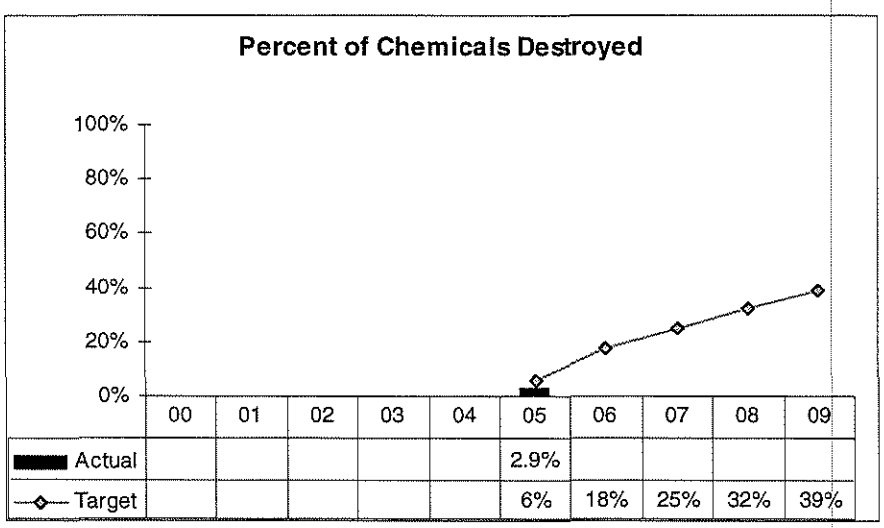
III. KEY MEASURE ANALYSIS

Agency Mission: To be a leader in restoring, maintaining and enhancing the quality of Oregon's air, water and land.

KPM #9	UMATILLA Cumulative percent of chemical agent destroyed at Umatilla Depot	Measure since: 2002
Goal	PROTECT PEOPLE & THE ENVIRONMENT FROM TOXICS.	
Oregon Context	There are no Oregon High Level Outcomes related to this measure. This measure is also an agency Executive Measure, supporting DEQ's Strategic Directions.	
Data source	DEQ Umatilla Chemical Demilitarization Program data.	
Owner	DEQ Eastern Region, Umatilla Chemical Demilitarization Program. Rich Duvall, (541) 567-8297 x22	

1. **OUR STRATEGY**
   DEQ's role is to oversee the safe and timely destruction of all chemical agents at the Umatilla Chemical Agent Disposal Facility (UMCDF, or Depot). The Army and its contractor are responsible for the actual destruction of chemical agents. DEQ regulates the activity via permit and is actively engaged in the process to ensure protection of workers, the community and the environment.

2. **ABOUT THE TARGETS**
   The targets were selected based on projections made by the Army. The targets reflect consideration of the type of chemical agent being destroyed, the type of munitions that contain the chemical, and operational constraints, such as the capacity of the incinerator, as well as budget. The targets are intended to increase over time from commencement of chemical weapons destruction in 2004 until 100% chemical destruction is achieved.



3. **HOW WE ARE DOING**
   The 2005 percentage of chemical weapons destroyed is slightly lower than originally planned, due to several fires during the reporting period. A thorough root cause analysis was done, which further delayed chemical agent destruction. The trend towards 2006 shows that the target will likely be achieved.

Agency Mission: To be a leader in restoring, maintaining and enhancing the quality of Oregon's air, water and land.

4. **HOW WE COMPARE**
   There are no other Chemical weapons facilities in Oregon. There are five other active facilities in the country—some using incineration, some neutralization. Each facility is unique in its ability to destroy chemical agent. Each facility has different types and amounts of chemical agent, which negates meaningful comparison.

5. **FACTORS AFFECTING RESULTS**
   There are numerous technical challenges associated with the processing of chemical weapons at the UMCDF that could extend the dates by which performance targets will be achieved. Some problems can be anticipated (e.g. the possibility of gelled chemical agent in some rockets), based upon experiences at other chemical agent disposal facilities. Other, unanticipated issues (e.g. the frequency of rocket fires that occurred at UMCDF), may also arise.

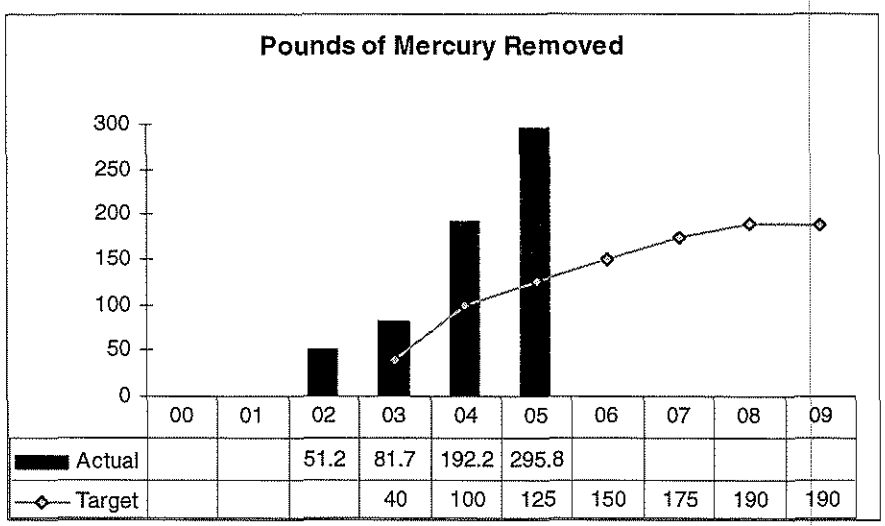
6. **WHAT NEEDS TO BE DONE**
   DEQ needs to continue the oversight of the operation.

7. **ABOUT THE DATA**
   The data is provided in reports to DEQ by the U.S. Army and is reported herein on a calendar year basis.

Agency Mission: To be a leader in restoring, maintaining and enhancing the quality of Oregon's air, water and land.

KPM #10	TOXICS PREVENTION AND REDUCTION Pounds of mercury removed from the environment through DEQ's efforts.	Measure since: 2002
Goal	PROTECT PEOPLE & THE ENVIRONMENT FROM TOXICS. This is one of DEQ's identified sustainability measures.	
Oregon Context	KPM #10 does not directly link to a High Level Outcome, but supports Oregon Shines Goal 3: Healthy, sustainable surroundings.	
Data source	Annual project reports.	
Owner	Land Quality Program. Pat Vernon, (503) 229-5720	

1. **OUR STRATEGY**
DEQ's goal is to reduce and remove increasing quantities of mercury from the environment to protect human health. One of our strategies is to provide alternatives for the proper disposal of mercury-containing products through public-private partnerships, household hazardous waste collection events and education. This measure reflects the work being carried out by the Land Quality Program. Efforts are also developing or underway in the Air Quality and Water Quality Programs.



	00	01	02	03	04	05	06	07	08	09
Actual			51.2	81.7	192.2	295.8				
Target				40	100	125	150	175	190	190

2. **ABOUT THE TARGETS:**
DEQ targets for mercury reduction will eventually include all the agency's mercury reduction activities, though at this time efforts underway in Air Quality and Water Quality are not reflected in the targets. Our long term goal is to increase the amount of mercury removed from the environment. Recovery initiatives sometimes target long-lived products that are replaced with non-mercury containing alternatives. The result is that a one time environmental success that is not replicable creates significant variability in projected recovery levels. The existing targets contemplate incremental increases in the short term and reflect the variable nature of the program.

3. **HOW WE ARE DOING:**
A program to recover mercury-containing manometers from dairies resulted in the recovery of 87 pounds of mercury in 2005. This program was successfully completed in 2006. New manometers do not contain mercury therefore this project will not be repeated. The success of this "one

time" project has resulted in pounds collected exceeding our goal for 2005. While the numbers may level off over the next few years, we are still successfully reducing the amount of mercury in the environment.

4. **HOW WE COMPARE:**
It is difficult to compare mercury collection programs due to a large number of variables. For the manometer program, the volume of mercury collected is comparable to programs in other states. For example, EPA reports that a pilot program in California garnered 230 pounds of mercury.[2] In 2004, the state of Wisconsin collected 405 pounds of mercury from manometers.[3]

5. **FACTORS AFFECTING RESULTS:**
Many mercury collection opportunities are voluntary. DEQ makes the program available, publicizes it and relies on Oregon residents to turn in mercury containing products.

6. **WHAT NEEDS TO BE DONE:**
DEQ anticipates increased outreach and promotion to stimulate public participation in removing mercury from the environment. Work with the Dental and Clean Water Associations will continue in order to ensure best management of mercury in wastes generated by dentists. In addition, the mercury reduction efforts of Air Quality and Water Quality programs will be incorporated in future targets and reporting of performance results.

7. **ABOUT THE DATA:**
Data are collected from cities and counties that hold their own household hazardous waste collection events, the Thermostat Recycling Corporation, and DEQ collection contractors, and compiled by DEQ staff annually.

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[2] http://www.epa.gov/Region9/cross_pr/innovations/merrec.htm
[3] http://www.dnr.state.wi.us/org/caer/cea/mercury/program.htm

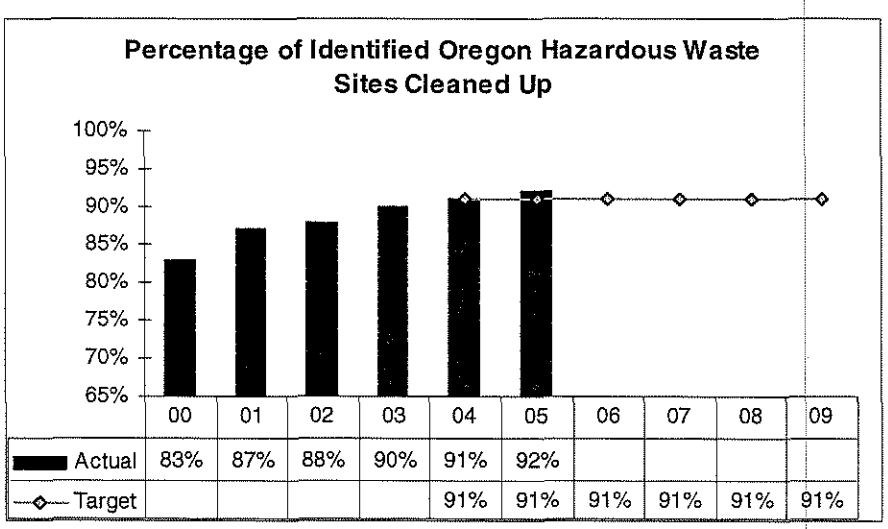
III. KEY MEASURE ANALYSIS

Agency Mission: To be a leader in restoring, maintaining and enhancing the quality of Oregon's air, water and land.

KPM #11/ OBM #84	CLEANUP: Percentage of identified Oregon hazardous waste sites cleaned up.	Measure since: 1990
Goal	PROTECT PEOPLE & THE ENVIRONMENT FROM TOXICS.	
Oregon Context	KPM #11 is also Oregon Benchmark #84. It links to (1) Oregon Statewide Planning Goal 6: Air, water and land resources quality (OAR 660-015-00 (06)); and (2) Oregon Shines Goal 3: Healthy, sustainable surroundings.	
Data source	Environmental Cleanup Site Information (ECSI) database; Leaking Underground Storage Tank (LUST) database.	
Owner	DEQ Land Quality Program. Pat Vernon, (503) 229-5720	

1. **OUR STRATEGY**
   This measure helps the Department determine on-the-ground accomplishments of both the Cleanup and Tanks Programs by tracking sites that are cleaned up and being cleaned up. The great majority of sites counted in this measure are tank sites (i.e., where releases of fuel from underground storage tanks have occurred). In addition, this measure provides a quick view of our ability to maintain an established, high level of performance in these programs.

2. **ABOUT THE TARGETS**
   The targets started at the upper end of the scale. Further improvement, while likely, will be incrementally smaller than in the past. It is important to maintain our excellent performance in these programs as well as acknowledge our continued accomplishments.



	00	01	02	03	04	05	06	07	08	09
Actual	83%	87%	88%	90%	91%	92%				
Target					91%	91%	91%	91%	91%	91%

3. **HOW WE ARE DOING**
   In 2005, the Cleanup and Tanks Programs added over 2,000 sites to the list of sites that need attention. Despite the enormous increase, this measure was above target. We believe the trend will be to remain at about the 90-92% achievement level.

4. **HOW WE COMPARE**
   There are no comparisons available or relevant.

Agency Mission: To be a leader in restoring, maintaining and enhancing the quality of Oregon's air, water and land.

5. **FACTORS AFFECTING RESULTS**
While the percentage of sites cleaned up has increased, there has not been much change over the past two years, primarily because the huge number of underground tanks that have been cleaned up in the past acts as somewhat of an "anchor." Nonetheless, the upward trend is indicative that the percentage of sites cleaned up continues to rise in real time. The percentage of hazardous waste sites cleaned up or being cleaned up has remained in the 60 – 75% range for a number of years, with no evident trend. The lack of a trend and the lower percentage compared to tank sites can be explained by the greater complexity and scope of hazardous waste sites.

6. **WHAT NEEDS TO BE DONE**
While the advances are incrementally small, DEQ remains committed to efforts aimed at increasing the percentage of hazardous waste sites that are investigated and cleaned up, by increasing the agency's visibility in "brownfields," and by offering current information about DEQ's Cleanup Programs and incentives for site owners and operators. This measure is both a Key Performance Measure and an Oregon Benchmark. DEQ is proposing to modify the language of the Benchmark to align with the KPM language approved by the 2005 Legislature, by removing the language "*or being cleaned up*" from the Benchmark. This change allows us to specifically report on our performance related to sites for which cleanup has been completed. If approved, DEQ will establish new targets and report on the smaller universe of sites for which cleanup actions have been completed.

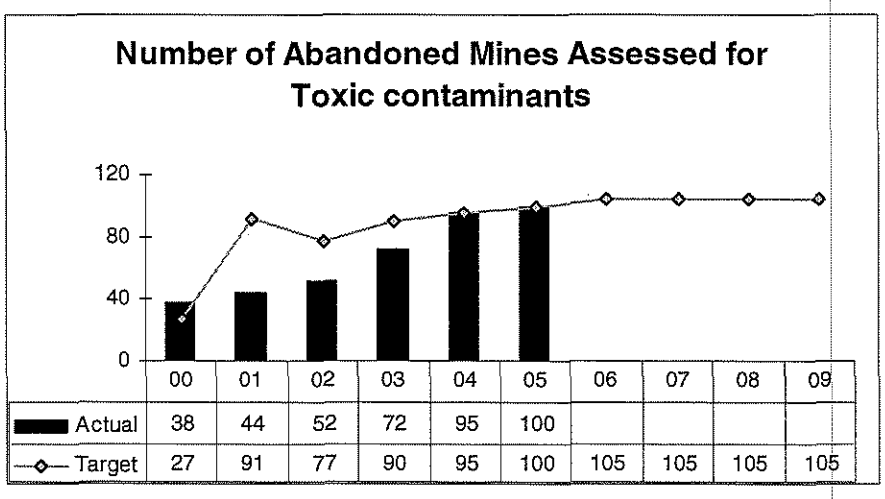
7. **ABOUT THE DATA**
Data is by calendar year, and derives from queries of: (1) DEQ's leaking underground storage tank (LUST) database; and (2) DEQ's Environmental Cleanup Site Information (ECSI) database.

III. KEY MEASURE ANALYSIS

Agency Mission: To be a leader in restoring, maintaining and enhancing the quality of Oregon's air, water and land.

KPM #12	Cumulative number of abandoned mines assessed for toxic contaminants.	Measure since: 1998
Goal	PROTECT PEOPLE & THE ENVIRONMENT FROM TOXICS.	
Oregon Context	There are no Oregon High Level Outcomes directly related to this measure. This measure is also an agency Executive Measure supporting DEQ's Strategic Directions.	
Data source	Environmental Cleanup Site Information (ECSI) database	
Owner	DEQ Land Quality Program. Gil Wistar (503) 229-5512	

1. **OUR STRATEGY**
   Abandoned mines can be sources of mercury pollution and other toxic compounds in the environment. The implementing strategy in 2002-2003 was to make these sites the priority for cleanup. Since that time, DEQ has evaluated most of the abandoned mine sites perceived to present the greatest threat to human health and the environment. The current strategy is to examine the landscape annually for sites that should be added to the cleanup priority list.



	00	01	02	03	04	05	06	07	08	09
Actual	38	44	52	72	95	100				
Target	27	91	77	90	95	100	105	105	105	105

2. **ABOUT THE TARGETS**
   DEQ set the targets knowing that a fixed number of abandoned mines were likely to present some threat to human health and the environment (about 150). In addition, only a proportion of the identified contaminated sites present risks that warrant investigation and further action. This is why the targets have leveled off at around 105 sites for 2007 and 2008. The number of evaluations will level off as well.

3. **HOW WE ARE DOING**
   We have largely succeeded in evaluating abandoned mines to determine the highest priorities for further investigation or cleanup. So far, however, we have not been as successful at finding the financial resources needed to conduct further investigations and cleanups at many of the abandoned mines. Most of these sites have private owners with no knowledge of, or responsibility for, the contamination caused by historical mining activity, and the persons or companies responsible for the contamination are largely bankrupt, deceased, or otherwise inaccessible.

4. **HOW WE COMPARE**
   There are no known available or relevant comparisons.

5. **FACTORS AFFECTING RESULTS**
   Three key factors affecting results are: (1) the difficulty of cleaning up mercury and toxics in general; (2) the known, finite number of abandoned mine sites in Oregon; and (3) limitations in funding to pursue needed follow-up actions at abandoned mine sites.

6. **WHAT NEEDS TO BE DONE**
   The focus needs to shift from evaluations of abandoned mine sites to further investigation and cleanup of the highest-priority threats revealed by the evaluations from past years. This will require significant funding from sources that DEQ has already looked into, and in a few cases succeeded in obtaining. Specifically, in order to proceed with additional investigation and cleanup, DEQ would need to obtain funding through (1) grants or funding from EPA and other federal partners; (2) legislative support for additional Orphan Program funding; and (3) private sources, identified by conducting in-depth histories of site owners and operators, sometimes dating back over 100 years.

7. **ABOUT THE DATA**
   Data is by calendar year, and derives from DEQ's Environmental Cleanup Site Information (ECSI) database. Detailed information about the abandoned mine sites DEQ has evaluated is available online[4]. On the on-line form, enter "%mine" in the Site Name field (make no other entries in any other field), and a list of abandoned mine sites throughout Oregon appears. Clicking on the ECSI numbers of any of these sites will bring up a detailed site report.

[4] http://www.deq.state.or.us/wmc/ECSI/ecsiquery.asp?listtype=lis&listtitle=Environmental+Cleanup+Site%20Information+Database

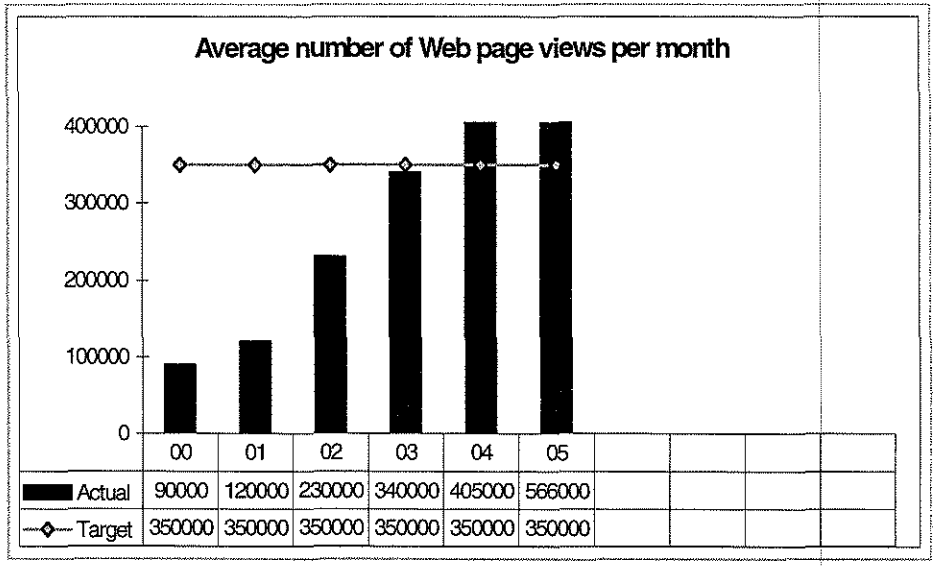
III. KEY MEASURE ANALYSIS

Agency Mission: To be a leader in restoring, maintaining and enhancing the quality of Oregon's air, water and land.

KPM #13	WEB PAGE VIEWS Average number of web page-views per month.	Measure since: 2000
Goal	INVOLVE OREGONIANS IN SOLVING ENVIRONMENTAL PROBLEMS.	
Oregon Context	There are no established Oregon Benchmarks or High Level Outcomes to which this measure links. However, DEQ's efforts reflect the understanding that Oregonians value access to environmental information, and easy access via the Internet. DEQ is committed to providing high-quality data about environmental conditions in Oregon communities and will continue to do so.	
Data source	Quarterly WebTrend reports.	
Owner	Office of Communications and Outreach. Nina DeConcini, (503) 229-6271	

1. **OUR STRATEGY**
   DEQ no longer considers this measure relevant or meaningful in evaluating our progress in involving Oregonians in solving environmental problems and is proposing deletion for the 2007-09 biennium. Nevertheless, DEQ does maintain use-friendly environmental information through its website.

2. **ABOUT THE TARGETS**
   Targets were created at the inception of DEQ's Web site. Since then the target numbers have not changed, although actual numbers have far exceeded the targets. However, page views are not meaningful in evaluating agency performance because they do not distinguish between internal and external access to web pages, nor do they inform us as to whether public visitors to DEQ's website found the information informative or were motivated to get involved in solving environmental problems.



3. **HOW WE ARE DOING**
   In 2005, Web page-views continued to increase, with near 566,000 Web page-views of DEQ's external site each month. This measure is significantly above target, as has been the case every year since 2000.

4. **HOW WE COMPARE**
   DEQ does not follow the Web data of simular agencies, though we believe those that are attempting to evaluate customer service through data on access to web pages are similarly unimpressed with the relevance and meaningfulness of a web page views based measure.

5. **FACTORS AFFECTING RESULTS**
   Factors effecting results includes continual improvements made to DEQ's Web sites and content, streamlined processes and improved use of the Web by staff.

6. **WHAT NEEDS TO BE DONE**
   DEQ plans to continue regular upgrades to its Web site as needed. DEQ is proposing deletion of this measure for the 2007-09 biennium.

7. **ABOUT THE DATA**
   DEQ WebTrends are reported on a quarterly basis within a calendar year.

III. KEY MEASURE ANALYSIS

Agency Mission: To be a leader in restoring, maintaining and enhancing the quality of Oregon's air, water and land.

KPM #15 and #16	CUSTOMER SERVICE : Percent of customers rating their satisfaction with the agency's customer service as "good" or "excellent": overall, timeliness, accuracy, helpfulness, expertise, availability of information	Measure since: 2006
Goal	EXCELLENCE: Delivering outstanding public service and continuously seeking customer feedback to improve our service.	
Oregon Context	There are no Oregon Benchmarks or High Level Outcomes related to this measure, but excellence in customer service is a priority in the State of Oregon, and all state agencies are required to report their performance results.	
Data source	Bardsley & Niedhart, an independent consulting firm, conducted the customer service surveys.	
Owner	Office of Communication and Outreach. Nina DeConcini, (503) 229-6271	

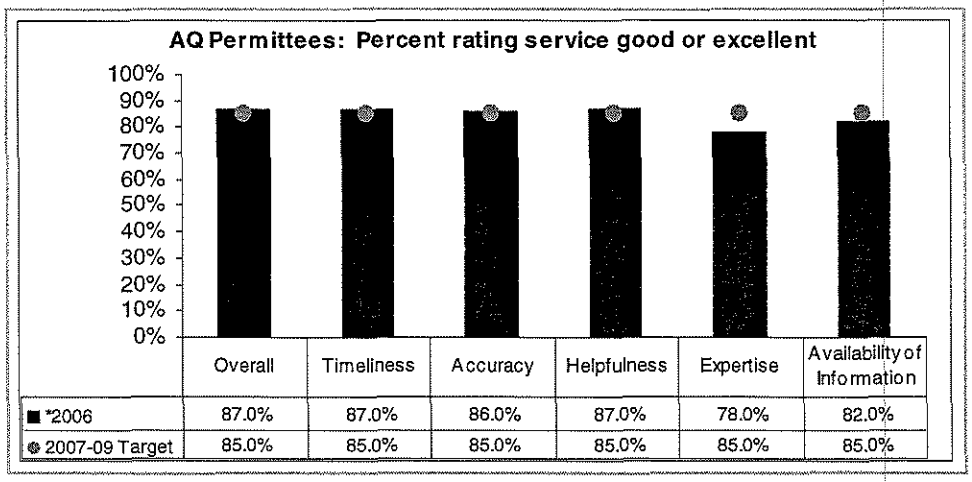
1. **OUR STRATEGY**
   DEQ's strategy is to continue to deliver the highest quality customer service possible. By gathering information directly from customers, we are better able to target resources to improve our service.

2. **ABOUT THE TARGETS**
   There are no comparison targets since 2006 is the baseline year.

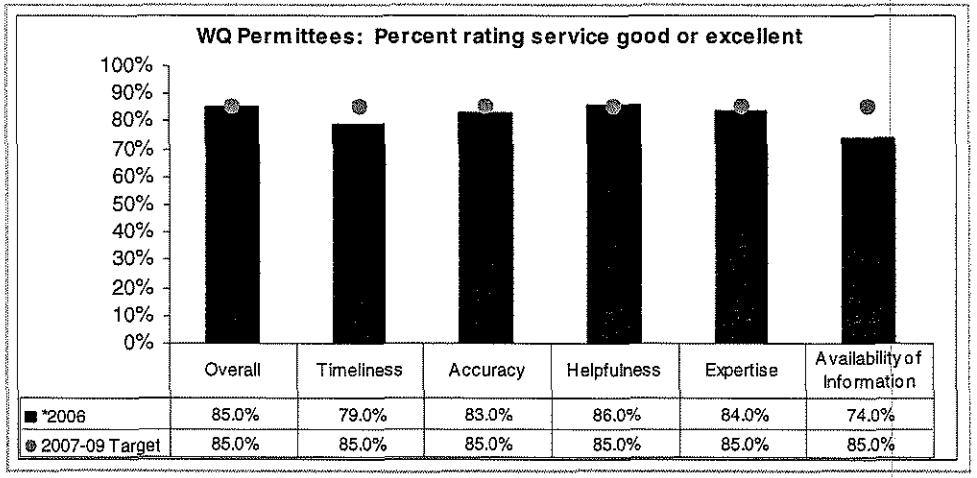
3. **HOW WE ARE DOING**
   We are pleased to see the majority of respondents in the "agree" or "strongly" agree category.

4. **HOW WE COMPARE**
   See above.

5. **FACTORS AFFECTING RESULTS**
   DEQ believes that effective employee performance management, training and streamlined processes throughout DEQ's Air Quality, Water Quality and On-Site Septic Systems programs contribute to the largely positive feedback on DEQ's customer service.

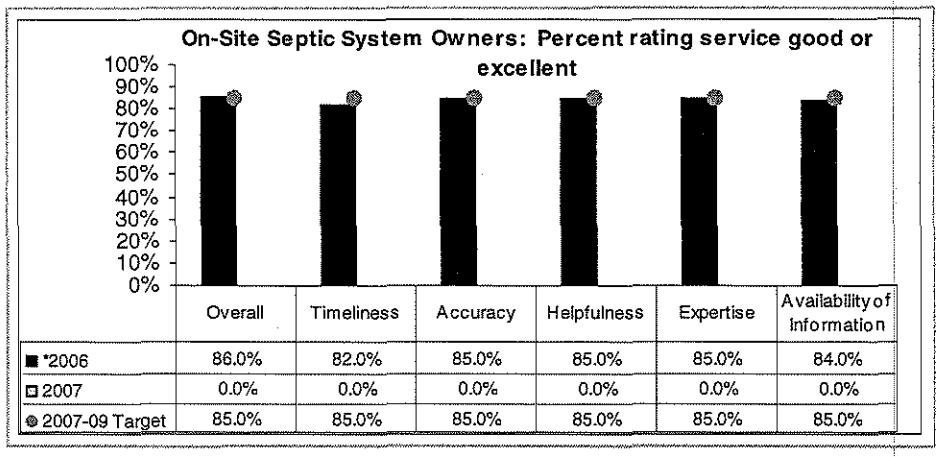


	Overall	Timeliness	Accuracy	Helpfulness	Expertise	Availability of Information
*2006	87.0%	87.0%	86.0%	87.0%	78.0%	82.0%
2007-09 Target	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%



	Overall	Timeliness	Accuracy	Helpfulness	Expertise	Availability of Information
*2006	85.0%	79.0%	83.0%	86.0%	84.0%	74.0%
2007-09 Target	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%

6. **WHAT NEEDS TO BE DONE**
   DEQ will continue to make it a priority to reinforce excellent customer service in administering DEQ programs.



	Overall	Timeliness	Accuracy	Helpfulness	Expertise	Availability of Information
*2006	86.0%	82.0%	85.0%	85.0%	85.0%	84.0%
2007	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2007-09 Target	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%

7. **ABOUT OUR CUSTOMER SERVICE SURVEY**
   The customer survey for AQ and WQ Permittees and On-Site Septic System customers is part of the Permitted Customers Study prepared for DEQ by the consulting firm, Bardsley and Neidhart.

   The survey was conducted in May, 2006. Bardsley and Neidhart used a telephone survey to statistically sample the affected populations. The survey was administered to a representative sample of DEQ customers statewide, including 77 air quality permit holders, 221 WQ permit holders, and 200 On-Site Septic System customers. Sample characteristics described above. Weighting was not necessary because the surveys were kept distinct and separate. The ranges of sampling variability were computed at the 95% confidence level.

   In addition to the three groups of customers represented, DEQ is surveying drivers in the Portland area who bring their cars in for emissions testing and facilities who have received technical assistance from DEQ regarding hazardous waste disposal and management. This is the first year (2006) we have surveyed these groups to establish a baseline. We will continue to survey all five customer groups every other year to chart our progress, and will report our first set of results for these two additional customer bases in the 2006 Annual Performance Progress Report to be issued in 2007.

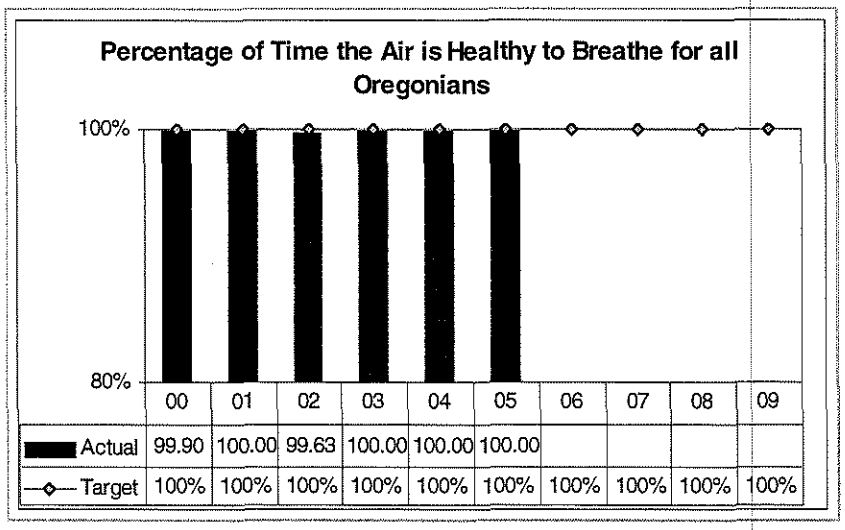
III. KEY MEASURE ANALYSIS

Agency Mission: To be a leader in restoring, maintaining and enhancing the quality of Oregon's air, water and land.

OBM #75	AIR QUALITY CONDITIONS Percent of time air is healthy to breathe for all Oregonians.	Measure since: 1990
Goal	IMPROVE OREGON'S AIR AND WATER.	
Oregon Context	OBM # 75 (air quality conditions) is also linked to: (1) Oregon Statewide Planning Goal 6: Protecting air, water and land resources; and (2) Oregon Shines Goal 3: Provide healthy, sustainable surroundings.	
Data source	DEQ air quality monitoring database	
Owner	Air Quality Division. Margaret Oliphant, (503) 229-5687	

1. **OUR STRATEGY**
   DEQ implements federal emission standards for mobile and stationary sources and develops and implements science-based air quality improvement initiatives for Oregon focused on specific source categories (e.g. old polluting residential wood stoves, diesel engines, and open burning) in locations with high air pollutant concentrations.

2. **ABOUT THE TARGETS**
   DEQ strives to fully protect public health from outdoor air pollution. This measure indicates whether the outdoor air that Oregonians breathe meets the federal health-based air quality standards for particulate matter, ozone (smog) and four other air pollutants. While Oregon's air does not technically violate the federal standards, there are numerous unhealthy days in some communities. Since 2000, the unhealthy air days have ranged from a high of 60 days in 2002 to a low of 17 in 2003.



	00	01	02	03	04	05	06	07	08	09
Actual	99.90	100.00	99.63	100.00	100.00	100.00				
Target	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

3. **HOW WE ARE DOING**
   Oregon is consistently meeting current federal air quality standards; however, based on recent health effects studies, the U.S. Environmental Protection Agency (EPA) adopted new, more stringent standards for fine particulate. Without new efforts to reduce pollution from wood stoves and other combustions sources, the percentage of time the air is healthy to breathe will fall below 100%.

   DEQ has recognized for some time that this measure does not adequately reflect new scientific understanding about air pollution and public health. During 2006 DEQ worked with the Oregon Progress Board to develop a new Benchmark for air quality. This Benchmark, which will appear in next year's report, will measure the unhealthy air days in Oregon communities and measure the number of people breathing air that has toxic air pollutant concentrations high enough to cause significant long-term health risks.

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Agency Mission: To be a leader in restoring, maintaining and enhancing the quality of Oregon's air, water and land.

4. **HOW WE COMPARE**
   Other states do not measure the percent of time air is healthy to breathe in a manner consistent with the current Oregon measure. DEQ has comparable data from Washington and Idaho for the new measure of unhealthy air days. In 2005, Oregon experienced 33 days of unhealthy air in 6 different cities, Washington experienced 15 unhealthy days in 8 cities and Idaho had 37 unhealthy air days in 9 cities.

5. **FACTORS AFFECTING RESULTS**
   Reliance on burning for heat and for waste disposal, along with increasing motor vehicle use, are the primary sources of unhealty air. Weather patterns and natural events, such as wildfires, can be significant factors resulting in poor air quality.

6. **WHAT NEEDS TO BE DONE**
   Meeting the targets in the performance measure being developed will require collaboration among DEQ, other state agencies, local governments, health agencies, the public, and other partners. Reducing smoke (particulate matter) from woodstoves, open burning, diesel engines (e.g. trucks, construction equipment, trains, vessels) and other sources of combusion would make a significant reduction in unhealthy air days. Efforts to reduce emissions from gasoline engines (e.g. cars, lawn equipment), fuel distribution and commercial processes, are also needed. New federal and state standards for cars, trucks, construction equipment, and their fuels will help by reducing many of the pollutants of concern. However, identifying the local air quality problems through monitoring and developing locally supported emission reduction strategies will provide the best health protection for Oregonians.

7. **ABOUT THE DATA**
   Data for this measure is collected from monitoring sites throughout the state and is available through the DEQ website for whatever time frame is desired. Calendar year is used for this report. This measurement data is collected according to methods determined by the EPA and used by state and local air quality agencies nationwide. Extensive quality assurance procedures ensure data quality. The only limitation on this database is the number and location of monitoring sites. The number of Oregon monitoring sites has decreased since 2001 due to state and federal budget cuts. DEQ's 2007-2009 proposed budget requests restoration of the most important sites because monitoring is significant for air quality improvement strategies and an important aspect of measuring performance.

III. KEY MEASURE ANALYSIS

Agency Mission: To be a leader in restoring, maintaining and enhancing the quality of Oregon's air, water and land.

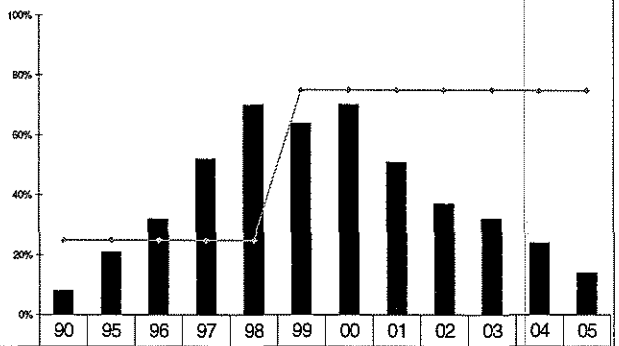
OBM #78	WATER QUALITY CONDITIONS **Percent of monitored stream sites with (a) significantly increasing trends in water quality, (b) decreasing trends in water quality, (c) water quality in good to excellent condition.**	Measure since: 1995
Goal (s)	IMPROVE OREGON'S AIR AND WATER.	
Oregon Context	As an Oregon Benchmark, this measure is also linked to: (1) Oregon's Statewide Planning Goal 6: Air, water, and land resources quality (OAR 660- 015- 00 (06)); and (2) Oregon Shines goal 3: Healthy, sustainable surroundings.	
Data source	DEQ water quality monitoring data.	
Owner	DEQ Laboratory. Steve Mrazik, (503) 229-5983 ext. 267	

1. **OUR STRATEGY**

All Water Quality programs at DEQ implement management strategies that are intended to maintain and improve overall water quality.

Benchmark 78 (a,b,c) are high level environmental indicator measures which report on status and trends in Oregon's surface water quality. Current status and trends in water quality provide some indication of DEQ's success in achieving all three outcomes, although there are many entities that affect water quality and thus these results are not solely a measure of DEQ performance. Water quality trend data can be used by the agency to maintain successful programs and modify or eliminate programs that are not resulting in maintaining or improving water quality, in addition to reporting progress to the public, legislature and stakeholders.

78a. Percent of monitored stream sites with significantly improving trends in water quality



	90	95	96	97	98	99	00	01	02	03	04	05
Actual	8%	21%	32%	52%	70%	64%	70%	51%	37%	32%	24%	14%
Target	25%	25%	25%	25%	25%	75%	75%	75%	75%	75%	75%	75%

2. **ABOUT THE TARGETS**

Benchmark 78 targets were established in coordination with the Oregon Progress Board. The performance measure incorporates three components related to stream water quality: improving trends, declining trends, and streams in good to excellent condition. In order to better distinguish actual water quality trends from natural variability, the trends are based on the ten years of data collected prior to analysis. Greater numbers of stream monitoring sites with improving water quality than declining water quality indicate progress towards the goal of protecting Oregon's water. In addition, maintaining or increasing the percentage of stream sites with good to excellent water quality also indicates progress towards the goal.

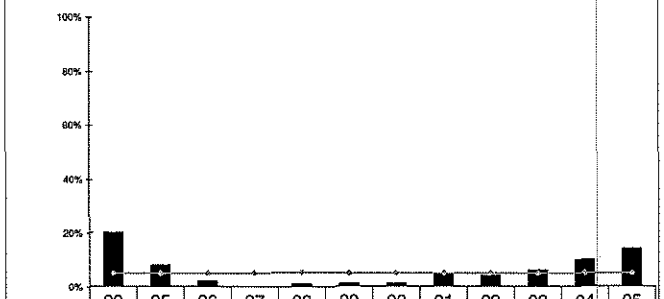
3. **HOW WE ARE DOING**

Water quality has shown steady improvement over the last 14 years. Improvement was greatest between 1997 to 2001. The percentage of sites with improving trends has decreased each year for the last five years, but there were still more improving sites than declining through

2004. The most recent analysis indicates that the number of improving sites and declining sites are now equal. After 14 years of improvements, water quality is currently holding steady.

In 2005, the percentage of monitored stream sites with significantly increasing trends was 14%. Measure 78(a) has been below the target for the last several years. In 2005, the percentage of monitored stream sites with significantly decreasing trends was 14%. From 2003 to 2005, measure 78(b) has been above the target. The percentage of monitored stream sites with good to excellent water quality condition was 51% in 2005. For the last 7 years measure 78(c) has exceeded the target.

78b. Percent of monitored stream sites with significantly decreasing trends in water quality



	90	95	96	97	98	99	00	01	02	03	04	05
Actual	20%	8%	2%	0%	1%	1%	1%	5%	4%	6%	10%	14%
Target	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%

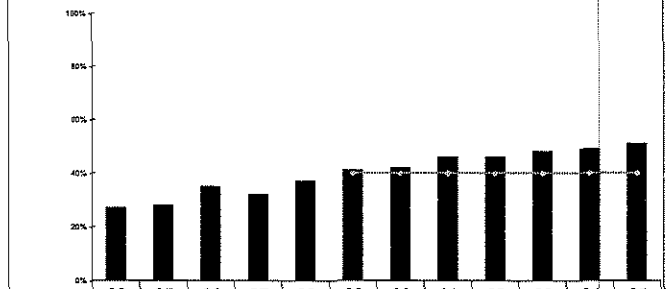
4. **HOW WE COMPARE**

No industry standards exist. The performance is based primarily on the Oregon Water Quality Index (OWQI). The OWQI is used to describe general stream water quality status and trends. The OWQI also shows the general effectiveness of water quality management activities.

5. **FACTORS AFFECTING RESULTS**

Targets were met between 1996 and 1998. Targets were changed in 1999 and reflect a time of substantial increases in water quality that were occurring due to progress on developing and implementing Total Maximum Daily Loads (TMDLs) and associated water quality management plans. The failure to meet the target for increasing trends in water quality is at least partially a statistical function in that earlier positive trends have resulted in some streams attaining good to excellent condition and stabilizing at that level. The failure to meet the target for declining trends is more of a concern and may reflect the rapid population growth and associated development that often affects water quality in certain areas. In addition, a small number of sites with decreasing trends may be due to changing management practices. DEQ is working with management agencies to ensure water quality is protected and the trends reverse.

78c. Percent of monitored stream sites with good to excellent water quality condition



	90	95	96	97	98	99	00	01	02	03	04	05
Actual	27%	28%	35%	32%	37%	41%	42%	46%	46%	48%	49%	51%
Target						40%	40%	40%	40%	40%	40%	40%

DEQ recognizes we may need to re-evaluate current targets for the trends measures as they are probably not realistic over the long term as more streams reach stable condition. DEQ will need to discuss the process for target changes and funding necessary to do so with the Oregon Progress Board.

Agency Mission: To be a leader in restoring, maintaining and enhancing the quality of Oregon's air, water and land.

6. **WHAT NEEDS TO BE DONE**

The data for this benchmark are developed from a network of 132 ambient monitoring sites on the state's major rivers and streams. The Oregon Progress Board has recommended supplementing this with additional benchmarks on aquatic biological integrity (indices of biological integrity for macroinvertebrates and fish) and OWQI based on data collected from a statewide probabilistic sampling network representing all stream miles. The addition of such benchmarks would provide a more robust measure of the quality of Oregon's surface water. There is also a need (as indicated above) to revisit the current targets for the trending measures. In addition, further evaluation is needed to determine reasons for the failure to meet the target for declining trends.

DEQ has developed a comprehensive water quality monitoring strategy that outlines what it would take to do more monitoring for public health regarding toxics; permit evaluation; groundwater; and fish consumption. To fully implement this strategy would require more than 80 staff. Currently our water quality monitoring is done with about 18 staff. In addition, to fully implement the additional benchmarks recommended by the Oregon Progress Board through the State of the Environment Report Benchmark Workgroup (mentioned above) would take an additional 9 staff.

7. **ABOUT THE DATA**

Long term ambient water quality monitoring data are collected in accordance with the Ambient Water Quality Monitoring Network Quality Assurance Project Plan. Monitoring data are stored in DEQ's Laboratory Analytical Storage and Retrieval Database (LASAR) and analyzed annually based on the hydrologic water year. All DEQ monitoring data are accessible via the web at http://deq12.deq.state.or.us/lasar2/.

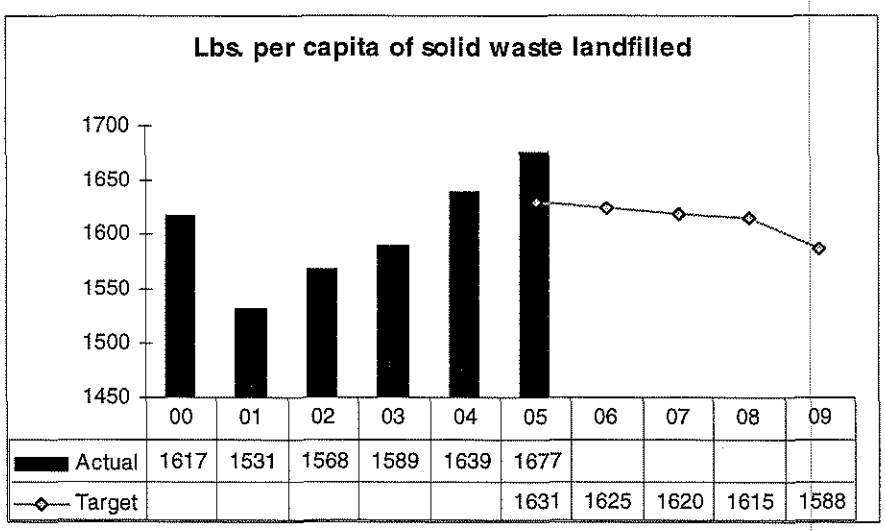
III. KEY MEASURE ANALYSIS

Agency Mission: To be a leader in restoring, maintaining and enhancing the quality of Oregon's air, water and land.

OBM #83	SOLID WASTE: Pounds of municipal solid waste landfilled or incinerated per capita.	Measure since: 1992
Goal	INVOLVE OREGONIAN'S IN SOLVING ENVIRONMENTAL PROBLEMS.	
Oregon Context	As an Oregon Benchmark, this measure is also linked to: (1) Oregon Statewide Planning Goal 6: Air, water and land resources quality (OAR 660-015-00 (06)); and (2) Oregon Shines Goal 3: Healthy, sustainable surroundings.	
Data source	Landfill disposal tonnage reports.	
Owner	DEQ Land Quality Program. Peter Spendelow, (503) 229-5253	

1. **OUR STRATEGY**
   Through increased recycling and waste reduction activities, the amount of waste being landfilled and incinerated will diminish. Oregonians' involvement is crucial and depends on environmentally conscious purchasing habits, as well as waste reduction and recycling habits.

2. **ABOUT THE TARGETS**
   DEQ recently revised our targets to take into account two factors. First, state law sets a statewide recovery goal of 45% by 2005 and 50% by 2009. Second, state law also sets a waste prevention goal of no per-capita increase by 2005, and no absolute increase in tons generated by 2009. Based on these goals and reasonable assumptions, we derived new targets for disposed waste that meet these two state goals.



	00	01	02	03	04	05	06	07	08	09
Actual	1617	1531	1568	1589	1639	1677				
Target						1631	1625	1620	1615	1588

3. **HOW WE ARE DOING**
   In spite of increased recycling, disposal has climbed steadily since reaching a temporary low in 2001. Increased construction and demolition waste is believed to be a significant factor in the overall increase in disposal. Improved economic conditions in Oregon have also lead to an increase in waste generation and disposal.

4. **HOW WE COMPARE**
   It is difficult to compare disposal from state to state or to compare our state to the national average, because every state defines and measures its waste stream differently. However, the 2004 BioCycle survey of the states ranked Oregon as having the second lowest disposal of municipal

solid waste, substantially below the national average as measured in that survey. The same BioCycle survey ranked Oregon as having the highest recycling rate in the nation.

5. **FACTORS AFFECTING RESULTS**
Although the strong recycling programs in Oregon have had a large influence in reducing disposal, many other factors also affect the year-to-year changes in disposal. These factors include construction activities, trends towards larger house sizes and greater number of households with fewer people per house. Changes in economic conditions also affect how much people buy, and thus how much waste they dispose.

6. **WHAT NEEDS TO BE DONE**
It is important to continue to track the data and look at programs that contribute to Oregonian's understanding of steps they can take to reduce per capita disposal.

7. **ABOUT THE DATA**
All landfills and incinerators report the tons of waste they dispose to DEQ each quarter, except for very small facilities that report to DEQ annually. DEQ has occasionally audited disposal data from selected facilities. All of the larger landfills use certified scales and computerized recordkeeping to record and report disposal tonnage. Per capita disposal for 1999 and before have been adjusted based on revised statewide population figures resulting from the 2000 census. The results reported here are slightly higher than the results DEQ reports in our annual recovery survey, because a change in state law in 2001 directed DEQ to exclude from disposal a small amount of materials burned as fuel at the waste-to-energy facility in Marion County. For consistency with past benchmark data, we did not apply that exclusion to the Benchmark 83 data.

State of Oregon

Department of Environmental Quality — Memorandum

To: Environmental Quality Commission **Date:** February 22, 2007

From: Stephanie Hallock, Director S. Hallock

Subject: Director's Dialogue

Building stronger relationships with Oregon tribes

In December, I reported to you about our efforts to build stronger relationships with Oregon's nine federally-recognized tribes. As sovereign nations, tribes are critical partners in our environmental work, and their interests and activities are often closely aligned with our mission. In November, I sent letters to tribal leaders offering to meet with them in their locations to discuss opportunities for strengthening our working relationships, and a number of tribal councils have expressed interest in holding these meetings. In January, Kerri Nelson, Dick Pedersen, Mikell O'Mealy (DEQ's Tribal Liaison) and I were invited to meet with the Siletz Tribal Council, and we had a very good discussion about local issues and ways for us to work together more. In early March, Kerri, Mikell and I will meet with the Coquille Tribal Council, and we will schedule future meetings with leaders of the Burns Paiute Tribe and Grand Ronde Tribes. In addition, we sent surveys last month to Natural Resource and Cultural Resource Coordinators of all nine tribes to seek specific suggestions on ways we might partner more to achieve our shared goals, especially around emerging issues that are important to the tribes. Later this month, DEQ's Executive Management Team will talk about our plans for using the information gained in these surveys, as well as training opportunities for DEQ employees who work with tribes (we used to offer more tribal-relations training than we do now), and other needs.

Petitions for reconsideration of the Willamette Basin TMDL

All petitions requesting reconsideration of the Willamette Basin TMDL were denied and the petitioners were notified by letter the week of January 15th. However, DEQ did acknowledge that there were some unresolved issues regarding the Willamette Basin TMDL Order. We plan to address these issues through specific implementation orders and the appropriate use of compliance schedules and temporary authorizations for use of reserve capacity. We have encouraged the facilities to explore the range of innovative strategies for meeting their waste load allocations which include, but are not limited to: facility heat recovery, alternative disposal, and mitigation and trading of heat units which would be a part of a temperature management plan. We are discussing the substance of the implementation orders with the petitioners. We anticipate that we will have draft orders completed by the end of February and final orders within 60 days of the date of the denial letters. No suits have been filed to date; however, the petitioners have until mid-March to formally file in court.

Bend office fire update

The Bend office fire on December 1 directly affected 20% of the office space, and the entire office was affected by smoke damage and a complete power outage. The next weekend, pipes

froze and burst, flooding another 20% of the building. We closed the office on December 26th. Staff are working out of their homes, DEQ's spill trailer, and various other temporary locations. Staff are doing their best to continue high priority work and provide the level of service that our customers have come to expect. I am proud of them all.

DEQ has located and secured, with Department of Administrative Services (DAS) approval, a temporary space. We will move into that space between February 14th and February 28th. We are also actively seeking a permanent facility for our Bend area operations.

Douglas County takes on administration of onsite program

On February 12, 2007, administration of the onsite septic system program in Douglas County was transferred to the Douglas County Planning Department. One DEQ employee was transferred to the County with the program. Douglas County now joins 22 other counties in administering the program under contract with DEQ. DEQ will retain oversight responsibilities and will continue to develop and implement program policies and provide technical assistance and guidance to Douglas County. The transfer should allow for better customer service to Douglas County property owners who will now be able to apply for septic system permits in the same office they apply for land use planning actions and building permits.

The transfer of the onsite septic system program to Douglas County will leave the DEQ Roseburg office with a receptionist and two employees serving other water quality functions including watershed work and permitting of municipal and industrial sources. Plans call for the eventual closure of the office; there is the potential for sharing the space with other agencies over the next year and a half.

Diesel tugboats project

One Diesel Tugboat generates as much air pollution as well over a hundred heavy duty trucks. The Department has identified resources ($220,000 in federal funds, and $580,000 in state tax credits) that will encourage two tugboat companies to upgrade as many as three boats on the Columbia River. Their plans to replace the three and half decade old engines with new low emitting, fuel efficient engines will cost the companies an additional $3.7 million. However, the new engines will allow faster shipping of more freight with lower fuel costs. Projected emission reductions are estimated to be equivalent to retrofitting over 500 trucks, which would cost approximately $7.3 million.

Oregon fish recovery planning effort

Fish recovery plans are being drafted for Endangered Species Act (ESA) listed and at-risk un-listed fish stocks throughout the State. These efforts, while managed by ODFW, involve all natural resource agencies as well as stakeholders from the public and private sectors. Plans written for stocks not listed under the ESA are called "conservation plans". Plans for ESA listed stocks are referred to as "fish recovery plans." Recently the *Conservation Plan for the Oregon Coastal Coho Evolutionarily Significant Unit* (ESU) was released, reviewed by the public, and is scheduled to be adopted by the Oregon Fish and Wildlife Commission at their March meeting. The plan took two years to complete and outlines the State's management approach to recover coastal coho. The plan includes actions that each natural resource agency will take in this effort. DEQ's programs and their role in fish recovery have been outlined in a document titled *Habitat*

Strategies and Actions for ESA Recovery Plans.

Key DEQ actions in the coastal coho ESU and other regions include continued development and implementation of TMDLs, water quality-based permitting, 401 hydro-electric relicensing, support of restoration activities through 319 grants, and ongoing monitoring of water quality factors. Previous and ongoing monitoring efforts are coordinated through the Oregon Plan Monitoring Team, which meets monthly and includes members from all natural resource agencies.

Recovery plans are in various stages of development for other fish stocks including the Southern Oregon Northern California (SONC) Coho ESU; lower Columbia coho, steelhead, and Chinook; Upper Willamette steelhead and Chinook; and mid-Columbia steelhead. DEQ staff participates on the technical recovery planning teams for each of these areas. The Governor in a January 9, 2007, letter to all natural resource agency Directors, stressed the ongoing need for agencies to support recovery planning efforts and maintain obligations made in these plans. The letter requests that agency boards and commissions support this coho conservation plan. A copy of the letter is attached to this report. A copy of the *Conservation Plan for the Oregon Coastal Coho Evolutionarily Significant Unit* is available electronically at: http://www.oregon-plan.org/OPSW/cohoproject/coho_proj.shtml .

Oregon Low Emission Vehicles (OR-LEV)

As expected, there are a couple of different court cases challenging CA-LEV. The Supreme Court is considering the case of Massachusetts v. EPA which will determine whether EPA must regulate CO2 as a pollutant. A decision is not expected until sometime this summer. In mid-January, a federal judge in California stayed further proceedings in a separate case challenging California's greenhouse gas (GHG) emission requirements for motor vehicles. It is likely that the rules will go into effect unchanged as the litigation continues over the later phases of the program, when GHG reductions are greatest. The only portion of the rule that is potentially at risk is the portion of the rule which reduces GHG emissions from vehicles in Oregon by progressively improving engine efficiency. Regardless of the outcome of these lawsuits, Oregon will still be able to implement the tighter standards that reduce a number of different pollutants (VOC, NOx, and toxics) and incorporate targets for selling a certain percentage of Zero Emission Vehicles within the state.

Ash Grove Cement Company

The EPA recently finalized their regulations for cement manufacturing plants and chose not to require mercury controls for existing cement plants because of the expense. Environmental groups and a number of states are now suing the EPA for allegedly violating the Clean Air Act by not regulating mercury from these plants. Attached is an article from the February 21 edition of the Oregonian. The Department and DOJ are evaluating the merits of the case and whether to join the lawsuit since Oregon's largest mercury emitter is Ash Grove Cement.

Ash Grove's mercury emissions have been estimated to be nearly ten times greater than those from PGE Boardman, but the estimates are based on very limited information. As a result, the Department has requested the company do additional sampling and they have since completed three days of source stack testing and approximately two months of sampling the feedstock which includes the limestone, ore, and other materials used to make the cement. All the data

from these tests unfortunately will not be available until the end of April when the final analysis is complete. In the meantime, the Department is researching what the next steps could be including deposition modeling, monitoring, and an Oregon specific rule to control mercury.

Mercury Rule

It has been brought to our attention that an unintended consequence of the recently adopted Utility Mercury rule will make it difficult for any new state-of-the-art coal gasification plant to be built in Oregon even if its emissions are below Oregon's mercury emissions cap. This is separate from the issue of trading and relates to how the Department distributes mercury credits to new plants within Oregon. The Department plans to solve this issue by distributing credits on a first-come-first-serve basis for new plants. This solution will require a change in rule, and we plan to add it to another rulemaking (permit streamlining phase II) slated to go out for public comment in about a month.

Smoke management

At the April 19-20 EQC meeting there will be an informational item on the Oregon Smoke Management Plan and the process for its approval. The objective of the Smoke Management Plan is to manage forestry burning in the state in order to improve forest health, reduce the threat of wildfire, and eliminate forest slash, while at the same time protecting air quality and public health. If the EQC is interested the Department will arrange a field trip to visit locations near Bend where efforts are being made to practice non-burning alternatives and biomass utilization.

Over the last 3 years the Department has actively participated in the review of the Oregon Smoke Management Plan and will share its comments with the EQC. The Board of Forestry (BoF) is interested in hearing directly from the EQC on the proposed changes to the plan. Below is a timeline of events.

- March 7 BOF meeting
- April 19-20 - EQC Informational Item
- June - BOF meeting to hear EQC views, authorize public hearings
- Summer - public hearings
- Fall/Winter - BOF and EQC approval of final plan.

Meetings held in the Lower Columbia area to hear community concerns

Last October, during the EQC's Town Hall meeting in Astoria, you heard concerns from community members about the potential cumulative air and water quality impacts from a number of industrial facilities that have been proposed in the lower Columbia River area. Four liquid natural gas (LNG) facilities and a coal gasification plant have been proposed on the Oregon side of the river, and a coal gasification plant, an ethanol refinery and other industrial development has been proposed on the Washington side. This spring, DEQ expects to receive air and water permit applications for the proposed Bradwood Landing LNG facility and the Port Westward coal gasification plant on the Oregon side. To hear community concerns and questions about these facilities early-on, and to provide information about DEQ's role in the permitting process, we held two public informational meetings in the lower Columbia area in January - one in Astoria on January 23 and another in Clatskanie on January 30. Over 120 citizens from both sides of the river attended the meetings, as did local officials and representatives from other regulatory agencies. We recorded over 50 questions raised and had a good dialogue about some

of the concerns. In general, community members would like DEQ to do more monitoring of cumulative air and water impacts and consider potential emissions from proposed facilities in our permitting process. Over the next few weeks, we will develop answers to the questions raised and provide that information back to everyone who attended and others who are interested. We also will hold public meetings in these communities again to take comments on the permit applications that we expect to receive this spring. Commissioner Hampton attended the meeting in Clatskanie and can provide her perspective on how it went.

Governor's request for agency strategic briefing memo

The Governor has directed state agencies to provide him with a draft strategic briefing memo by March 30 (to be finalized after comments by June 15), including three elements:

1. Major accomplishments for the 2005-07 biennium;
2. Strategic plan for the 2007-09 biennium; and
3. Long term strategic challenges and recommendations on how best to meet them.

His goals are to prepare himself to speak proudly of state government's accomplishments, assist with strategic policy issues, and to understand our vision and challenges for the future.

We are drafting the memo now, and I will provide you with a copy. I am thinking of including a caveat within the memorandum that we may revise the long term strategic challenges in a few months, so that you can more fully engage in determining our major challenges and strategies to address them. Our earlier discussions on DEQ's strategic plan and your list of emerging issues are a good foundation, but a more in-depth discussion would be helpful. A summer retreat with you could be a good avenue for discussing these important issues, as well as determining what adjustments, if any, we need to make as a result of legislative actions.

Oregonian 2/21/07

Activists, 9 states sue over cement kiln emissions

Air quality | The EPA is accused of failing to control mercury at industrial plants in Oregon and other states

By MICHAEL MILSTEIN
THE OREGONIAN

Environmental groups and nine states are suing the federal government for refusing to control toxic mercury released into the air by existing cement kilns, including one in Eastern Oregon that is among the largest sources of airborne mercury nationwide.

The Environmental Protection Agency decided in December that it would be too expensive for cement companies to refit their plants to cut down on mercury emissions. The lawsuits filed Friday and Tuesday contend that the EPA defaulted on an earlier court decision that ordered the agency to regulate mercury from the plants.

The case has a direct impact on Oregon because a cement plant next to Interstate 84 in Durkee released an estimated 1,534 pounds of mercury into the air in 2005, the last year with numbers available. Emissions from the plant operated by Ash Grove Cement Co. are about 10 times as high as those from Oregon's next largest industrial mercury source — Portland General Electric's coal-fired power plant near Boardman.

Although state regulators are mandating mercury restrictions on the Boardman plant, they are still considering how to address mercury from the cement kiln.

The Oregon Department of Environmental Quality is awaiting results from new testing of the cement kiln's emis-

Please see **MERCURY,** Page D2

Mercury: Lawyer claims agency put politics first

Continued from Page D1

sions conducted in December, said Linda Hayes Gorman, eastern regional manager for air quality at the DEQ.

Mercury collects in the food chain — especially in fish — causing neurological damage and birth defects in people who consume too much contaminated fish. Some forms of the compound fall out of the air quickly, while others can travel thousands of miles around the globe.

The DEQ wants to know more specifically what forms of mercury come from the cement plant.

Mercury emissions from the cement kiln are believed to be unusually high because of mercury levels in rock that is mined nearby to make the cement. The rock is heated during the manufacturing process, which allows mercury to vaporize into the air.

Emissions from the plant are calculated based on limited testing from more than five years ago.

In 2004, the Durkee plant was the third-largest source of airborne mercury in the country, according to estimates the company reported to the EPA. However, its releases declined in 2005.

Nine Eastern and Midwestern states sued the EPA on Tuesday for not controlling cement kilns, following a similar lawsuit filed last week by environmental groups including the Sierra Club, Downwinders at Risk, Desert Citizens Against Pollution, and Montanans Against Toxic Burning.

A judge last year found the EPA "grossly delinquent in making serious efforts to comply" with direction by Congress to limit hazardous toxic compounds in the air. The judge said the EPA was instead devoting time to rule changes, "many of which make existing regulations more congenial to industry."

The EPA said it is reviewing the new lawsuits and would "respond appropriately in due course."

James Pew, an Earthjustice attorney representing the environmental groups, said the EPA appeared to act based more on politics than on the legal mandates of the Clean Air Act.

"They really have nothing to lose by forcing everyone into another round of lawsuits," he said. "From a political appointee's point of view, it's probably preferable to get a tongue-lashing from the court than a tongue-lashing from political supporters."

Michael Milstein: 503-294-7689; michaelmilstein@news.oregonian.com

THEODORE R. KULONGOSKI
Governor

Interoffice Memo

Date: January 11, 2007

To: Agency Heads

From: Chip Terhune
Chief of Staff

Re: Agency Strategic Briefing Memos

The goal with this request for Agency Strategic Briefing Memos is three-fold:

- First, I want to learn about and be able to speak proudly of state government's accomplishments. By describing the major achievements for the 2005-07 biennium you have experienced in your agencies, I will be able to ensure that the Governor's Office trumpet your successes.

- Second, by having knowledge of your strategic plan for the 2007-09 biennium, I will be able to assist you with policy related issues, legislative issues, communications projects, endorsements and be a voice of support from the Governor's Office. This knowledge will allow the Governor's Office to be pro-active on behalf of agencies and the Governor.

- The third element of my goal with this assignment to you is to understand your agency's vision of the future and knowing the challenges you face. It is my intention to help find and support solutions to those challenges to better serve our public.

The specifics of this request that I provided you at the January 9, 2007, Agency Head meeting are listed below with noted timelines. I appreciate your attention towards this assignment.

These "Strategic Briefing Memos" will include the following three elements:

- List and Description of Major Accomplishments for the 2005-07 Biennium.
- Strategic Plan for the 2007-09 Biennium.
- Description of Long Term Strategic Challenges facing the Agency and Recommendations on How Best to Meet those Challenges.

In addition, I have the following expectations for this project:

- No longer than 25 pages total.
- No standard template – each agency can create their own approach.
- If possible, list the agency team members involved in its creation.
- Draft due March 30, 2007, to the Governor's Office. Please submit the draft to the following email address: kitsy.r.griffith@state.or.us.
- Drafts will be reviewed and returned with comments by May 15, 2007.
- Final versions due June 15, 2007, to Governor's Office.

Please do not hesitate to call me with any questions at (503) 373-1565. Thank you very much and I look forward to working with you.

CAT:krg

THEODORE R. KULONGOSKI
Governor

January 9, 2007

Mr. Virgil Moore, Director
Oregon Department of Fish and Wildlife

Mr. Tom Byler, Director
Oregon Watershed Enhancement Board

Mr. Marvin Brown, State Forester
Oregon Department of Forestry

Ms. Katy Coba, Director
Oregon Department of Agriculture

Ms. Louise Solliday, Director
Oregon Department of State Lands

Mr. Phil Ward, Director
Oregon Water Resources Department

Ms. Vicki McConnell, State Geologist
Oregon Department of Geology and Mineral Industries

Ms. Stephanie Hallock, Director
Oregon Department of Environmental Quality

Mr. Tim Wood, Director
Oregon Department of Parks and Recreation

Mr. Lane Shetterly, Director
Oregon Department of Land Conservation and Development

Mr. Matthew Garrett, Director
Oregon Department of Transportation

Natural Resource Agency Directors:

The State of Oregon is nearing completion of a two-year conservation planning effort for coastal coho. The Conservation Plan for the Oregon Coast Coho Evolutionarily Significant Unit has been reviewed by the public and will soon be presented to the Oregon Fish and Wildlife Commission for approval, as part of ODFW's Native Fish Conservation Policy requirements. Because NOAA Fisheries has decided not to list coastal coho as a threatened species, Oregon maintains management jurisdiction of this species and assumes responsibility for ensuring that coastal coho populations are fully recovered. I know this is an objective we all share.

The coastal coho planning effort included considerable agency input and public involvement. Successful implementation of the plan will depend on the commitments made by state natural resource agencies to fulfill statutory authorities and responsibilities for protecting coho habitat and conserving fish. I am confident that state agencies will continue to support the cooperative spirit of the Oregon Plan for Salmon and Watersheds in fulfilling their commitments to the Coast Coho Conservation Plan.

State natural resource agencies and their boards and commissions can provide visible leadership and support and I ask that you familiarize your respective board or commission with the plan and the commitments and obligations made by your agency and work with the chair and members to obtain their full endorsement.

I also want to point out that the governance structure for the Oregon Plan for Salmon and Watersheds has been revised to better implement the Coast Coho Conservation Plan and other future conservation plans. The revised governance structure will strengthen the linkages between my natural resources staff and the various technical and regional teams, will expand roles and responsibilities and will ensure stronger accountability by tasking the core team with overall leadership. Agency participation on these teams will be critical to effective implementation to restore habitat and conserve coastal coho for the benefit of Oregon and Oregonians. I ask you to ensure strong, effective representation in the governance teams.

I am personally counting on your strong leadership as Oregon, in concert with NOAA Fisheries, develops and implements recovery plans for listed salmon and steelhead across the state. Oregon will need to facilitate the collaborative development and implementation of these recovery plans so that Oregonians will willingly assist us in recovering listed populations. Although we face serious challenges in fulfilling our responsibility to recover these economically and culturally important species, I am confident that you and your staff are up to the task.

I appreciate the hard work your agencies do every day to help protect and conserve our valued fish resources and their habitats.

Respectfully,

THEODORE R. KULONGOSKI
Governor

TRK:sk:ab

c: Ms. Marla Rae, Chair, Oregon Fish and Wildlife Commission
Mr. Daniel Heagerty, Co-Chair, Oregon Watershed Enhancement Board
Ms. Jane O'keefe, Co-Chair, Oregon Watershed Enhancement Board,
Mr. Steve Hobbs, Chair, Board of Forestry
Mr. Bernie Faber, Chair, Board of Agriculture
Mr. Dan Thorndike, Chair, Oregon Water Resources Commission
Mr. Donald Haagensen, Chair, Dept. of Geology and Mineral Industries
Ms. Lynn Hampton, Chair, Environmental Quality Commission
Mr. Bill Gregory, Chair, Oregon Parks and Recreation Commission
Mr. John VanLandingham, Chair, Oregon Department of Land Conservation and Development Commission
Mr. Stewart Foster, Chair, Oregon Department of Transportation Commission

State of Oregon

Department of Environmental Quality Memorandum

Date: February 22, 2007

To: Environmental Quality Commission

From: Greg Aldrich, DEQ Legislative Liaison

Subject: Agenda Item L, Information item: Budget and Legislative Update

Representative Jackie Dingfelder will be joining your meeting at 8:30 on Friday, February 23. This will be an opportunity to have a brief dialogue about legislative issues affecting DEQ and the EQC. She is the chair of the House Energy and the Environment Committee, which is where most of the DEQ bills are being heard in the House. Senator Brad Avakian, chair of the Senate Environment and Natural Resources Committee, may also attend is his schedule permits. His committee is hearing most of the DEQ-related bills in the Senate.

The attached memo briefly summarized the bills and other legislative issues that affect DEQ. It is meant to provide an overview of the issues before both committees and may be a resource for your discussion with the legislators. Also, this overview will be the basis of my legislative update presentation which follows at 9:00 a.m.

DEQ Legislative Update
February 20, 2007

Bills Related to the Air Quality Program

Title V - Senate Bill 107 increases fees for major industrial permittees to equal the cost of the permitting program as required by federal law. While an existing statute allows annual adjustments to the fee based on changes in the Consumer Price Index, this bill is needed to align the fee to current costs. About two weeks before the first hearing, industry's "no position" on the proposed 24% fee increase changed to opposition. Industry was interested in concessions on regulations that exceed federal requirements. Negotiations between stakeholders and DEQ continued up until the hearing but no consensus was reached. The bill passed out of the Senate Environment and Natural Resources on a 3 to 2 vote along party lines. DEQ is meeting with members of the Senate in anticipation of the floor vote.

Clean Diesel – House Bill 2172 provides grants, loans and tax credits to retrofit, rebuild or replace older diesel engines and to reduce diesel idling. Incentives will be available for operators of all types of diesel engines, including trucking and construction companies, agricultural operations, municipalities, school districts, marine operators and railroads. This bill has broad support and no known opposition. The first hearing is scheduled for February 26th in the House Energy and Environment Committee. The Governor's Recommended Budget funds this work at $3,000,000 in General Fund and $1,500,000 in Federal Funds.

Heat Smart For Clean Air – The Senate Environment and Natural Resources Committee Bill (SB 338) provides funding to help homeowners replace old uncertified woodstoves with cleaner options and includes a requirement for removal of uncertified wood stoves upon sale of the home. The bill would fund the grant program by redirecting Asbestos and Open Burning penalties from the General Fund to the grant fund. While the cost of the grant program is not included in the Governor's Recommended Budget, the Governor's staff support the bill and hope it can be included in an "add back" if more revenue becomes available. After an initial hearing, DEQ is working on some clarifying amendments with the Hearth Products Association and the Realtors Association. The Associated Oregon Industries strongly opposed the funding mechanism, but we have negotiated a workable solution with them that preserves the funding.

Low Emission Vehicle Registration – House Bill 2172 would require proof of compliance with California emission standard when a new vehicle is registered in Oregon. It will protect Oregon consumers from unknowingly purchasing a noncompliant vehicle and Oregon dealers from unfair competition by violators. This approach is used by nearly all of the states that have adopted California's vehicle emission standards. The bill passed the House Energy and Environment Committee unanimously and passed on the House floor by a vote of 48 to 8. The bill has no fiscal impact, so it will move on to the Senate for consideration.

Agriculture Air Quality – Senate Bill 235 introduced jointly with the Oregon Department of Agriculture (ODA), would allow regulation of agriculture to the extent necessary to comply with the federal Clean Air Act. It would designate ODA as the lead implementing agency, and would authorize ODA to conduct research on best management practices to reduce emissions from agricultural operations. Environmental groups are not satisfied with the bill and plan to push for amendments that go beyond the Clean Air Act. The agriculture industry is equally determined to maintain the requirements of the bill as proposed. We expect a hearing on this bill in early March.

Field Burning – Burning is used to dispose of leftover straw and stubble on fields after grass seed harvesting. Oregon statute limits the number of acres that may be burned in the Willamette Valley, and the Oregon Department of Agriculture implements a smoke management program to avoid impacts on larger population centers. Willamette Valley residents have concerns about smoke impacts, and Representative Holvey is introducing a bill that would eliminate field burning

state-wide. While we have no position on the bill, DEQ, ODA and the Health Division are providing technical support to all parties interested in this legislation.

Bills Related to the Land Quality Program

Land Quality Fee Bills - Four DEQ-LQ bills passed out of the Senate Environment and Natural Resources Committee on February 8. SB 103 helps maintain adequate funding for our hazardous waste work by increasing hazardous waste generator fees. SB 104 maintains adequate funding for our underground storage tank (UST) work by increasing annual UST permit fees. The bill also makes permanent the pilot optional field ticket enforcement procedure. SB 105 maintains adequate funding for our work related to marine spill prevention and response and also expands spill prevention planning requirements to liquefied natural gas (LNG) vessels and facilities. SB 106 provides funding to pay for auditing heating oil tank (HOT) decommissioning and cleanup work by increasing the fee charged for filing HOT contractor reports. The next consideration of these bills will be by the full Senate.

Electronic Waste - Three comprehensive electronic waste management bills have been introduced (HB 2395 by a legislative interim committee, HB 2626 by Representatives Dingfelder and Bruun, and SB 541 by Senator Morse). The House Committee on Energy and the Environment held an informational session on electronic waste on February 7. Committee Chair Dingfelder formed a work group of interested parties including DEQ to reach consensus on bill language using HB 2626 as the vehicle. Representative Cannon is chairing the work group and hopes to finish work by the end of February. The three bills focus on the recycling of personal computers, monitors, lap tops and televisions through a system managed or financed by product manufacturers.

Bottle Bill Changes - There will be at least three bills addressing Oregon's Bottle Bill and by February 23, they should all be filed and printed. Senator Verger has introduced a bill (SB 481) that expands the Bottle Bill to include all beverages other than milk, raises the deposit to 13 cents with a refund of 10 cents, captures the unredeemed deposits and establishes redemption centers as an alternative to returning containers to stores. There will likely be another bill focusing on these same issues and a less comprehensive bill adding water bottles to the Bottle Bill. Senator Avakian, chair of the Senate Environment and Natural Resources Committee, has scheduled hearings for February 20 and 22.

Bills related to the Water Quality Program

Mixing Zone Buoy/Signage Bill – Senate Bill 317 requires water quality permit holders who discharge persistent bioaccumulative toxins into Oregon waters at concentrations that cause waters to fail to meet water quality standards to pay for DEQ installation and maintenance of mixing zone marker systems (buoys, signs, or other markers). We are currently working on a fiscal analysis of the bill to outline what resources we would need to implement the bill.

Underground Injection Control (UIC) – House Bill 2118 is the result of joint stakeholder and DEQ efforts to secure statutory authority to establish fees to keep this program at DEQ. Last year DEQ initiated the process to return program primacy to EPA due to affordability issues. Stakeholders asked the EQC to reconsider this action and as a result, the EQC asked that stakeholders and DEQ work to seek funding support during the 2007 Session. This bill had its first public hearing on February 16 in the House Energy and the Environment Committee and so far, no known opposition has arisen.

State of Oregon

Department of Environmental Quality Memorandum

Date: February 23, 2007

To: Environmental Quality Commission

From: Stephanie Hallock, Director S. Hallock

Subject: Agenda Item N: Petition to Amend Rigid Plastic Container Recycling Rules, OAR 340-090-0320 and 340-090-0360

Why this is Important

Oregon's Rigid Plastic Container Law and rules establish requirements for the reuse and recycling of beverage bottles, tubs, pails, and similar containers sold in Oregon. Their purpose is to stimulate recycling programs for these containers and to support markets for recycled plastics. In January, the Department of Quality (DEQ) received a petition requesting the Environmental Quality Commission (EQC) to change certain rigid plastic container rules. The EQC must either initiate rulemaking as requested or deny the petition no later than April 11, 2007.

Petition

This petition was submitted January 11, 2007, by Paul S. Cosgrove on behalf of eleven clients subject to Oregon's Rigid Plastic Container Law (Petitioners).[1] Petitioners are requesting the EQC to amend Oregon's rigid plastic container recycling rules OAR 340-090-0320(16) and 340-090-0360(1) in two ways:[2]

1. Define "recycled" to include all containers *collected and intended for recycling*, whether they are actually recycled or not.

2. Allow manufacturers that package products in rigid plastic containers (product manufacturers) to use the average recycled content of all of their containers to meet 25% recycled content criteria. Existing rules require each container to achieve 25% recycled content.

A copy of the full petition is provided as Attachment A.

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[1] Petitioners include the Soap & Detergent Association; Adhesive and Sealant Council; American Chemistry Council; Associated Oregon Industries; Consumer Specialty Products Association; Cosmetic, Toiletry and Fragrance Association; Grocery Manufacturers Association/Food Products Association; Northwest Food Processors Association; Oregonians for Food and Shelter; Plastic Shipping Container Institute; and Rigid Plastic Packaging Group.

[2] In a telephone communication on February 10, 2007, Paul Cosgrove, on behalf of Petitioners, advised Larry Edelman, Oregon Department of Justice, that Petitioners are no longer requesting the EQC to amend OAR 340-090-0360(2)(a) regarding corporate averaging for *container* manufacturers. They are requesting corporate averaging only for *product* manufacturers.

Recommendation DEQ recommends that the EQC deny the petition and authorize the DEQ Director to issue an order documenting this decision on the EQC's behalf. DEQ will report to the EQC after the current legislative session with any recommendations for rule changes.

Background Most early recycling programs included newspaper, glass, and cans, but not plastics. In 1991, the Oregon legislature passed the Rigid Plastic Container Law as part of the Oregon Recycling Act (1991 Senate Bill 66) to increase reuse and recycling of rigid plastic containers (e.g., soda bottles, various tubs and pails, jars, and clamshell containers). The law established recycling or reuse requirements for rigid plastic containers sold or offered for sale in Oregon. Any rigid plastic container automatically meets these requirements if the aggregate recycling rate for all rigid plastic containers in Oregon is at least 25%. If the aggregate recycling rate falls below 25%, containers must meet one of the other compliance criteria:

- Be either a type of container (e.g., resin type or shape/design) or a product-associated package (e.g., Brand X detergent or all Brand X products) that is being recycled at a rate of 25% or more; or
- Contain a minimum of 25% recycled content; or
- Be reused or refilled at least five times.

In December 2006, DEQ announced that the rigid plastic container recycling rate for compliance purposes for 2007 will fall below 25%. This is the first year DEQ has determined this rate would be below 25%. This means that beginning next year, product manufacturers must meet one of these other compliance criteria for containers sold in Oregon unless the recycling rate determined for 2008 is above 25%.

Sources for additional information are cited at the end of this report.

Key issues

I. Petitioners' first request

Amend the definition of "recycled in Oregon" as follows:

> OAR 340-090-0320 Definitions
> "(16) "Recycled in Oregon" means generated in Oregon as plastic from post-consumer rigid plastic containers and collected, processed and *[eventually]* **intended to be** manufactured into another product, other than fuel or energy, either in Oregon or outside the state."

Petitioners propose to modify the definition of recycled so that collection and processing of rigid plastic containers, with the intent to recycle, would be considered recycled. In effect, they seek to have plastic containers that are collected for recycling, but disposed of as solid waste, count as recycled in the

calculation of recycling rates for rigid plastic containers.

Department Comments:

There are three primary reasons to deny the petitioners' first request.

1. The Oregon Department of Justice (DOJ) has advised that a court would likely find that the EQC lacks the authority to amend the definition of "recycled in Oregon" as Petitioners request because the definition appears to be inconsistent with both statute and legislative intent. (See DOJ memo of February 9, 2007, Attachment C)

   Oregon solid waste statute does not define "recycled," but defines "recycling" as:

   > Any process by which solid waste materials are transformed into new products in a manner that the original products may lose their identity. ORS 459.005(20)

   Mere source separation and collection of recyclable materials with the intent that they be manufactured into products would not constitute recycling as defined by the statute. Neither would it be consistent with the intent of the 1991 Rigid Plastic Container Law: to reduce the amount of plastic containers disposed of as solid waste, increase reuse or recycling of plastic containers, and increase use of recycled material in plastic containers. In this context, "recycling" clearly implies more than collection and disposal by a recovery facility.

2. The Rigid Plastic Container Law requires the legislature to conduct a hearing on rigid plastic container recycling whenever the aggregate recycling rate for these containers falls below 25% (ORS 459A.657). The hearing is to determine the factors causing the rate to decrease, including the status of collection programs in the state, and the capacity to process rigid plastic containers collected and to reclaim the resin from those containers. DEQ informed the appropriate legislative committees about the rate decrease in January, and a hearing will be conducted soon on this issue. DEQ will report back to the EQC after this legislative session with any recommendations for rule changes. Initiating rulemaking now would be premature.

3. A number of proposals currently being considered by local governments, material recovery facilities (MRFs), numerous other interested parties, and the Oregon legislature could significantly increase plastics recycling, particularly:

   - Improving the sorting efficiency at MRFs to reduce the loss and

disposal of containers
- Adding tubs, pails, and other non-bottle plastics to curbside collection programs
- Changing the Oregon Bottle Bill to include water, juice, or other beverages
- Increasing recovery of 5-gallon buckets and other containers not collected at the curb

On October 4, 2006, DEQ gathered over 60 representatives of product manufacturers, container manufacturers, haulers, MRFs, other businesses, local and regional governments, environmental organizations, and consumers to discuss the decline in plastic container recycling and invite their cooperation in reversing this trend. With a concerted effort, DEQ and these stakeholders together should be able to improve recycling programs enough to raise the recycling rate above 25% for 2008 and beyond.

II. Petitioner second request

Amend the method for calculating recycled content as follows:

OAR 340-090-0360 Recycled Content Compliance
"(1) A rigid plastic container shall have at least 25% recycled content by January 1, 1995 to comply with OAR 340-090-0350(1)(a). **Product manufacturers may achieve compliance with this option based on the average recycled content of their containers. Averaging may be calculated using either data specific to containers sold in Oregon or containers sold nationwide.**

The requested change would allow product manufacturers to use the average recycled content of all of their containers to meet the minimum content criteria. An individual container would not need recycled content as long as the average recycled content in all of the product manufacturer's containers was at least 25%. The existing rule requires that each container have at least 25% recycled content. Petitioners believe this amendment would allow product manufacturers to comply with Oregon's minimum content criteria using the same corporate averaging methods used in California.

Department Comments:

There are three primary reasons to deny the petitioners' second request.

1. DOJ has advised that given the wording of the statute, the EQC may lack authority to allow corporate averaging to achieve minimum content requirements as Petitioners request. (See DOJ memo of February 9, 2007,

~~Attachment C)~~

ORS 459A.655 provides a minimum recycled content option for sale or use of rigid plastic containers in Oregon. To qualify under this compliance option "any rigid plastic container" must contain 25% recycled content.

The statute does not address averaging of content by product manufacturers or container manufacturers. On its face, it does not expressly authorize or preclude the EQC from allowing corporate averaging as Petitioners request. But the plain language requires that each container have the required content.

One might argue, based on the intent of the statute to provide for increased recycled content in containers, that the EQC would have sufficient authority to provide for averaging by rule if it finds that the net result of averaging would likely achieve equal or greater recycled content in plastic containers overall in Oregon. But DOJ believes that argument is subject to considerable doubt given the wording of the statute.

2. The EQC rejected corporate averaging after extensive consideration in its 1994 rulemaking. Rulemaking to readdress the issue now is premature, particularly with a legislative hearing on the rigid plastic container issue occurring in the near future.

   Corporate averaging was considered extensively when the EQC adopted the rigid plastic container rules in 1994. Over the course of several months, three task forces comprehensively examined various concepts, applications, and methods for using corporate averaging, including comparisons with California's requirements. Task force members represented product manufacturers, plastic container manufacturers, plastics processors and recyclers, public interest groups, local government, and the public at large.

   The task forces could not agree on a recommendation to allow corporate averaging, noting strong, opposing views on the issue. National product and container manufactures with multiple product lines desired the flexibility and cost savings of corporate averaging, while small and local manufacturers with few product lines believed that corporate averaging would put them at a competitive disadvantage for market share. The general public, recycling community, and environmental groups generally opposed corporate averaging.

   Not surprisingly, the differing sides also disagreed on whether corporate averaging would encourage the use of recycled content or improve the status quo. The task forces found that Oregon's rigid plastic container

law differed significantly from California's, making simple comparisons difficult. And they lacked sufficient data to determine whether corporate averaging would achieve recycled content in containers at least equal to that achieved without corporate averaging.

In rejecting corporate averaging, the EQC accepted DEQ's determination that no applications of corporate averaging were equitable for both large national and small local manufacturers.

Stakeholder comment

On January 29, 2007, DEQ issued a notice of opportunity to submit comments on the petition through February 12, 2007, and to appear before the EQC at the February 23, 2007, EQC meeting. Attachment D is a summary of the 66 written comments DEQ received on the petition. Commenters represented plastic packagers and product manufacturers (12), refuse and recycling businesses and organizations (4), other businesses (3), Master Recyclers (3), local governments (5), and the general public (39).

EQC action alternative

The petition was submitted under ORS 183.390 and OAR 137-001-0070, which require the EQC to initiate rulemaking or deny the petition within 90 days of submittal (no later than April 11, 2007). OAR 137-001-0070 provides the EQC with the following alternatives for responding to the rulemaking petition:

- Deny the petition, or
- Initiate rulemaking proceedings as proposed in the petition.

DOJ has also advised that the EQC may:

- Grant the petition in part and deny it in part, or
- Deny the petition and direct DEQ to consider other rulemaking approaches.

Attachments

A. Petition to Amend Rules, submitted January 11, 2007 by Paul S. Cosgrove on behalf of 11 industry associations.
B. Copy of DEQ Notice requesting public comment on "Petition for Amendment of Oregon Rules Related to Rigid Plastic Containers," issued January 29, 2007.
C. February 9, 2007, Memorandum from Oregon Department of Justice to DEQ on Rigid Plastic Container Rule Petition.
D. Summary of public comments received by DEQ on Paul S. Cosgrove's January 11, 2007, petition to amend OAR 340-090-0320 and OAR 340-090-0360.

Other sources available upon

A. "Oregon's Rigid Plastic Container Recycling Rate for 2005 and Determination of the Recycling Rate for Compliance Purposes for 2007,"

request ~~December 29, 2006, Peter Spendelow, DEQ.~~

http://www.deq.state.or.us/lq/pubs/docs/sw/RPC0507Report.pdf

B. "Oregon Rigid Plastic Container Law - Recycling Rate Decline," DEQ's presentation to October 4, 2006, forum on rigid plastic containers. http://www.deq.state.or.us/lq/pubs/docs/sw/RPCInfoMeeting2006.pdf
C. EQC staff report: Adoption of Rules to Implement Oregon's Rigid Plastic Container Law, Agenda Item H, October 21, 1994, EQC meeting.
D. DEQ's "Implementation of Oregon's Rigid Plastic Container Law: Report to the 1991 Oregon Legislature," January 1995 (following 1994 rulemaking).
E. DEQ's Rigid Plastic Container web page (including relevant laws and rules): http://www.deq.state.or.us/lq/sw/recovery/rpc.htm.

Approved:

Report Prepared By:	Peter Spendelow (503-229-5253) and Loretta Pickerell (503-229-5808)
Program Administrator:	Al Kiphut

Attachment A

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January 11, 2007

VIA FACSIMILE

Ms. Stephanie Hallock
Director, Department of Environmental Quality
811 SW 5th Avenue
Portland, Oregon 97204

Re: Petition for Rulemaking – Rigid Plastic Container Regulations

Dear Stephanie:

Enclosed please find a Petition to amend two of Oregon's Rigid Plastic Container Rules in Division 90, submitted on behalf of eleven different associations of businesses affected by these rules.

We look forward to working with you, your staff and the Environmental Quality Commission with respect to this Petition.

Very truly yours,

Paul

Paul S. Cosgrove
Of Counsel

cc: Petitioners
Interested Parties

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Petition to Amend Rules
(Rigid Plastic Container Rules)

This petition to amend rules ("Petition") is submitted on behalf of the Soap & Detergent Association, Adhesive and Sealant Council, American Chemistry Council, Associated Oregon Industries, Consumer Specialty Products Association, Cosmetic, Toiletry and Fragrance Association, Grocery Manufacturers Association/Food Products Association, Northwest Food Processors Association, Oregonians for Food and Shelter, Plastic Shipping Container Institute, and Rigid Plastic Packaging Group ("Petitioners"). Petitioners request that the Environmental Quality Commission ("EQC") amend OAR 340-090-0320 and 340-090-0360 as described below and in the attachments to this Petition. This request is made pursuant to the procedures set forth in OAR 137-001-0070, made applicable to EQC and the Department of Environmental Quality ("DEQ") by OAR 340-011-0024. The addresses for Petitioners are listed on Exhibit A, filed herewith. The names of persons known to the Petitioners to be interested in the subject matter of this Petition are listed on Exhibit B, filed herewith. Copies of the proposed amendments to the cited rules are attached as Exhibits C and D, respectively.

1. **Revised Definition of "Recycled in Oregon" - OAR 340-090-0320(16)**

On January 2, 2007, DEQ issued its Rigid Plastic Container Recycling Rate Report ("DEQ Report"), in which it announced that it has determined that the aggregate rigid plastic container recycling rate for compliance purposes for 2007 is below 25%, and that the actual recycling rate for 2005 – the last year for which actual data is available - is 24.3%.

There are several reasons listed in the DEQ Report for the drop in the aggregate recycling rate for rigid plastic containers, one of which DEQ stated as follows: "Although curbside programs have significantly increased the amount of plastic containers being collected, close to 20% of those containers are being mismanaged at Oregon's material recovery facilities and end up being disposed." DEQ Report, page 1. Although these containers are put into the recycling system by Oregon homeowners and businesses, they get lost during the process of the commingled recycling collection, transportation, sorting and processing system in use in most of Oregon's communities. In sum, these containers are being recycled by Oregonians, but they are not counted as being "recycled in Oregon" as that term is currently defined.

The current definition of "recycled in Oregon" requires DEQ to exclude alot of the rigid plastic containers actually being recycled by Oregonians in calculating the aggregate recycling rate. DEQ estimates that approximately 1,700 tons of rigid plastic containers – containers that are being put into curbside bins and other recycling receptacles - are lost in this way. DEQ Report, page 8. This is occurring because recycling has moved from a source separated system, the kind of system in place when Oregon's Rigid Plastic Container Law was enacted, to a commingled system in which recyclable materials, including rigid plastic containers, are mixed together in the

Attachment A

collection and processing stages. The definition of "recycled in Oregon"in OAR 340-090-0320 (16) should be amended so that all the containers being recycled by Oregonians, including those that are "lost" in the collection and processing system, are counted.

The loss of these containers is not a minor issue. The 1700 tons of rigid plastic containers lost in the commingled recycling system is equal to about three percentage points in the aggregate recycling rate. The manufacturers of rigid plastic containers, the manufactures of products packaged in rigid plastic containers, Oregon retailers and Oregon consumers should get credit for all the recycling that actually occurs in Oregon, regardless of whether Oregon's recycling system – managed in part by DEQ – has been changed to a commingled collection system that loses 20% of the material that is put into it.

2. Permitting Recycled Content as an Average of All Containers - OAR 340-090-0360(2)

Since DEQ has determined that the overall rigid plastic container recycling rate has now dropped below 25%, some container and product manufacturers will need to rely on recycled content in order to comply with Oregon's Rigid Plastic Container Law. Only one other state – California – has a similar law. However, in California, where nearly all manufacturers rely on recycled content in order to comply with that law, a manufacturer may calculate the recycled content rate for its containers by comparing all the post-consumer recycled plastic it uses in all of its rigid plastic containers to the total amount of plastic in those containers. In contrast, Oregon's current rules require a different kind of calculation. Although a manufacturer can use an annual average to measure its use of recycled plastic, the average must be separately calculated for each "type" of rigid plastic container. Presumably, a manufacturer must calculate the recycled content level for its bottles separately from its tubs, or maybe for its big bottles separately from its smaller bottles, although this is not clear at this point since the term "same type" is not defined in the statute or rules.

Aggregation and averaging is permitted nearly everywhere else in Oregon's Rigid Plastic Container Law and rules. Recycling rates are calculated in the aggregate, across all Oregon communities, for all types of products, manufactured by all the companies doing business in Oregon. The definition of "recycled content" already contemplates use of a "material balance approach that calculates total recycled material input as a percentage of total material input...." OAR 340-090-0020(15). The rules already allow a manufacturer to calculate recycled content "within a one year period, as determined by the container manufacturer..." OAR 340-090-0360(2)(a). Allowing manufacturers to calculate recycled content as an average of all the manufacturer's rigid plastic containers is consistent with the both the language and objectives of Oregon's Rigid Plastic Container Law and rules.

Reducing the inconsistency in calculation requirements and recordkeeping for manufacturers that have to comply – as most must – with both California's law and

Oregon's law would greatly diminish the cost of compliance for these businesses. Requiring manufacturers to set up complicated Oregon-only record keeping and calculation systems is inappropriate and unjustified, especially since it results in no additional environmental benefit.

Attachment A

Exhibit A

Addresses for Petitioners

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Attachment A

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Exhibit B
Names of Persons (other than Petitioners) Known to be Interested in This Petition

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Attachment A

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Exhibit C

Proposed Amendment to OAR 340-090-0320

Definitions

As used in OAR 340-090-0310 through 430 and in OAR 340-012-0042 unless otherwise specified:

(1) "Container manufacturer" means the producer or generator of a rigid plastic container for a packaged product that is sold or offered for sale in Oregon. A "container manufacturer" is the same as a "package manufacturer" as defined in ORS 459A.650(2).

(2) "Container Manufacturer's Certificate of Compliance" means the certificate provided by the container manufacturer to a product manufacturer which describes the records which the container manufacturer has available to document that a rigid plastic container or containers are in compliance with OAR 340-090-0350(1)(a), (1)(b)(A), or (1)(b)(B).

(3) "Container/product ratio" means the ratio of the weight of a rigid plastic container to the units of product in the container.

(4) "Department" means the Department of Environmental Quality.

(5) "Drug" has the meaning given by the federal Food, Drug, and Cosmetic Act (21 U.S.C. 321) and pertinent regulations, including the following:

(a) Articles recognized in the official *United States Pharmacopoeia*, official *Homeopathic Pharmacopoeia of the United States*, or official *National Formulary*, or any supplement to any of them; and

(b) Articles intended for use in the diagnosis, cure, mitigation, treatment, or prevention of disease in man or other animals; and

(c) Articles (other than food) intended to affect the structure or any function of the body of man or other animals; and

(d) Articles intended for use as a component of any article specified in subsections (a), (b), or (c) of this section.

Drugs include nonprescription or over-the-counter drugs regulated pursuant to the federal Food, Drug and Cosmetic Act (21 U.S.C. 321).

(6) "FDA" means federal Food and Drug Administration.

(7) "FD&C Act" means federal Food, Drug and Cosmetic Act (21 U.S.C. 321).

Attachment A

(8) "Infant formula" has the meaning given by the federal Food, Drug and Cosmetic Act (21 U.S.C. 321(f)), and is food which purports to be for special dietary use solely as food for infants because it simulates human milk or is suitable as a complete or partial substitute for human milk.

(9) "Medical device" means an instrument, apparatus, implement, machine, contrivance, implant, in vitro reagent, or other similar or related article, including a component, part or accessory, which is:

(a) Recognized in the *National Formulary*, *United States Pharmacopoeia*, or any supplement thereto, and intended:

(A) For use in the diagnosis, cure, mitigation, treatment, or prevention of disease in man or other animals; or

(B) To affect the structure or any function of the body of man or other animals which does not achieve its primary intended purpose through chemical action within or on the body of man or other animals; and is

(b) Not dependent upon being metabolized for the achievement of any of its principal intended purposes.

(10) "Medical food" has the meaning given by the federal Food, Drug, and Cosmetic Act (21 U.S.C. 321) and pertinent regulations and includes the following:

(a) A product formulated to be consumed or administered internally under the supervision of a physician; and

(b) A product intended for specific dietary management of a disease or condition for which distinctive nutritional requirements, based on recognized scientific principles, are established by medical evaluation.

For purposes of these rules, medical food is food that is consumed or directly placed in the stomach or intestine through a tube, or other food which is used to manage a disease or medical condition, or food labeled "may be used as the sole source of nutrition" or "may be used as the sole item of the diet". Food for which popular dietary claims are made, such as "low fat" or "low sodium," is not medical food.

(11) "Post-consumer rigid plastic container" means a rigid plastic container that would otherwise be destined for solid waste disposal, having completed its intended end-use and product lifecycle. Rigid plastic containers which held obsolete or unsold products shall be considered post-consumer rigid plastic containers when used as a feedstock for new products other than fuel or energy.

(12) "Product-associated container" means a brand-specific rigid plastic container line, which may have one or more sizes, shapes or designs and which is used in conjunction

with a particular, generic product line. A "product-associated container" is the same as a "product-associated package" as defined in ORS 459A.650(3).

(13) "Product manufacturer" means the producer or generator of a packaged product that is offered for sale in Oregon in a rigid plastic container:

(a) For purposes of these rules "product manufacturer" includes all subsidiaries and affiliates;

(b) Identification of the product manufacturer, for purposes of these rules, shall be determined by the following hierarchy:

(A) When the name of the entity that manufactured the product held by the container is stated on the container label, then that entity shall be considered the product manufacturer;

(B) When the container label does not state the entity that manufactured the product held by the container, but the container label does state the distributor of the container, then the distributor shall be considered the product manufacturer;

(C) When the container label does not state either the entity that manufactured the product held by the container or the distributor of the container, but the container label states the importer of the container, then the importer shall be considered the product manufacturer;

(D) When the container does not have a label or the label does not state the entity that manufactured the product held by the container, or the distributor of the container, or the importer of the container, or the container is filled at the point of sale and no other manufacturer distributor or importer is identified on the label, then the store that sells the product held by the container shall be considered the product manufacturer.

(14) "Product manufacturer's Report of Compliance" means the report provided by a product manufacturer to the Department which documents compliance of a rigid plastic container or containers with requirements of OAR 340-090-0350 or exemption from those requirements as set out in OAR 340-090-0330.

(15) "Recycled content" means that portion of a package's weight that is composed of recycled material, as determined by a material balance approach that calculates total recycled material input as a percentage of total material input in the manufacture of the package.

(16) "Recycled in Oregon" means generated in Oregon as plastic from post-consumer rigid plastic containers and collected, processed and [*eventually*] **intended to be** manufactured into another product, other than fuel or energy, either in Oregon or outside the state.

Exhibit D

Proposed Amendment - OAR 340-090-0360

Recycled Content Compliance

(1) A rigid plastic container shall have at least 25% recycled content by January 1, 1995 to comply with OAR 340-090-0350(1)(a). **Product manufacturers may achieve compliance with this option based on the average recycled content of their containers. Averaging may be calculated using either data specific to containers sold in Oregon or containers sold nationwide.**

(2)(a) A container manufacturer shall determine the recycled content of an individual rigid plastic container as being the same as the calculated recycled content for all *[the same type of]* rigid plastic containers manufactured during the same time period, within a one-year period, as determined by the container manufacturer *[, with the same input ratio of recycled material to total plastic]*;

(b) The recycled content of a rigid plastic container is calculated by dividing the weight of recycled material used in the production of the container by the total weight of plastic material used to produce the container. The result of that calculation is a percentage, which is the recycled content.

Attachment A

(17) "Recycled material" means a material that would otherwise be destined for solid waste disposal, having completed its intended end use or product life cycle. Recycled material does not include materials and by-products generated from, and commonly reused within, an original manufacturing and fabrication process.

(18) "Recycling rate" means the level, stated as a percentage, at which post-consumer rigid plastic containers are recycled in Oregon. The rigid plastic container recycling rate is determined by dividing the weight of plastic from post-consumer rigid plastic containers recycled in Oregon by the combined weight of plastic from both post-consumer rigid plastic containers recycled and those disposed of in Oregon.

(19) "Reduced container" means a rigid plastic container which has a container/product ratio which is at least ten percent less than the container/product ratio for the same product by the same product manufacturer five years earlier, as provided in OAR 340-090-0330(5).

(20) "Replacement product" means a product which is used to refill a rigid plastic container. Replacement product must be the same as or similar to the original product in the container.

(21) "Reused container" means either a refillable or reusable container which is refilled by the product manufacturer or reused by the consumer and is used at least five times with the same or a similar product.

(22) "Rigid plastic bottle" means a container that has a mouth narrower than its base.

Notice: Request for Public Comments

Attachment B

Petition for Amendment of Oregon Rules Related to Rigid Plastic Containers

State of Oregon
Department of Environmental Quality

Land Quality Division
Solid Waste Program
811 SW 6th Avenue
Portland, OR 97204
Phone: (503) 229-5253
Fax: (503) 229-6977
Contact: Peter Spendelow
http://www.oregon.gov/DEQ/

Notice issued: January 29, 2007

Written comments due:
Written comments must be received no later than 5 p.m. on Monday, February 12, 2007.

Opportunity for oral comments:
An opportunity to present oral comments will be provided to members of the public at the February 22-23, 2007 Oregon Environmental Quality Commission (EQC) meeting in Salem, Oregon. The exact time and location have not yet been determined.

Where can I get more information and send comments?
The Department of Environmental Quality (DEQ) will accept written comments via mail, fax or e-mail sent to the contact person listed below. Questions or requests for additional information should be addressed to:

- **Name:** Peter Spendelow
- **Phone:** (503) 229-5253
- **Mailing address:** 811 SW 6th Ave, Portland, OR 97204
- **Fax:** (503) 229-6977
- **E-mail:** spendelow.peter@deq.state.or.us.

How can I review documents?
A full copy of the rule amendment petition submitted by Paul S. Cosgrove on behalf of eleven petitioners for DEQ/EQC review and consideration is available at http://www.deq.state.or.us/news/publicnotices/pn.asp or by contacting Peter Spendelow as listed above.

What are DEQ/EQC's responsibilities?
DEQ is the regulatory agency that helps protect and preserve Oregon's environment. DEQ is responsible for protecting and enhancing Oregon's water and air quality, for cleaning up spills and releases of hazardous materials, and for reducing and ensuring proper management of hazardous and solid wastes. The EQC is a five-member citizen panel appointed by the governor to serve as DEQ's policy and rulemaking board. The EQC adopts rules, establishes policies, issues orders, and judges appeals of fines or other DEQ actions.

Who is petitioning for this rule amendment?
This petition for proposed rule amendment was submitted on January 11, 2007 by Paul S. Cosgrove on behalf of the Soap & Detergent Association; Adhesive and Sealant Council; American Chemistry Council; Associated Oregon Industries; Consumer Specialty Products Association; Cosmetic, Toiletry and Fragrance Association; Grocery Manufacturers Association/Food Products Association; Northwest Food Processors Association; Oregonians for Food and Shelter; Plastic Shipping Container Institute; and Rigid Plastic Packaging Group.

What rule amendments are requested?
Petitioners are requesting the EQC to amend Oregon's recycling and waste reduction rules, Oregon Administrative Rules (OAR) 340-090-0320(16) and 340-090-0360 as follows (deleted text is *[bracketed in italics]* and new text is **underlined and bold**):

OAR 340-090-0320 Definitions
"(16) "Recycled in Oregon" means generated in Oregon as plastic from post-consumer rigid plastic containers and collected, processed and *[eventually]* **intended to be** manufactured into another product, other than fuel or energy, either in Oregon or outside the state."

OAR 340-090-0360 Recycled Content Compliance
"(1) A rigid plastic container shall have at least 25% recycled content by January 1, 1995 to comply with OAR 340-090-0350(1)(a). **Product manufacturers may achieve compliance with this option based on the average recycled content of their containers. Averaging may be calculated using either data specific to containers sold in Oregon or containers sold nationwide.**
(2)(a) A container manufacturer shall determine the recycled content of an individual rigid plastic container as being the same as the calculated recycled content for all *[the same type of]* rigid plastic containers manufactured during the same

time period, within a one-year period, as determined by the container manufacturer*[, with the same input ratio of recycled material to total plastic]*;
(b) The recycled content of a rigid plastic container is calculated by dividing the weight of recycled material used in the production of the container by the total weight of plastic material used to produce the container. The result of that calculation is a percentage, which is the recycled content."

What legal requirements apply to this petition?

OAR 137-001-0070 allows any interested person to "petition an agency to adopt, amend or repeal a rule." OAR 137-001-0070 also identifies the information that must be included in the petition and dictates that "...before denying a petition, the agency must invite public comment upon the rule, including whether options exist for achieving the rule's substantive goals in a way that reduces the negative economic impact on businesses." Finally, OAR 137-001-0070 dictates that the agency "shall, in writing, within 90 days after receipt of the petition, either deny the petition or initiate rulemaking proceeding." OAR 340-011-0046 clarifies that the EQC will generally serve as the decision maker for petitions submitted in accordance with OAR 137-001-0070.

What happens next?

The allowed 90-day window for an EQC decision on the petition expires on April 11, 2007. DEQ will review the petition and prepare a staff report to be presented to the EQC at its February 22-23, 2007 meeting in Salem, Oregon. The staff report will include discussion of potential impacts of the proposed amendments and the DEQ's recommendation to the EQC regarding action on the petition. The DEQ will also provide the EQC a summary and discussion of written comments received during the comment period. The EQC will provide a final opportunity for members of the public to provide oral comments at their February 22-23, 2007 meeting before making a decision on the petition.

The DEQ's staff report and summary of written comments will be made available for public review before the February meeting of the EQC. The EQC agenda for the February meeting and the DEQ's staff report will be posted on the DEQ website when it is available. (http://www.oregon.gov/DEQ/EQC/index.shtml)

Accessibility information

DEQ is committed to accommodating people with disabilities at EQC meetings. Please notify DEQ of any special physical or language accommodations or if you need information in large print, Braille or another format. To make these arrangements, contact DEQ Public Affairs at (503) 229-5696 or toll free in Oregon at (800) 452-4011.

People with hearing impairments may call DEQ's TTY number, (503) 229-6993.

HARDY MYERS
Attorney General

Attachment C.

PETER D. SHEPHERD
Deputy Attorney General

DEPARTMENT OF JUSTICE
GENERAL COUNSEL DIVISION

MEMORANDUM

DATE: February 14, 2007

TO: Loretta Pickerell, DEQ Solid Waste

FROM: Larry H. Edelman, Assistant Attorney General
Natural Resources Section

SUBJECT: Rigid Plastic Container Rule Petition

You asked for advice concerning a petition for EQC rulemaking submitted January 11, 2007 by Paul Cosgrove on behalf of clients subject to Oregon's Rigid Plastic Container Law. Petitioners are requesting the EQC to amend Oregon's recycling and waste reduction rules, Oregon Administrative Rules (OAR) 340-090-0320(16) and 340-090-0360 as follows (deleted text is *[bracketed in italics]* and new text is **underlined and bold**):

OAR 340-090-0320 Definitions
"(16) "Recycled in Oregon" means generated in Oregon as plastic from post-consumer rigid plastic containers and collected, processed and *[eventually]* **intended to be** manufactured into another product, other than fuel or energy, either in Oregon or outside the state."

OAR 340-090-0360 Recycled Content Compliance
"(1) A rigid plastic container shall have at least 25% recycled content by January 1, 1995 to comply with OAR 340-090-0350(1)(a). **Product manufacturers may achieve compliance with this option based on the average recycled content of their containers. Averaging may be calculated using either data specific to containers sold in Oregon or containers sold nationwide.**
(2)(a) A container manufacturer shall determine the recycled content of an individual rigid plastic container as being the same as the calculated recycled content for all *[the same type of]* rigid plastic containers manufactured during the same time period, within a one-year period, as determined by the container manufacturer*[, with the same input ratio of recycled material to total plastic]*;
(b) The recycled content of a rigid plastic container is calculated by dividing the weight of recycled material used in the production of the container by the total weight of plastic material used to produce the container. The result of that calculation is a percentage, which is the recycled content."

1515 SW Fifth Ave, Suite 410, Portland, OR 97201 Telephone: (971) 673-1880 Fax: (971) 673-1886 TTY: (503) 378-5938

You ask whether the EQC has authority to amend the rules as requested. It is important to note at the outset that, while the EQC has broad general rulemaking authority encompassing ORS 495A, under Oregon law an administrative agency may not, by its rules, amend, alter, enlarge or limit the terms of a statute. An agency's interpretation of statutory language through rules must comport with the language of the statute and statutory intent. See, **Cook v. Workers' Compensation Dep't, 306 Ore. 134 (1988)**

Discussion Regarding Amendment of OAR 340-090-0320

ORS 459A.655 establishes compliance options for sale or use of rigid plastic containers in Oregon based on the percentage of rigid plastic containers that are "**recycled in the state....**" (emphasis added)

Existing OAR 340-090-0320, which implements the statutory provision, does not use the term "recycled in the state." Rather, it provides the detailed definition of "recycled in Oregon" referenced in the excerpt from the Petition above. The regulatory definition requires that a material not only be collected, but also processed and manufactured into another product to meet the definition.

Petitioners propose to modify the regulatory definition so that collection and processing of rigid plastic containers, with the intent to recycle, would be considered recycled in Oregon for regulatory purposes.[1] In effect, Petitioners seek to have plastic containers that are collected for recycling but disposed of as solid waste count as recycled in the calculation of recycling rates for rigid plastic containers.[2]

The question is whether the proposed change would be consistent with the statute and the legislative intent, and therefore within the EQC's rulemaking authority.

The statute does not define "recycled". It does, however, define "recycling" as:

> **Any process by which solid waste materials are transformed into new products in a manner that the original products may lose their identity. ORS 459.005(20)**

Mere source separation and collection of recyclable materials with the intent that the materials be manufactured into products would not constitute recycling as defined by the statute. One must acknowledge, however, that a common understanding of the term recycle is to source separate and make available for collection, and that the statute sometimes loosely refers to the term recycle in this context. Thus, it is important to also consider the statutory context and

[1] There is some question whether the amendment as proposed would aid Petitioners. They seek to include in the recycling rate calculations plastic that is source separated and collected, but not actually "processed".
[2] A percentage of plastic containers commingled with other recyclable materials does not get properly sorted at certain recovery facilities as the result of problems in the sorting system. This plastic ends up as a contaminant in sorted paper bales and is ultimately disposed of by paper mills as a residual waste from the pulping process.

Attachment C

legislative intent behind the rigid plastic container law in determining whether the EQC may make the requested amendment.

The rigid plastic container law was part of SB 66, the 1991 Oregon Recycling Act. The objectives of the plastic recycling portion of that law, interpreted by the EQC through the statement of purpose in OAR 340-90-0310, include reduction of the amount of plastic containers disposed of as solid waste, increased reuse or recycling of plastic containers, and increased use of recycled material in plastic containers. Viewed in this context "recycling" clearly implies more than collection and disposal by a recovery facility.

Based on the analysis above, it seems unlikely that a court would find the EQC has authority to amend OAR 340-090-0320 as requested by Petitioners.

Discussion Regarding Amendment of OAR 340-090-0360

ORS 459A provides a minimum recycled content option for sale or use of rigid plastic containers in Oregon. The statute provides that to qualify under this compliance option "any rigid plastic container" must contain 25% recycled content. In the statutory context, the word "any" appears to mean "each" container.

The statute does not address averaging of content by product manufacturers or container manufacturers. On its face, the statute does not expressly authorize or preclude the EQC from allowing corporate averaging as Petitioners request. But the plain language mandates that each container have the required content. It is questionable whether a court would look beyond the plain wording. One might argue, based on the intent of the statute to provide for increased recycled content in containers, that the EQC would have sufficient authority to provide for averaging by rule if it finds that the net result of averaging would likely achieve equal or greater recycled content in plastic containers overall in Oregon. That argument is subject to considerable doubt given the wording of the statute.

Please let me know if you have any further questions.

GENS8261

Summary of Written Comments on Petition to Amend Rigid Plastic Container Recycling Rules (2/16/07)

Favor Redefining Recycled

(13,31,34,35,42,43,44,45,56,57,58,63,66)

- Generally favors redefining recycling (44,45)
- Redefining the term 'recycled' would increase flexibility and the number of available options in the regulated community for meeting state requirements (13)
- The proposed change would more accurately reflect the true level of recycled material being collected curbside (13,42)
- Changing the definition would help the state of Oregon meet its goal of RPC recovery (13)
- Product manufacturers should not be penalized because of processing errors over which they had no control. What we know is that Oregonians prepared 1700 tons of material for recycling which was lost due to systemic processing errors, not the act of product manufacturers. Consequently, product manufacturers ought not to be penalized, especially when that penalty will have no remedial effect on Oregon's recycling infrastructure (31,35,44,56,58,63,66)
- Nearly 20% of plastic containers that were set out to be recycled by Oregon's citizens were lost due to error and processing issues. These containers were rightfully part of the total volume of recycled packages and were properly deposited into the recycling system. These containers should be included in the recycling rate and consumer product manufacturers should not be penalized for error in the plastic container collection system (34)
- Adopting the new definition would give DEQ greater flexibility to focus its resources on issues that would have the greatest impact on achieving the State's waste diversion goals (42)
- Clarifying the definition of 'recycled' to include the post consumer resin (PCR) that is inadvertently lost during processing more accurately reflects the true amount of PCR used within Oregon (43)
- We request that the 1700 tons of misdirected material identified by DEQ be added back into the calculation and that the processing systems be re-examined for ways to capture these wastes (57)
- The proposed amendments are essential for our compliance and do not diminish the law and would better reflect the original goals of the law (57,58)

Oppose Redefining Recycled

(1,3,5,7,8,11,12,14,15,16,17,18,19,20,21,22,24,25,26,28,29,32,33,37,38,39,46,50,51,52,54,55,59,60,61,65)

- Generally opposes redefining recycled (7,8,16,21,22,25,28,38,65)
- Weakens recycling requirements and opens the door to manufacturers of other materials covered by minimum recycled content laws to request similar amendments (1,29)
- Companies need to address challenges to recycling efficiency because they have much more impact compared to an individual (5)
- The lost plastic to the landfill should not be counted as being recycled (14)
- Plastic Manufacturers are asking DEQ to change the wording in the RPC container law so that they do not have to take responsibility for following State law to the detriment of all (15,17,19)
- The purpose of the rule was to create a market for recycled plastic, if we change the definition of the words each time an excess is reached, there is no point in having the rules in the first place (18)
- Re-defining "recycled" to include the plastic lost during recycling is a waste of administrative effort and another way of avoiding the real issue (20)
- Instead of actively working to increase recycling and stave off something that they saw coming for the past five years, manufacturers are relying on a political process to undermine Oregon law (26)
- These laws should be strengthened, not weakened (11,29,37,46,50,51,55)
- There should be no change to the law, manufactures should comply with the laws as written and interpreted by DEQ (3,18,24,52,54,59)
- Manufactures should be working with the state and the haulers to devise better systems for recycling these materials – not looking for ways to make the law easier to get around (12)
- People will not be working toward the same goal if we change definitions to serve one specific group (32)
- Redefining 'recycled' does not change the bottom line. The bottom line is that plastics must be recycled/re-used (33)
- The proposed changes only open a loop hole that the plastic industry could use only for their benefit (39)
- No one disputes that some of those containers slip though the sorting process, but the increased volume of RPCs placed in the commingled system more than makes up for those lost. Plus as the processors become more adept at sorting for those containers, even more RPCs will be recovered (60)
- The proposed change would clearly negate the intent of the law to increase recycling in Oregon, and would effectively make it unenforceable by substituting an immeasurable intention for a provable action (61)

Favor Corporate Averaging
(5,13,31,34,35,42,43,44,45,56,57,58,63,66)

- Generally favors corporate averaging (5,13,43)
- The changes would achieve several goals, including increasing flexibility and options in the regulated community for meeting state requirements, creating a more accurate reflection of the true level of recycled material used in new container production, harmonizing regulation among states with similar RPC regulations thereby reducing the compliance burden on industry, and helping the state of Oregon meet its goal of plastic recycling levels (13,43)
- This change is essential for product manufacturers. Corporate averaging provides product manufacturers with the flexibility to purchase suitable recycled resins as they become available. Both small and large companies benefit equally because it allows small companies to purchase and use more material when it is best priced to their advantage (31,63,66)
- Corporate Averaging is the cornerstone of compliance in California. It is currently the only other state with similar requirements and its law allows for aggregation and averaging across a corporation's product lines that are packaged in RPCs (31,34,56,58,63)
- The closer Oregon's law conforms with California's law, the less will be the burden of compliance on the regulated community without altering the objective of either law (31,34,42,45)
- Recycled resins must not only be available in required quantities, they must also be of a quality suitable for their intended use. For example, resins from motor oil recycled motor oil containers are not suitable for some applications because of contamination. Corporate averaging provides product manufacturers with the flexibility to purchase suitable recycled resins as they become available and to use them efficiently on a company wide basis (35,58)
- Corporate Averaging allows product flexibility to explore the use of resins which may currently have a limited supply of PCR, but which may offer more favorable benefits elsewhere in its lifecycle. Allowing this would ensure the same consumption of PCR and offer greater opportunities to realize other environmental benefits (42)
- The total amount of post-consumer resin (PCR) needed to comply with 25% PCR content requirement is exactly the same under either system (i.e. averaging or per container) (42)
- It is virtually impossible to safely package all of our products in containers with 25% recycled content. We were able to achieve a corporate average by using more than 25% in some of our products, offsetting the inability to use recycled content packaging in a small range of more challenging products. This flexibility allows us to most effectively utilize resins (57)
- The proposed amendments are essential for our compliance and do not diminish the law and would better reflect the original goals of the law (57,58)
- In many cases, containers made of at least 25% PCR are too weak to withstand the rigors of the distribution environment (43)
- Allowing compliance based on the total average of recycled content of all containers provides a level of flexibility that will actually allow for the inclusion of more recycled content being used, when practical, while supporting Oregon goal of achieving 25% recycled content in packaging (44)

Oppose Corporate Averaging
(1,3,4,7,8,10,11,12,14,15,16,17,18,19,21,22,24,25,26,28,32,33,37,39,46,49,50,51,52,54,55,59,60,61,64,65)

- Generally opposes corporate averaging (8,10,14,15,16,17,19,22,25,28,32,65)
- Opposes industry attempt to avoid its obligation to recycle (1,7)
- All plastic packaging should be made of recyclable materials without exception (4)
- We need to bolster the markets for post-consumer recycled materials (11)
- The recycled content law is a good law that helps assure the materials we collect have a market value. Simply recalculating the totals will not accomplish any positive outcomes (21)
- Instead of actively working to increase recycling and stave off something that they saw coming for the past five years, manufacturers are relying on a political process to undermine Oregon law (26)
- There should be no change to the law, manufactures should comply with the laws as written and interpreted by DEQ (3,18,24,33,52,54,59)
- These laws should be strengthened, not weakened (11,12,37,46)
- Manufactures should be working with the state and the haulers to devise better systems for recycling these materials – not looking for ways to make the law easier to get around (12)

- The proposed changes only open a loop hole that the plastic industry could use only for their benefit (39)
- I agree with manufacturers that it is not their responsibility to make up for the loss of meeting a 25% recovery rate, although I think they should have to meet a 25% requirement in all of the containers they produce (49)
- Averaging the content of recycled material and misusing that average as justification for saying a container contains recycled materials is lying (50,51,55)
- The petition claims that Oregon's commingled recycling system loses 20% of the rigid plastic containers set out for recycling, and converts that number into three percentage points that, if included, would bring the rate over the 25% recycling rate requirement. It is unfortunate that the Petition chooses to blame the very system that – without any investment on the part of the petitioners – has kept the rigid plastic container (RPC) rate in the 25% range (60)
- The petition makes no attempt to show that this change would benefit recycling in Oregon, generally develop the market for recycling plastics, or in any way better represent the intent of this law. DEQ should agree to this change only if it is confident that it does not, and will not, degrade the standard currently in rule (61)
- Including the recycled content of containers old nationwide could significantly reduce the recycled content of products manufactured in Oregon (64)

Other Comments Corporate Averaging

- Let them average the recycled content of their products but do not change the rules, unless they are made more stringent (4)
- Averaging the content of all containers a manufacturer sells does have some merit, and if that is a possible negotiation point to allow the results to take place, then it should be done to allow forward progress (20)

Other Comments

Expand Oregon's Bottle Bill

- Generally supports expanding the bottle bill (1, 2)
- There is no connection between the content of beverage containers and recycling incentives (6)
- There should be a deposit on all beverage containers (10,24,27,28,38,48,50,55,62)
- There should be a deposit on all containers, including tubs (9,20)
- Definitely make more items redeemable and more easily sorted, even if that means only letting certain bottles into the Oregon market (14)
- Increase the deposit amount (24,36,38)
- Give grocers some incentive so they don't mind spending the time and space to handle bottle returns (27)
- Modernize Oregon's bottle bill (26,46)
- If plastic bottles are going to be added to the bottle bill, then containers will need to be easier to return. Grocery stores should accept ALL bottles regardless of whether or not they sell a specific variety (47)
- All stores should accept all deposit bottles or better yet take it out of their hands and using a private contractor or having the state manage it (62)

Oppose expansion of the Bottle Bill. Grocers could not handle the increase in materials being turned in for deposit (4)

Abolish the bottle bill. This Tom McCall creation was intended to control littering. This is not longer the primary purpose of recycling (40)

Requested changes are slippery slope to weakening Oregon's recycling laws and should be denied (1,29)

The problems with commingling recyclable materials need to be fixed (1)

The way to get rid of the problem is to eliminate the commingle process (38,50,51)

Manufacturers should use plastic that can be recycled instead non-recyclable "take-out" food containers (2)

Current RPC recycling rate of 25% is too low and should be higher (3,5,6,12)

In favor of a packaging tax for manufacturers on both food and non-food items (9)

Manufacturers must be held responsible for the materials they produce (8)

Somehow we have to inspire the public to recycle more (4)

Government needs to be more efficient, minimize waste, and provide more recycling containers in public spaces (5,22,40)

Stop the endless dig for virgin material (11)

Support Vicki Berger's bottle bill (12,49)

Reusing is even better than recycling, we should make some bottles reusable (14)

Litter along roads and in natural areas has increased substantially, especially water and liquor containers, plastic bags and tubs (9)

The people of Oregon are proud to have a recycling state and do not want to see that changed because it is inconvenient for businesses to comply (17)
We are counting on DEQ to protect us and push the plastics industry's forward by supporting their efforts at creative problem-solving, not erode environmental protection laws (19)
Request companies to help educate the public on recycling/reuse strategies in their local community, especially starting with the youth (22)
Disposal companies should expand curbside recycling to include more kind of plastics (22,27,41)
It is not the manufactures' problem or responsibility to reclaim this material, use the inmates at all the landfills (23)
Lets concentrate on public education and a new improved bottle bill rather than the manufacturers' continually calling the shots (24,29)
Eugene has considered itself in partnership with the Oregon DEQ around issues relating to solid waste and recycling for many years. If DEQ accepts the proposal it will undermine the partnership long established between the state and local governments and strengthen manufacturers confidence in overturning nascent product stewardship efforts (26)
The plastic industry is suggesting that the problem exists within the processing industry that is mis-sorting materials intended for recycling. While they are correct in that assessment, the solution they suggest will not correct the underlying problem that it is extremely difficult to effectively sort plastic containers from paper fibers collected in a commingled stream (26)
DEQ provides little to no direct permitting or oversight of what we characterize as "clean MRF's" (26)
Decrease standard garbage can size (22)
Allocate funds for retooling of recycling plants so that plastic bottles don't get lost. In the meantime, ask the public to keep plastic on the side as they do for glass (27)
Give manufacturers an incentive to use easily recycled plastics so recyclers don't have to deal with seven kinds of plastic (27)
There is a need for more public service announcements and other types of educational campaigns to better educated people on how to properly recycle and protect our environment (27,29,36,47,49)
Some of the industry criticism that our recycling system and machinery is at fault for the amount of recycled material going to the landfill is understandable. I would be happy to resume separating my recycled materials (28)
I do sympathize with the grocers who have to handle the returnables. Perhaps a system establishing recycling centers could be initiated (28)
In contrast to the low value of glass, RPC containers are fetching $120 a ton and HDPE and PET are readily sold at prices between $240 and $400 a ton, transportation included (29)
All types of plastics should be recyclable (30,33)
If the sorting is misguiding enough material that the manufacturers are affected then perhaps the manufacturers should help get the sorting issue corrected (33)
There needs to be better standardization with regard to the type of plastics used. Many of them don't carry numbers anymore (36)
I trust the ingenuity and the shared environmental concerns of the plastics industry to spawn innovation to accommodate existing definition. If a very brief extension/accommodation is needed for the industry to prepare in some way for the changes, this seems more reasonable than lowering the current standards (37)
The recycling of TV's and Computer CRT's should be lawfully mandated (38)
Manufacturers can always sell plastic not created up to Oregon standards somewhere else (39)
We should adopt laws such as the one in Seattle where if there are too many recyclables in the trash, the hauler will not pick it up (40)
To be successful, product prices must be kept competitive in the marketplace. Additional cost of manufacturing – represented by increased packaging content mandates – have to be passed on to consumers which raise the prices for these products (44)
Plastic bottles should be separated from the commingled mix (47)
Efforts should be made to develop more sophisticated methods of separating recycling materials (49)
There is no point in demanding the public go through the trouble of separating our recyclables if it all goes into the same place. I have no problem with separating recyclables if there is a good reason (50, 51,55)
Any number of industry arguments can be made that ANY manufacturing and recover restrictions, or ANY act that requires a business to be accountable to the public for it's actions, negatively impacts their ability to make a profit (52)

Local governments are expanding the types of plastic collected curbside and working hard to educate residents about the programs. Material recovery facilities are adding sorting machinery to address material loss in their processing of recyclables. Industry needs to do its part as well (59)
Despite changes in the rigid plastic recovery rates related to commingle recycling processes, manufacturers must have stewardship for the products they create. Not allowing changes to this law will ensure that manufactures will have to come up with creative solution and develop partnerships (64)
A more positive step in RPC rate discussions would be for all concerned to agree that a comprehensive survey of what is happening to RPCs would be the most useful information to have in a discussion about the RPC rate (60)

List of Commenters and Reference Numbers

Reference Number	Name	Organization	Date on comments
1	Annick Elisabeth Chalier	General Public	2/8/2007
2	Bernie Marlia	General Public	2/8/2007
3	Mike Hemelstrand	General Public	2/8/2007
4	Nan Alvord	General Public	2/8/2007
5	Mika Lepisto	General Public	2/8/2007
6	Casey Bahr	General Public	2/8/2007
7	Christine Sime	General Public	2/8/2007
8	Barry Smith	General Public	2/8/2007
9	Chis Carvalho	General Public	2/8/2007
10	Bruce Bishop	General Public	2/8/2007
11	Jo Rodgers	Bring Recycling	2/8/2007
12	Joshua Berger	Plazm	2/8/2007
13	Karen Arneson	American Honda Motor Co., Inc	2/8/2007
14	Julia Garretson	General Public	2/8/2007
15	Janet Dahlgren	General Public	2/8/2007
16	mbsemail	General Public	2/8/2007
17	Brady Cox	Remax Integrity	2/8/2007
18	Martin Dreisbach	General Public	2/8/2007
19	Jim and Linda Frazier	General Public	2/8/2007
20	Karsten Zuendel	General Public	2/8/2007
21	Paul Kuck	Lane County Master Recycler	2/9/2007
22	Laura King	General Public	2/9/2007
23	Steve Mackey	General Public	2/9/2007
24	Rick Craycraft	General Public	2/9/2007
25	Lisa Cassidy	General Public	2/9/2007
26	Nancy Young	City of Eugene	2/9/2007
27	Diane Larson	General Public	2/9/2007
28	Bill Murlin	General Public	2/9/2007
29	Julie Daniel	Bring Recycling	2/9/2007
30	Carol	General Public	2/9/2007
31	Dennis Griesing	The Soap and Detergent Association	2/9/2007
32	Sarah Grimm	Lane County	2/9/2007
33	Marissa Houlberg	General Public	2/9/2007
34	Andy Hackman	The Consumer Specialty Products Association	2/9/2007
35	Gerri Walsh	Ball Corporation	2/9/2007
36	Barbara Rogers	General Public	2/9/2007
37	Dianna Larsen	Master Recycler	2/9/2007

List of Commenters and Reference Numbers			
Reference Number	**Name**	**Organization**	**Date on comments**
38	Christopher Horton	Master Recycler, Next Step Recycling	2/9/2007
39	Rob Farquhar	Master Recycler	2/9/2007
40	Richard Vetter	General Public	2/10/2007
41	Ruth Pursell	General Public	2/10/2007
42	Jack McAneny	Procter and Gamble	2/12/2007
43	Susan Nestegard	Ecolab	2/9/2007
44	Bryan Harrison	Aliticor	2/8/2007
45	Thomas P Langan	Unilever	2/12/2007
46	Chris McCullough	Douglas County	2/12/2007
47	Noreen Zupan	General Public	2/10/2007
48	Karmel Murphy	General Public	2/10/2007
49	Julie Wyckoff-Byers	General Public	2/10/2007
50	Jessica Sweeney	General Public	2/10/2007
51	Nanci Williams	General Public	2/10/2007
52	Mary Neland	General Public	2/11/2007
53	Julie Bertram	General Public	2/11/2007
54	Jennifer Knight	General Public	2/11/2007
55	Michelle Crimmins	General Public	2/12/2007
56	Tim Shestek	American Chemistry Council	2/12/2007
57	Jan Wengler	Reckitt Benckiser	2/12/2007
58	Caroline Silveriera	Grocery Manu. Assoc./Food Products Assoc.	2/12/2007
59	Susan Terry	Clackamas County	2/12/2007
60	Kristen Mitchell	Oregon Refuse and Recycling Association	2/12/2007
61	Rob Guttridge	Clark County	2/12/2007
62	Gayle and Jim Lee	General Public	2/12/2007
63	Pete Dinger	Rigid Plastic Packaging Group	2/9/2007
64	Nina Whitney	General Public	2/9/2007
65	Joshua Welch	General Public	2/9/2007
66	Cynthia A. Demers	Dial	2/12/2007

Agenda Item N

SCJohnson
A FAMILY COMPANY

F. H. Brewer
Director
Worldwide Government Relations

S. C. Johnson & Son, Inc.
1525 Howe Street
Racine, WI 53403-2236

February 20, 2007

Mr. Peter Spendelow
State of Oregon
Department of Environmental Quality
811 SW 6th Avenue
Portland OR 97204

Dear Mr. Spendelow:

S.C. Johnson & Son, Inc. (SCJ) is pleased to provide these comments in support of the petition for amendment of Oregon rules related to Rigid Plastic Containers that was submitted on January 11, 2007, by Paul S. Cosgrove on behalf of the Soap and Detergent Association, of which we are a member, and several other interested parties.

SCJ is a global manufacturer of household products. Our brands which are marketed in Oregon in rigid plastic containers include Windex® glass cleaners, fantastik® and Scrubbing Bubbles® kitchen and bath cleaners, Shout® laundry pre-wash stain remover, and OFF!® insect repellants.

With the prospect of compliance with Oregon's Rigid Plastic Container (RPC) law being required of individual product manufacturers beginning in 2008, we believe the proposed amendments are essential for compliance. More importantly, the amendments reflect our basic goals for any new regulatory action in this area, namely, that proposed new rules: (1) provide a reasonable compliance timeframe with flexible compliance options; (2) provide reasonable exemptions, such as for RPCs that contain products regulated under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA); (3) not unduly restrict our ability to provide Oregon consumers with affordable, quality, and efficacious products that add value to their lives; and (4) implement requirements that are harmonized with other states, so as to minimize the compliance burden on product manufacturers.

The proposed amendment to the definition of "Recycled in Oregon" is needed to address an issue raised by the Department of Environmental Quality (DEQ) relating to the 1,700 tons of misdirected material that was identified but not counted under the current rule. By its own admission, DEQ acknowledges that nearly 20 percent of plastic containers being collected are mismanaged at Oregon's material recovery facilities and end up being disposed. We support the petition's contention that product manufacturers should not be penalized for lapses in the recycling stream that they could neither control nor prevent. As we understand it, the 1,700 tons of containers lost in the commingled recycling system would equal approximately three percentage points in the aggregate recycling rate—enough to push the state's recycling rate over the 25% threshold.

The second proposed amendment, related to 'corporate averaging,' is essential for product manufacturers. Corporate averaging provides product manufacturers with the flexibility to purchase suitable resins as they become available and to use them efficiently on a company-wide basis. The net effect is the same as requiring all containers covered by the law to have 25% when looked at from a company-wide basis. For example, we are able to include as much as a 50% recycled content in standard-sized bottles of Windex® multi-surface and glass cleaners, but it is almost prohibitively expensive to specify recycled content in certain low-volume SKUs.

As you may know, corporate averaging is a key compliance option in California, which permits both container manufacturers and companies that sell products in rigid plastic containers to meet recycled content by calculating the percentage across their entire product line, not solely on a product-by-product basis. Both small and large companies benefit equally from this mechanism because it allows smaller companies to purchase and use more material when it is best priced to their advantage. Harmonizing Oregon's rules with California's also would greatly decrease compliance costs for businesses by reducing inconsistencies in calculation requirements and recordkeeping for manufacturers that have to comply with both states' rules.

For these reasons, we consider corporate averaging a key provision to include in any final recycled packaging legislation or regulation.

In closing, SCJ supports the petition and urges the DEQ to adopt necessary changes to its regulations.

Sincerely,

FHB/cpp

ORIGINAL

ENVIRONMENTAL QUALITY COMMISSION MEETING

MEETING
FEBRUARY 22ND AND 23RD, 2007

- - -

TRANSCRIBED BY AIMEE CLEM ON MARCH 13, 2007

ENVIRONMENTAL QUALITY COMMISSION MEETING

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- - -

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LYNN HAMPTON: -- Meeting. And has everybody had a chance to review those and the materials you received?

UNIDENTIFIED SPEAKER: I did.

LYNN HAMPTON: Commissioner Uherbelau?

JUDY UHERBELAU: Yes, I have one question -- thank you -- on Page 3. If you look in the second paragraph five lines down it doesn't make sense. Either that, or my brain isn't tracking where it says, "Require the ALJ to respond by denying the request for clarification or by responding." We've already said the respond, why are we adding the last three words?

LYNN HAMPTON: I think what it was intended to mean, and it isn't worded clearly, is require the ALJ to either deny their request or respond to their request.

JUDY UHERBELAU: Okay, so we need to clarify that.

LYNN HAMPTON: Sure.

JUDY UHERBELAU: And then I think we had another -- okay. That's it.

LYNN HAMPTON: Okay. So with wording as follows: "Respond to or deny the request

for clarification period," be acceptable? Does that sound right, Judy?

JUDY UHERBELAU: It's what they want to (inaudible), yes.

LYNN HAMPTON: All right. Do -- are the other commissioners all right with that change? Okay, any other noted changes? Anybody want to move to accept the minutes as modified?

UNIDENTIFIED SPEAKER: I so move.

UNIDENTIFIED SPEAKER: Second.

LYNN HAMPTON: Okay, it's been moved and seconded. Those who approve say, "I".

GROUP IN UNISON: I.

LYNN HAMPTON: I. Okay, onto Item B, Umatilla Chemical Demilitarization Program status update. And I see we have Colonel and Don with us. Good morning. Thank you for coming.

JONIE HAMMOND: Good morning, (inaudible) Hampton, commissioners. I'm Jonie Hammond, Eastern Region Administrator. With me is Rich Duvall, Umatilla Administrator, Lieutenant Colonel Rettan [phonetic], and project manager Don Barkley. Rich will start off by giving the update and then if you have questions we're all available for questions and answers.

RICH DUVALL: Good morning, madam chairman, commissioners. As you can note on the first item on your update, we've sort of reached the halfway point, which is kind of encouraging cuz a lot of us thought we'd never get here. And things are going fairly well. The second item on there, the Secondary Waste Trial Burn, was completed at the end of January. What this enables them to do is increase from 50 pounds to 300 pounds every tray of secondary waste that goes through the metal parts furnace. And in their shake down and trial burn process they came very close to running out of secondary waste before they got the trial burn completed. So it's anticipated that by the end of the GB campaign this summer all of the GB generated secondary waste should be gone. And the third item on the agenda -- I just wanted to point out the Facility Safety Award. Washington Demilitarization Company was officially awarded the -- OSEA's VPP star status, which is very prestigious for a company out of some 4 million companies in the US, only 1600 have achieved this level of safety performance. And I wish Doug Hammerick was here so we could pat him on the back, cuz they've done a very good job.

UNIDENTIFIED SPEAKER: Can you tell

us just in a very brief way what it takes to get to be one of the 1600? I mean, does that mean like zero lost hours in so many months or years or what? Just very briefly, kind of what you have to do to --

DON BARKLEY: Yes, very briefly, Don Barkley, (inaudible) project manager. It's basically the result of implementing a management system, a safety management system and not necessarily a statistics based approach, because those are generally lagging indicators. So we institute a management system and it is an OSEA defined process that, I guess, in its basis terms promotes a system of leadership involvement and an employee-based or led process where from top down and bottom up everyone is working to a common set of goals to improve the safety performance, both as an organization and as individuals. And OSEA actually has a set of metrics that they come in and evaluate us on. I think it was about a year ago they came in with their first kind of screening, or maybe it was two years ago -- I've lost track of time. Was it due? So probably early in Colonel's 10 year a couple of years ago. They come in, do an assessment, leave us a list of action items to address to elevate our performance and then they came back last summer for a final

evaluation, and based on our commitment to that management process, which if followed, elevates, I guess, confidence in OSEA that we can operate more on our own, more self directed without oversaught and (inaudible) to go.

UNIDENTIFIED SPEAKER: Thank you.

RICH DUVALL: Okay, next thing I wanted to present to the commission is on Page 2 of your update, the first bullet, is a permit modification we worked on for a minimum temperature limit change in the deactivation furnace. I kind of wanted to show you why we were doing that.

LYNN HAMPTON: Commissioner Uherbelau is noting you need to speak more directly into the microphone.

RICK DUVALL: Thank you. I'll do my best. This is a view of what the de- activation furnace is supposed to look like. It's relatively clean. This is the burner end of the de- activation furnace. And what we ran into on projectile processing because the temperature limits were set during rockets, the furnace seemed to be a little bit hot and it was melting the aluminum casings on the bursters from the projectiles. And this was presenting some damage problems to the furnace and is

also accumulating enough that the furnace drive wouldn't turn it like it was supposed to. We managed to limp through the 8-inch campaign just by shutting the furnace down regularly and sending somebody inside to clean out the accumulated aluminum. It came out in some pretty good sized sheets. This is the heated discharge conveyor. A lot of the melted aluminum ended going out onto that conveyor and chipping it up. It also caused several delays, because it had to be shut down so somebody could go into this area and chip off the aluminum. Now this was a hot area so when they had to shut it down and send somebody in, they either to be in DPE suits or they had to de-con the area to get people in to clean it up. And all the bright shiny stuff on there is the melted aluminum, but isn't supposed to be where you see it. This is the ash bin for the de-activation furnace. What you can see there are a few of the burster casings, mostly on the nose coned lifting lugs and a lot of little pieces of melted aluminum. And in this view you don't see anything other than the lifting lugs, because there's nothing coming through expect the steal pieces. And what we have agreed with the army to try is to drop the minimum temperature in the furnace by 50 degrees, based on the trial burns that

were done at other facilities, Tuella [phonetic] and Aniston, to see if that wouldn't correct this problem. And we did that starting with the 155 projectiles at the end of January, and it seems to have benefited. We're not quite ready to declare victory yet, because we haven't really re-amped up to full processing speed, but things are looking up. And there haven't been any melted aluminum related shut downs so far in the 155 campaign. And we---

LYNN HAMPTON: Are those results that you picture the result of dropping the set point by the 50 degrees Fahrenheit, or was that a greater drop?

RICK DUVALL: What really resulted from this -- when we dropped the minimum temperature at the feed end of the furnace by 50 degrees it enabled a temperature drop of close to 300 on the burner end, which is where most of the melting problem was going on. The temperature at the burning end of the furnace was getting as high as 1500 degrees, which is about 300 degrees above the melting point of aluminum. And with this change it's dropped into the 1250 to 1300 range. And it seems that the aluminum pieces are making it through the furnace. There's some melting still going on in the conveyor,

but not as much and not enough to impede the progress.

UNIDENTIFIED SPEAKER: What temperature -- do you know what temperature you need to adequate burn off any of the chemicals that are still on there? Could you be down another 50 and eliminate the last part of your melting?

RICK DUVALL: Possibly, yes. We don't know. We've -- we really don't understand -- well, I shouldn't say, "don't understand." We're not sure that dropping the temperature would have any other impacts, other than preventing the melting aluminum. With the regulations the way they are it's difficult just to drop the temperature without fronting some type of trial burn or having something we can base the decision on.

LYNN HAMPTON: So that's why you authorized the temporary authorization?

RICK DUVALL: Yes, madam chairman, that's why.

LYNN HAMPTON: So what's the next step in this process then if you decide that this is a justifying step?

RICK DUVALL: If it's a justified step we will continue processing of the class 3 permit mod --

actually make it permanent in the permit that they can operate the de-activation furnace for projectiles at 950 rather than 1020.

LYNN HAMPTON: Is there any other data you still need to get before you are ready to say yes to this?

RICK DUVALL: Just to make sure that we've dropped low enough. Okay, and the last thing on my agenda was the next permit one down on the Page 2, talking about liability insurance requirements. The existing permit requires the Washington Demilitarization Company to maintain $375 million of liability insurance. And they've asked to be -- to have their liability requirements change back to what the rules requires, which is much lower. I believe it's $2 million and $4 million instead of $375 million. These permit mods currently out on public comment and at the end of March when the comment period closes we may have to make some sort of decision on what to do.

LYNN HAMPTON: Since that provision was added to the permit by the EQC does the modification need to be done by us?

RICK DUVALL: Well, madam chairman, legally speaking, probably not, but if there is any

public comment we may want to have you guys look at it, rather than have us try to force it.

LYNN HAMPTON: Commissioner Uherbelau?

COMMISSIONER UHERBELAU: Chair, I noticed in the report that one of the conditions was to -- as part of the process to add Raytheon. What do they do? What is their role in this?

RICK DUVALL: Well, commissioner Uherbelau, Raytheon was a predecessor for the Washington Demilitarization Company. They're actually the same entity that Washington Group bought from Raytheon.

COMMISSIONER UHERBELAU: Okay. Was neither Raytheon nor Washington, whatever it is now, on the liability before because they're saying, "add them"? Were they not named on the policy?

RICK DUVALL: The original policy that was done was for Raytheon.

COMMISSIONER UHERBELAU: Okay. I'm looking at the last sentence where it says, "The condition was added to the permit by EQC as part of the process to add Raytheon (inaudible) DC."

RICK DUVALL: Oh, yes, commissioner Uherbelau. The original permit was issued only to

the Army and when the Army hired Raytheon as their contract, or the permit was modified to include them.

JUDY UHERBELAU: And it was just modified recently?

RICK DUVALL: This was back in '98 when that was modified.

JUDY UHERBELAU: '98?

LYNN HAMPTON: I think what they were doing was adding the WAC as a co- operator.

JUDY UHERBELAU: Okay. No, I know that. Yeah, I was just trying to find out when.

RICK DUVALL: Yeah, '98. Okay, and lastly, the only thing I want to point out is we are --

LYNN HAMPTON: Rich, I am sorry, but I have one last question on that last item so I'll interrupt you. What kind of process will you be going through in analyzing the diminution, if there's been any, which I presume there has been, in the overall risk and how that's going to relate to the amount of insurance that would be appropriate to maintain at this point, as opposed to the insurance that was required back in '98?

RICH DUVALL: Well, madam chairman, what we'll have to do is go back to the 1998 analysis and

see what risks were addressed to justify the $375 million requirement. Try to figure out which ones are still here and which ones are gone, and see if there is a justification for dropping the number as low as they've requested.

LYNN HAMPTON: And keeping in mind what unknowns there were, at least as far as Oregon was concerned at the beginning of the process and try to maybe nail down what of -- that was unknown has now become known. Anyway --

RICH DUVALL: Yes, there were a lot of unknowns at that time.

LYNN HAMPTON: There were a lot of unknowns at that point.

BILL BLOSSER: And also -- I presume you would also look at what the cost implications are. I don't know -- if the risk is actually very low the $375 million may not be costing them very much, because the insurance companies would recognize it. I don't know. Or maybe it's costing them an arm and a leg and it would save the Army and us, presumably, money if they didn't have to pay it.

RICH DUVALL: Yes, commissioner Blosser, the expense is steep. It runs around $400,000 a year to maintain that insurance level.

LYNN HAMPTON: Great. These will be issues that we --

BILL BLOSSER: If they didn't have to pay it could it just be paid to DEQ as --

UNIDENTIFIED SPEAKER: As a body right down the road we could maybe ask that question.

LYNN HAMPTON: Sorry to interrupt you, Rich.

RICH DUVALL: And the last thing I wanted to point out is we are in the 155 artillery round campaign, which is the last one for the GB Saran [phonetic], and it's anticipated that this campaign will end by June 30th, which will mark the end of the Saran campaign and there will be no more munitions containing Saran left.

LYNN HAMPTON: That's wonderful.

RICH DUVALL: Just something to look forward to.

LYNN HAMPTON: Absolutely. It may be in here and I may have missed it. Remind me of the proportion then of what we will have completed as to what's left, the various other kinds of agent that are left there to do?

RICH DUVALL: Okay, madam chairman, after the Saran is done we'll still have VX and

mustard. The VX campaign has bulk spray tanks, rockets, projectiles in mines, but fairly low numbers of each of those. And to expect that the VX campaign will take from six to nine months. The bulk of the mass left is in mustard.

LYNN HAMPTON: And those are in the big --

RICH DUVALL: Those are in the ton containers.

LYNN HAMPTON: -- Okay. And how about permit renewal? Who's going to be talking about that?

RICH DUVALL: Oh, excuse me. I knew there was something else I needed to talk about. The permit did officially expire on the 12th of February. As noted in here, our permit writer that has been with us for a long time left just before Christmas and we're currently without a permit writer. The rest of my staff are doing Yeoman [phonetic] work, keeping up on the modifications. But until we get a new permit writer hired we probably won't make much progress on the permit renewal. Fortunately the recruitment for the permit writer was successful and we have some very good candidates that we hope to be interviewing the first or second week of March. And

when we get somebody on that will be their sole priority, is to get the permit renewal put together and out on public comment.

LYNN HAMPTON: And the permit continues by operation of law until you renew then?

RICH DUVALL: Yes, ma'am.

LYNN HAMPTON: Because you made your determination of completeness at the renewal application prior to a certain date?

RICH DUVALL: Yes.

LYNN HAMPTON: Okay, commissioner Uherbelau?

JUDY UHERBELAU: That was the question is if it expired in February, what are they operating under? And you just said that they are able to continue operating under the rule of law, and where do you get that?

LYNN HAMPTON: Well, if you look in this last paragraph.

JUDY UHERBELAU: Yes.

LYNN HAMPTON: And we had a discussion about it. I'm not sure if you were here, Judy. What they -- what the facility -- makes an application for a renewal of the permit, then there's a determination by the department whether that

application was complete, and they made that determination. So my understanding is that the law says that if that application for renewal is determined to be complete then -- even though the original permit expires, you continue -- they're allowed to continue to operate under its terms and conditions.

JUDY UHERBELAU: So it's just kind of clean up work that needs to be done?

LYNN HAMPTON: Well, and they want to encourage the facilities, I imagine, to make their applications in a timely manner but allow the government the opportunity to review it completely. So we're in that sort of medium state right now.

STEPHANIE HALLOCK: Madam Chair, just one thing that you might find interesting, that law applies to all of our permits. And when you've heard people come before you on staff and talk about permit back logs, etcetera, because of lack of resources -- what this does is protect, if you will, the company so that as long as they've made timely application, if we're unable to get to their permit for whatever reason, either we've lost a staff person or we don't have the resources, they are allowed to continue to operate. They don't have to shut down

just because we haven't been able to get to their permit.

LYNN HAMPTON: But (inaudible) of the terms and conditions (inaudible)?

STEPHANIE HALLOCK: Absolutely not. They're operating under the existing -- and that's why we want -- like in the water program, for example, where we've been on this concerted effort to eliminate back logs and get permits current, because you obviously want to make sure the conditions that are in the permits are current and up to date.

JUDY UHERBELAU: Stephanie, is that continuation -- is that in the RS's --

STEPHANIE HALLOCK: It's in the ORS 468, isn't it, Larry?

LARRY: Well, it actually -- interestingly enough, it applies under -- probably under both state and federal law. Almost all of the major federal permitting programs have expressed provisions relating to that. Those were developed out of the federal APA, Federal Administrative Procedures Act. And then we have similar provisions in state law that apply to our state permits. So it pretty much applies across the board.

LYNN HAMPTON: Okay. Did you have

anything else you wanted to (inaudible)?

RICH DUVALL: No, that will do it.

LYNN HAMPTON: All right, anybody else? Anything to report on (inaudible)?

UNIDENTIFIED SPEAKER: Sure. I can't resist.

LYNN HAMPTON: Good.

LIEUTENANT COLONEL RETTIN: Lieutenant Colonel Rettin. I am 18 months through my command and only have six months remaining. I will be leaving this summer.

LYNN HAMPTON: Oh.

LIEUTENANT COLONEL RETTIN: And the thing I mostly focus is is on the deliveries, cuz that's mainly what I'm responsible for. And my 10 year safely delivered over 3500 of the (inaudible) onsite containers. And all I'm worried about now are the 550 left.

LYNN HAMPTON: Congratulations, Lieutenant Colonel Rettin. And thank you for coming. You've been at a lot of meetings where you haven't been speaking and you've shown up faithfully. I appreciate that. Anything else? Okay, thank you very much. Action Item C; we're a little bit ahead of schedule. Are we waiting for anyone? We'll have

Jonie and Larry Knudsen, sub delegation of signature authority for sewer system adequacy in sanitary districts.

LARRY KNUDSEN: Thank you. I thought I'd move up here so that I'm not looking at you sideways. Shall I go ahead?

LYNN HAMPTON: Go ahead, please.

LARRY KNUDSEN: Thank you. This is a recommendation to the EQC to delegate to the department the responsibility to review and approve certain sewage system plans. The review requirement arises under a statute that allows the Department of Human Services, DHS, to order the creation of new sanitary districts or to annex -- force the annexation of areas into existing sanitary districts in order to deal with water supply or sewage or some solid waste problems. Today we're only concerned about the sewage side of things. Under those statutes there's a role for the Environmental Quality Commission to review some of those plans. The process specifically is that the county or the local heath district petitions DHS to do the annexation or create the territory, the new sanitary district, and the county or the local health department also provides plans that they feel are needed to alleviate the health hazard. The statute

then provides for DHS to send those plans to the Environmental Quality Commission for review and the Environmental Quality Commission would initially determine whether or not those plans are adequate to either address the situation or to alleviate the problem. There's also a provision in the statute that allows the residents in the area that would be annexed or be put into a new sanitary district to propose a new alternative plan. And if they do that, then the statute provides for those plans to come to the commission to decide whether or not the alternative plan is preferable to the initially proposed plan. It's the department's view that it's probably most effective to have that kind of review function performed by the department rather than the commission. I'd advise that it's certainly within the commission's authority to sub delegate that function to the department. I am certain that the reason that it reads that it did is because back in 1973 when these statutes were adopted it was fairly common just to say that the commission shall do these things and allow the commission then to decide how it wanted to do these functions. The question comes up because of a particular petition that's been filed in Hood River County to annex certain areas near the Hood River

Airport into an existing sanitary district, that's called the Witten Master Corners area. It's an area that's had a long time problem with surfacing sewage from inadequate septic tank systems. That's really about the only thing I have to say, expect to say there is another similar statute that provides for annexation into cities for health hazard reasons. That also has a role for the commission but it's somewhat different and we're, at this point, only asking to address the issue under the statutes involving the health hazard annexation to a sanitary district. I'm happy to answer any questions and Jonie is here if you have particular questions about the Witten Master Corners.

LYNN HAMPTON: Commissioners, questions? Judy -- Commissioner Uherbelau?

JUDY UHERBELAU: Yeah, thank you. Larry, if the statute -- and I've not read the statute -- if the statute says that the commission shall do so and so -- shall approve, shall review, whatever, where does the authority come to delegate this to somebody else?

LARRY KNUDSEN: The Oregon Case law says that there's no general prohibition on sub delegation by order or commission to the department.

In some cases that may arise either expressly or it may arise by implication. Sometimes you'll have these elaborate situations where it will say, "The commissions gonna do this and the department is gonna do this and somebody else is gonna do that." And if you have a situation like that sometimes the courts will imply that there was a -- or they will say that statute implies that there is not a right to delegate. But other than that, the general view is that you can sub-delegate and, in fact, you do do a number of sub-delegations, probably dozens already, for an example -- excuse me. For example, the tax credits, the chippers, that function has been delegated to the department and no longer done by the commission, but there are many more examples of that taking place. It's really just a question of whether or not it's something you want to do and something you think is effective and efficient.

LYNN HAMPTON: Follow up?

JUDY UHERBELAU: You know, I'm curious. Haven't we been doing this, because this is a very technical matter? And if they come and dump it on the commission we read it and think, "Huh." Isn't the department looking at it first and giving a review? When -- I don't remember any coming before

us before, but I can't imagine it just being dumped at this point. I would think the department had done a review and an analysis and a report. Now that doesn't happen?

LARRY KNUDSEN: Well, we've had very few of these. Over time I'm only aware of one or two involving districts and one or two involving cities. Certainly there haven't been any in recent years. Now there is a similar provision that allows for general review of plans and specifications for sewage systems as part -- or related to the MPDS or WPCF permitting process. And under that statute it merely says that the department may review and you have adopted regulations that say when the department will review and when the department won't review those plans and specifications. But you're right, it is a technical exercise and what we will do if you decide that you don't want to delegate this function to the department is we'll have to have the department review the plans and specifications and bring them to you and make a report on what the department thinks is the appropriate response. And we can do that and in fact the department has seen and made some preliminary review of these plans and specifications already.

JUDY UHERBELAU: So what we're

talking about here is actually the department will not only review it and analyze it, but they will also make the decision?

LARRY KNUDSEN: They will communicate back to the department of human services whether or not they think the plan is adequate.

JUDY UHERBELAU: And we won't have any part of it?

LARRY KNUDSEN: No, that's right.

UNIDENTIFIED SPEAKER: So (inaudible) more of this technical review. All we're doing is saying, "Is the pipes big enough? Do they flow down hill?"

LARRY KNUDSEN: Yeah, there are two steps. One would be whether or not you think the system proposed by the county is adequate to either solve or alleviate the problem, so it really boils down to it's better than status quo. And the alternative would be -- if an alternative plan is proposed then you would have to judge between the counties proposed plan and the alternative plan prepared by the group in the area to be annexed and you'd say, "We think one is preferable to the other." That's the sum total of the exercise.

UNIDENTIFIED SPEAKER: I was going

beyond this, but I was under the impression that now we have this mechanism of onsite treatment where you build up a three foot or a five foot sand thing and you can treat anything anywhere per cost without having to put sewers in. Does it really come down to it's cheaper for these people to put sewers in and go to the (inaudible) district then to do the onsite? Is that what it comes down to or am I wrong about this onsite being possible and even on a pile of rocks, virtually?

LARRY KNUDSEN: Well, I'm way out of my technical expertise, but certainly there is an issue of whether or not it's cost effective to -- in this case they would be just building a collector system to join to an existing sanitary system. I believe in some of the other cases they've developed what are known as step systems, if you're familiar with that term, thinking that that was preferable to the individual high tech onsite sub surface treatment systems. And part of that is cost factor, part of that is a maintenance factor, because those other systems don't work well unless they're rigorously maintained. And then they can also be a factor of the amount of space you have available. But beyond that I'll have to defer to Jonie.

UNIDENTIFIED SPEAKER: I think what happens in these cases is they form a sewer district. A sewer district does the power for taxation. And they tax to cover the cost of putting the sewers in, so it's to everybody's advantage to connect to the sewer. So the option of putting in these onsite thing -- I mean, you can still put in an onsite system, but there's no reason to do it cuz you're gonna get a (inaudible) anyway whether you hook up to it or not. And that's what happens in these things is you just get full compliance because it's in everybody's best interest once the sewer district once the sewer district is created.

UNIDENTIFIED SPEAKER: Right now the situation is they're outside the sewer district and they're asking for permission --

UNIDENTIFIED SPEAKER: There is no sewer district in the county. In the county they're covered by -- they can have individual treatment sites; they can have septic tanks or whatever. The real problem is in the health side is -- is the health issues really show up as a non-point source problem, so you get the health condition in some local ditch, you know, where it came from. So all the county does is say, "Look, in this general area

we have a health condition that's not acceptable." Do we ever, in terms of systems -- maybe Kent knows the answer, do we ever do what -- and I have an arterial motive for asking all these questions. Do we ever do systems whereby there's an onsite septic tank, but the black water coming out of the septic tank then goes in the sanitary sewer so the sanitary sewer can be the quarter of the size cuz it's only handling water -- there's no solids in it? Is that an alternative that's ever put in in these conditions?

JONIE HAMMOND: Yes, commissioner. This is Jonie Hammond. Yes.

LARRY KNUDSEN: And that could, in fact, be an alternative proposal in a case like this is rather than just build a collector system to go to some kind of a step system. It isn't, but it could be.

UNIDENTIFIED SPEAKER: With those systems though typically what you have to do is pressurize the mains.

UNIDENTIFIED SPEAKER: No, they can be gravity too.

UNIDENTIFIED SPEAKER: Right, but you don't take (inaudible) from septic systems and put them into concrete sewers flowing down hill.

UNIDENTIFIED SPEAKER: Why not?

UNIDENTIFIED SPEAKER: Cuz you've got odor problems to no end, cuz this stuff is (inaudible) coming out of the septic system. So typically in those cases people look at putting them into some sort of pressurized pipes. You can use very small pipes, and they've been put in places where excavation costs are really high, places that have a lot of rock or whatever. And that kind of system -- I think one was promoted for Cottage Grove or drain, or something. I reviewed one of these once. Yeah. But they're really uncommon. They're really uncommon. So once you -- the cost is all in the sewers. Once you get the sewers in there's nothing to be gained by running the septic tanks, and then you've got to maintain them and pump them and all kinds of things. And especially -- usually what happens, as in this case, is you've got some large treatment plants in place and then you're adding on this little bit of addition that the treatment plants not gonna even hardly notice. So I mean, the way this thing works is the septic tanks go away, they rapidly go away.

UNIDENTIFIED SPEAKER: I think the underlying issue that I'm getting to is the sizing of

that sewer line, obviously, is it's sized just to handle the 40 houses that are out there or for the, I presume, possible future density of 5,000 houses when those things go from 10 acre lots down to 1/4 acre lots. And that's been the perennial issue in the whole -- in Oregon over these health annexations is are you, in effect, permitting expansion of the urban growth boundary, in effect, without them being part -- without them going through any process to decide this is where we want to have growth and merely because of the size of the sewer that's put in the ground.

LARRY KNUDSEN: And that is part of the equation and typically these were done unlike the municipal ones you may be thinking out where that is the big issue, do you expand the urban growth boundary or what kind of development do you allow inside the UGB? These annexations allowed with these sanitary district health hazard debatement [phonetic] projects generally involve small rural residential exception areas. And so they're typically not designed to hold more load than what's in that little area.

UNIDENTIFIED SPEAKER: Well, if they're designed to head just the load there then the issue goes away.

LARRY KNUDSEN: And the reason for that is, well, twofold. One is because of the land use implications and the second is because of the cost implications. Typically the folks in that area don't want to pay to oversize the lines.

LYNN HAMPTON: Particularly since it's kind of a forced -- are the total costs imposed on the residence when this health annexation, sort of, against their will happens?

LARRY KNUDSEN: Yes, as commissioner Williamson pointed out, once they're inside the district then they're subject to the district's assessment capabilities.

LYNN HAMPTON: And is it always the sewer district or is it sometimes simply a municipal -- or in this case, well I guess -- I'm -- I see what it would be with the city, but I'm a little confused of how it would legally run with (inaudible).

LARRY KNUDSEN: This particular statute only applies to special districts, and I use sanitary district, but as you know, there are a host of special sanitary -- special districts that can provide sanitary services. It doesn't apply to cities and counties, but there is this other statute that

would address those issues.

LYNN HAMPTON: I have a couple issues then. Assuming that the costs of this are spread by some sort of rational basis over the users that are specially annexed -- what I hear you saying is that that's generally the cost -- the cost is generally limited to that which is adequate to serve those already there and with the -- whoever has the ineffective -- let's say you've got this area, you've got some which have ineffective sanitation systems, septic, whatever it is, and some who are fine, are they extending this only to those who are not adequately dealing with their effluent or are they extending it to the whole geographical area?

LARRY KNUDSEN: What's happened in this case and typically is they will draw lines on the map and they will isolate where the problems are and they will try to draw a line around that to add it to the district boundaries. Within that area that's added there will be systems that are obviously fading and there will be systems where at least the owners and operators will claim that they're functioning well. And that is just the nature of it. I mean, if you have a septic tank that you pump often enough it will probably work okay. But typically

DEQ doesn't get involved in those determinations. The law, unfortunately for us, provides for DHS to make those difficult calls about appropriate boundary, etcetera. The task for the commission is to determine whether or not the proposed hardware is going to meet the requirement.

LYNN HAMPTON: And is your proposal -- I'm looking at Page 2 of your agenda item where the paragraph begins, "51% of the electors within the effective territory may propose an alternative plan. And then under the current system the commission reviews the alternative facility plans and time table and determines which plan is preferable." Are you proposing that this would also be delegated to the department?

LARRY KNUDSEN: Yes, what we're proposing is for Witten Master Corners and for anybody else that comes up until you revoke the delegation all review under this chapter, that would be the initial review with the petition, and any subsequent review that might come with an alternative proposal would be done by the department.

LYNN HAMPTON: Can you maybe make it clear for me, Larry, at what points in this process would land owners have an opportunity to go

before an elected body and object, make their case, discuss, and have a fact finding?

LARRY KNUDSEN: There is a requirement for a hearing that is conducted by DHS. There is some -- because of some statutory changes it became unclear what the nature of that hearing is, but DHS has held at least one contested case hearing already. It may hold a second hearing or a continuation of that hearing, and so there is that mechanism for the hearing. And then again, if there's an alternative proposal filed there would be a hearing on that as well. As they have done it, DHS has held that -- the administrative law judge has been the presiding officer at that hearing. Much like you do the -

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LARRY KNUDSEN: -- Of the ALJ's decision by DHS.

UNIDENTIFIED SPEAKER: If we go with your proposal, alternative (inaudible) you've got three alternatives there -- it says, "Delegated to the director or some other," if we just delegate it to the director doesn't that take care of it? The director can then say do whatever he or she wants (inaudible)?

LARRY KNUDSEN: That's correct.

UNIDENTIFIED SPEAKER: Okay. Well, I would move that we --

LYNN HAMPTON: I think Judy has a question. Go ahead, Judy.

JUDY UHERBELAU: Yeah, I have a legal question and then a comment. The way I read this, Larry, right now the Environmental Quality Commission if we delegated DEQ has the final say. If we do not approve of the plan they're dead in the water, is that correct?

LARRY KNUDSEN: If you were to determine that the proposal would not alleviate the health problem then it would end up going back to the county and the county would have to develop another proposal and run it through the process again.

JUDY UHERBELAU: Continuing that, if we approve it and it later turns out that something is wrong with the plan and harm happens, is not the EQC at this point liable or approving something that wasn't kosher?

LARRY KNUDSEN: No. I mean, not nearly the fact that something doesn't work doesn't create liability. Also, as I pointed out before, I believe in this case -- in most cases the plans and

specs would also be reviewed again as part of the permitting process.

JUDY UHERBELAU: So we're not the final review?

LARRY KNUDSEN: Well, not on that level of review. What we really had was talking about different kinds of plan review. This is kind of like a 5,000 foot level plan review. Is this kind of a system going to be adequate for what you're going to do? And then the part of the permitting process the department will either do a more specific review or in some cases that specific review is not done, but the local government that actually does the construction will accomplish that through its own staff and its own certified engineers. But that's when you get down to the level of whether or not this is adequate engineering.

RICH DUVALL: What's needed here is -- (inaudible) there is opposition of putting in the sewers, primarily because people don't want to move in the high density development. So that's where the opposition comes from. And so the first stage, when people have to do something, is there's usually a whole variety of less than optimum suggestions of how to fix this. And what this process here does is sort

of filters out those suggestions. And usually people are trying to save money. People are still trying to do something so they can maintain low density. And I've been involved in these before and there's just -- it's incredible the ideas that come up by a group of citizens on how they're gonna fix this. Ultimately, like Larry says, they have to come up with some sort of plan. It's got to get approved, and typically what the (inaudible) comes down is the pretty standard technologies.

LYNN HAMPTON: And from what I'm hearing from you, and I invite anyone involved in this to comment, to some extent I'm concerned about the political rights of those people who are resided and it sounds to me like that's happening at the county level with the county proposing --

LARRY KNUDSEN: Well, that's not our issue, that's the department of health services. So really, we're sort of in the secondary role here. The department of health services is the driver for all this, because they're using police power under public health. We're not involved in that part.

JUDY UHERBELAU: I think Lynn has brought up a very important part. For example, if we are delegating to the director and I have no problem

with it in a regular course, but if we are looking at where citizens have brought a plan and the other entity has brought a plan I think it would not be a good thing to delegate that on a political basis, having been involved with many of those things. I think when you have citizens versus the bureaucracy, two different plans, and you're telling the director to come in and approve and not approve, I think those (inaudible) should stay with the commission and we should take the heat after they do the review and so forth.

UNIDENTIFIED SPEAKER: Is that what happens? Do you -- do two of them come to you or does DHS give you one and say, "Is this okay?"

LARRY KNUDSEN: Well, initially you get one. In some cases if 51% of the voters in the area proposed to be annexed come up with their own plan then there would be two. And you would judge whether or not the alternative is preferable to the original, not whether or not some third thing would work, but just A or B.

UNIDENTIFIED SPEAKER: Could I ask a question before you leave this point? If we in fact had to make a decision between two plans is there any appeal to the commission in this process?

LARRY KNUDSEN: The way it's set up now that appeal is through DHS. Essentially DHS incorporates what you do and --

JUDY UHERBELAU: Before it gets to us or after?

LARRY KNUDSEN: After. You give your certification, if you want to use that term, to DHS, and DHS then moves with it. So the public process is first. On the county level the county -- level the county holds hearings, did ordinances, etcetera, to get this to DHS. Then DHS holds a contested case hearing, reviews everything, and then that would go up through the process. Right now there isn't a public process in front of the commission.

LYNN HAMPTON: Okay, so what I'm hearing you say is that the public process is for discontented land owners and will take place, obviously, at the county/city level, whoever is the initiating body under this statute, and then at the DHS level. And that essentially what happens with the involvement of this department is, or with this body, is to stamp the adequacy, scientific adequacy if you will, of the proposed plan, whether they're by the governing body or whether they're by the land owners, if they object?

LARRY KNUDSEN: That's right. And it's basically a ministerial process and that's why we thought it might be something that you would want to delegate.

UNIDENTIFIED SPEAKER: And could I just comment on this? I don't see the date in here for the original statute, but the intent of this was to have the Department of Environmental Quality/EQC give the technical opinion on functioning onsite systems. Historically, and I think Jonie and/or Larry would tell me, the onsite program ever since it became -- the state sanitary authority was one of the first things included in the formation of DEQ. So I suspect the reason for your involvement in this goes way back in time when everything having to do with the onsite program either had to be decided at the commission level or with the director. Now over the years some balance has been applied to that as the program has grown and it obviously didn't make sense, in some respects, to have highly technical decisions being made by a volunteer commission and/or even the directors. So this is a vestige, I think, of some of those earlier years where the intent was to decide those technical issues at the higher level than is probably necessary now in the program.

LYNN HAMPTON: Well, I feel comfortable now that we've sort of hashed all that out -- I feel comfortable following the recommendation here that we delegate this authority to -- is it to the director that you're' suggesting is the best way to do this?

LARRY KNUDSEN: That's fine, yes.

LYNN HAMPTON: I feel comfortable with it for all cases, as this comes up, having in mind that there's still plenty of public bodies and avenues for the political parts of the decisions to get made, cost allocation, etcetera, and that the intent of the statute is that DEQ is basically passing judgment on the adequacy of the proposed system.

UNIDENTIFIED SPEAKER: And madam chair, I would just note since commissioner Blosser alluded to it, there is -- there remains, irrespective of your decision on this matter, an unresolved tension, for lack of a better term, between land use planning and the extension of sewer lines out to these areas. And the point that commissioner Blosser made that the concern has always been if a line is extended, ultimately, what does that do to development overall? And there is an exception process that is

required on the land use side, and that's a whole other conversation that typically doesn't occur with this commission, I don't think it does anyway. And I think the question that Commissioner Blosser might have been raising is might there be an opportunity for a commission to have a conversation about those things if you retain this process? Obviously you can talk about anything you want to, but that's not really the intent of this approval here. This is just technical. It's not really about the exception process and land use planning.

LARRY KNUDSEN: And actually those issues have been discussed in the past. They were most recently discussed when there were some amendments to LCDC's rules dealing with this issue, their rules under Goal 11. And it may be an issue that will need to be revisited shortly because of measure 37, which has -- we sort of had a constructive balance that may no longer be functioning, depending on how much residential development occurs.

BILL BLOSSOR: I'm gonna move 3, delegating it to the director. But then I was gonna add a little, "In so far as the proposed solution is sized only to serve the people that are having the

health annexation problem." There is this capacity limitation put into it. So the tent being that if they were gonna put in a line to conserve ten times as many people then that's a policy issue that I would rather have come to the commission personally. But if they're just gonna take care of the people that are having the problem, their size and system just to take care of them, then I'm just gonna -- I would propose that we delegate it all to the director.

LYNN HAMPTON: And so you're talking about that language on Page 3, which reads, "The commission may delegate the pending and any future review and approval or denial of plans and schedules under ORS 431.705 to 760 to the director or some other designated staff person"?

BILL BLOSSER: Yeah, to the director with the condition that --

LYNN HAMPTON: And then I have some proposed (inaudible).

BILL BLOSSER: -- the proposed solution is only serving those that have the health annexation issue.

LARRY KNUDSEN: Just for clarification, cuz I'm gonna actually need to write a

delegation order because we need to move this on faster than what the minutes would provide -- that would, I assume, mean that if there are undeveloped properties within the annexation boundary those could be developed consist with acknowledge plan and land use regulations, correct?

BILL BLOSSER: Sure.

LARRY KNUDSEN: Yes, okay.

BILL BLOSSER: (inaudible).

LYNN HAMPTON: Well, (inaudible) do you have that in sufficient language that we could precede, Larry?

JUDY UHERBELAU: With his -- with Bill's additional?

LYNN HAMPTON: With that proviso? It's been moved that we accept Paragraph 3 under EQC action alternatives with a proviso limiting so long as the proposed plan or schedule is limited in capacity to existing users or known potential users, I guess, in the area affected. And I would guess Larry Freidy characterized that in another language. Is there a second for that motion? Is there a second? Well, then the motion fails. Nobody is seconding a motion like that. Do we need to discuss a different way to express this?

BILL BLOSSER: Well, I'll move as it is with deleting that last part about the designated staff member, (inaudible) recommendation 3.

LYNN HAMPTON: Without a limiting provio?

BILL BLOSSER: Right.

LYNN HAMPTON: It's been moved that the language set in Paragraph 3, eliminating some other designated staff person, without a proviso, that we approve that language delegating all pending and future review of these plans and schedules to the director. Is there a second? Okay. I will second that motion. And so we need to decide, vote, on this language. Those in favor of delegating the pending and future review, or denial of these plans and schedules under the statute to the director, indicate by saying, "I."

IN UNISON: I.

LYNN HAMPTON: It's two. Those opposed?

JUDY UHERBELAU: Opposed.

BILL BLOSSER: No.

LYNN HAMPTON: It fails. So think of something else, Larry.

BILL BLOSSER: Or we can leave it

the way it is.

UNIDENTIFIED SPEAKER: Well, madam chair, perhaps it would be helpful if the commissioner members -- you could discuss among yourselves kind of where -- we obviously know what commissioner Blosser was thinking, and get a feel on if others are not comfortable delegating it all or -- we could keep trying different language options, but it might be helpful to know what people are thinking.

LYNN HAMPTON: I need to take a break before I can discuss anything comfortably. So yes?

JUDY UHERBELAU: I would just say that even if this fails, and that's fine, that I would expect as a commission, that the department, the director, whoever, is doing the analysis and doing a report before it ever comes to us, because I trust that's what you're for. I don't think they expect us to spend hours and days and weeks trying to figure out these plans when that's not our field of expertise.

LARRY KNUDSEN: It may be -- maybe when we come back -- let me think about this, but I think this problem is already taken care of, because I don't think the department can actually permit the

extension if it's inconsistent with the existing, acknowledged plans. I think what Commissioner Blosser is concerned about is that for municipal health hazard annexations those are exempt from the requirements that require that reconciling of the land use plans with the development. But I don't think that's the case here, but maybe we can think about that if you want to take a break and I'll address that when we get back.

LYNN HAMPTON: Five minutes. I'll be right back.

(Break)

LYNN HAMPTON: Okay, we're back after our recess and, Ken, you were gonna say.

KEN WILLIAMSON: Well, I just wanted to explain my opposition to Bill's motion. When you put in these utilities these things are always designed by an engineer, and often engineers will determine that the most cost effective way is to put in over capacity. There may be reasons to put in over capacity, and I just don't think that we should be restricting those decisions by the professional engineering community not to design these things how they consider to be the best way to do it for whatever client that they have. So when these clients

come to some professional engineers their responsibility to give them back a plan that they think is gonna best meet their needs under whatever constraints that they have. And so I just don't think that that's a place where the commission needs to be going. Now there's a comfortable sort of thing here. Now if you look at field permits of the Army Corp of Engineers, and then the Division of Lands basically judges on those. Well, all of those things come to the DEQ and say, "Well, tell us whether these -- what they're proposing here for taking out gravel out of the stream or whatever has a problem with water quality?" And the DEQ responds to that. All that stuff doesn't come to this commission, because the point of contact for people trying to get those permits to take gravel, or put in dams or whatever, all that is by the division of state lands. So that's where they get their public testimony. So none of that stuff comes to the commission, but the DEQ does it all the time. And it seems like this is a similar sort of system is that the point of contact is really the health services. They get involved, they balance out public need versus private rights and we're just trying to provide some sort of judgment about whether these things are technically feasible. So that's how

my understanding of that.

LYNN HAMPTON: Larry, I'm sorry to interrupt you but I just wanted to note that we will have public forum at 11:00. If you're here to speak at the public forum Tanesha can direct you where the signup forms are and be sure and do one of those so that we know that you want to speak. And I'm sorry, Larry, go ahead.

LARRY KNUDSEN: Yeah, I was going to make, I guess, two points. One is that the desirability of the system from a land use point of view, probably is not in the commission or would it be in the department's prevue to make anyway. The decisions are statutorily very narrow, it's whether or not it's adequate to Aleve the health hazard or whether or not it's preferable to alleviate the health hazard. So that would be the first point. The second point would be that fortunately that doesn't mean that the land use consideration isn't subject to review or that somebody doesn't get to make that call. I think that does happen. I think that happens with the DHS decision. I think a DHS decision that approved a system that was inconsistent with land use requirements could be challenged on that basis, either by a property owner or somebody nearby, or even one

of the interested agencies. So I think there is that role, but I guess I'm not certain that it would be the commissions' role. And then I guess if I can add a third point is, the way we're currently set up there would be a check built into the process anyway and that's because the local planning authority, either the city or county or both if the area happened to be inside the UGB, would have to -- certification that they're requirements are met would be part of the approval of the plans and specs being done by the department as part of the (inaudible), the detailed plans and specs. That I think gets to a part of the issue that commissioner Blosser was raising -- not in -- it doesn't address the whole issue, because the only thing that would say is that it isn't authorizing service to some are that isn't currently authorized to develop in that fashion. So, if for example, it was designed to provide residential level collection for an area that isn't designed for residential, or isn't planned I should say for residential use, then presumably the county couldn't certify the construction under the land use compatibility requirements. That doesn't address entirely the issue. But also this particular process does not involve UGB amendments, which is a part --

or a potential part, of the health hazard annexation debate for the municipal statutes, which is one of the reasons we didn't include that process in this recommendation for delegation.

BILL BLOSSER: Just -- can I respond?

LYNN HAMPTON: Go ahead. Yes.

BILL BLOSSER: If -- if the -- the -- if the issue -- the annexation is coming up within a UGB, then it's not an issue. That is taken care of by other things. I'm not worried about that. If the health annexation is part of a UGB amendment I'm not worried about that cuz that's taken care of by other things. But my recollection is that the majority of these are neither of those. They're isolated things out someplace where a pocket is gonna be created and a line will be run in to connect to another system. So my only issue was I didn't want us to, by accident or whatever, cause a problem for the land use plan of that county and the cities around there by our approving something for more capacity then was needed to solve the problem. You start out saying that we certify it as adequate to alleviate, and so I was just trying to put words around adequate to alleviate being adequate to solve that problem and

not solve some other imagined problem like we might eventually want to put a subdivision of condos out here or something; that imagined problem. So that's why I was trying to eliminate to make sure that we didn't accidentally, as a department, create another problem under the guise of solving health problem.

STEPHANIE HALLOCK: Madam chair, could I interject something here?

BILL BLOSSER: That's all I was trying to -- just to make sure that we weren't accidentally. And I don't agree with Ken's comment cuz I've just seen too many situations over the years where -- particularly with sewers, the cost go up an inch and diameter of a sewer, or two inches or three inches, is very, very minimal. And so virtually always the engineer will say, "Well, you could get by with a six inch sewer, but gee, just for another buck you can go to an 8 inch and you have double your capacity." And a lot of people say, "Well, gee, okay let's double it." Well, you've just thereby created the potential for a major land use problem in that area. And so it's not a simple engineering issue. There is a capacity needed to serve those people and it's a four inch or a six inch or whatever line, and upsizing it to eight or ten may be very cheap, so it

may be "cost effective," but it creates an eventual major potential problem for that whole area. So that's why I was saying adequate to just solve the problem, cuz the engineers can tell you what will be adequate to solve it and that will be it. Anyway, that was my thinking.

STEPHANIE HALLOCK: Madam Chair, my recommendation is that you reject our recommendation to you. You are clearly not comfortable delegating this for whatever reason. We thought we would be sort of helping you not have to deal with a technical issue that you might not want to deal with. There have been, as were pointed out, maybe two of these in the last ten years. I don't even remember when the last one was. We would probably be taking this much time for you to address one of these issues if it came to you, and so rather than to continue to agony my recommendation would be that you just simply reject our proposal to delegate it to the department.

LYNN HAMPTON: But it's not agony. We're enjoying this very much. Ken, you were speaking.

KEN WILLIAMSON: That's the problem. But it seems like to me that these sewer districts, once they're put into place they're a legal entity.

They got a right to put whatever pipe they want into the ground and the only thing we can do is set some sort of minimal requirement, and minimal requirements are that they have to alleviate the condition. So I don't think anybody can tell them what pipe they can put in the ground.

LYNN HAMPTON: What you're saying is that the actual standard itself, which is alleviating the condition, operates as a check on the zealous overdevelopment or may?

BILL BLOSSER: As a minimum condition and they can -- if they're dreaming about putting in condos some way down the line they can put as much sewer pipe in the ground as they possibly want, and it just seems like, to me, it's not our obligation to get involved in that fight. Now clearly people have to get a permit to do this kind of development. They have to fit a land use law, but it's not this body that's getting involved in it.

LYNN HAMPTON: Commissioner Uherbeleau? Thank you, Ken.

JUDY UHERBELAU: Yes, I just want to say that I still would not vote for Ken or for Bill's, and I also won't agree with Stephanie, because I think there is -- there's room and should be that

the department, the director, or whatever, should be -- we should delegate to them when it's just a straightforward, "Here's the plan. Does it fit?" But when there's two plans and because we're not allowing that -- when the electors themselves have brought a plan in opposition and you're looking at two plans, I think that the commission should deal with those, because even though Larry has said the DHS they can go to them and have a hearing, the DHS to the electorate is still the elitist bureaucracy, and they do not feel or think many times that anyone is listening to them. And so I think that's where the commission can come in. They may feel a little differently about that. So right now the two proposals -- I can't vote for them. But I don't like Stephanie's either, as I said, cuz I do think they should do the ones in the regular course.

LYNN HAMPTON: Well, I'm sensing -- go ahead, Ken.

KEN WILLIAMSON: If there were two plans that come -- I mean, the way this thing is set out, the plan that would have to be looked upon is the 51% plan. I mean, the people that they decide within a sewer district, they get -- they do the petition, they say, "This is how we want to do it."

And DEQ has to decide whether it's acceptable or not. DEQ wouldn't choose one plan over the other. They don't have that --

JUDY UHERBELAU: Well, they compare. They determine --

KEN WILLIAMSON: -- No, they don't compare either one of them. They just decide --

JUDY UHERBELAU: --They determine which of the ones is preferable. Read the language in the thing.

KEN WILLIAMSON: -- But they still don't determine it.

JUDY UHERBELAU: Whatever.

LYNN HAMPTON: What you're saying is they would make that indication back to DHS, and DHS would make the final decision? Well, I'm sensing complete lack of consensus on this issue, and I would recommend that we table this for a future occasion, and maybe we'll be better able when you bring us, or if you bring us, when Master Corners should get to that point. We'll have some direct experience with the issues and maybe we can decide this for future.

BILL BLOSSER: Since we haven't had one of these in 10 years.

LARRY KNUDSEN: We will, in fact,

bring it back to the next commission meeting cuz DHS is waiting for a decision.

JUDY UHERBELAU: Then we can all lobby to know, but in the meantime.

LYNN HAMPTON: Is that acceptable to everyone for the moment?

BILL BLOSSER: Why does DHS need a decision? Why don't they just send the thing to us cuz we've got an existing procedure?

LARRY KNUDSEN: Well, they have and we were just asking you whether or not you wanted to make the decision or not, and since we'll --

BILL BLOSSER: We didn't make a decision.

LARRY KNUDSEN: -- next meeting we'll have you make a decision.

LYNN HAMPTON: Well, do I need to move to table this or this passes without action by us. Okay, having made -- Agenda Item D, is that where we are? Wait, I will invite them up and I will make one more reminder to (inaudible) Sewer here for the public forum. That will take place at 11:10 as it says on the agenda, with apologies to Andy Ginsberg, David Callure, and Mary Anne Fitzgerald, we will interrupt their presentation. Having delayed

them, we will interrupt them at 11:10.

STEPHANIE HALLOCK: Madam Chair, only one caveat on that. If anyone signs up to speak on the agenda item that these people are going to present, they have to do that after you've taken your action, so we'll have to redo the --

LYNN HAMPTON: Cuz the public comment is closed.

STEPHANIE HALLOCK: -- Right, you'll have to look at the (inaudible).

LYNN HAMPTON: And I wanted to say, after discussion with Helen, that if anyone is here to speak with -- is it Item N, Helen, that we're talking about for tomorrow?

HELEN LOTTRIDGE: yes.

LYNN HAMPTON: Item N is an agenda item for rigid plastic. And there will be an opportunity for comment tomorrow, because public comment is being held open until the -- at the -- to the presentation of that item. If you are here today to speak to this, but can't be here tomorrow please indicate that on your form, so that we'll give you priority. If we don't have enough time we'll give priority to those people who can't be here tomorrow. All right, Action Item D. I'm sorry, yeah, D; Rule

making, ozone maintenance plan.

ANDY GINSBERG: Chair Hampton, commissioners, for the record, my name is Andy Ginsberg. I'm the air quality administrator for DEQ and with me is Mary Anne Fitzgerald who is in the planning section in air quality, and we're here to present Agenda Item D, which adoption of the Portland/Vancouver and the Salem ozone maintenance plans and supporting rule revisions. As you probably recall, in December we had an information item on Syp [phonetic] development on ozone and particularly on the ozone maintenance plan. So you've got a lot of background and we were going to avoid repeating most of that, but if you have any questions, things you don't remember from last meeting that you'd like to raise we can answer those. And so Mary Anne's got a somewhat abbreviated presentation for today since we did that.

MARY ANNE FITZGERALD: And you should have copies. For the record, I'm Mary Anne Fitzgerald from the air quality division in Portland. I'll try to speak better into the microphone, and it looks like we're getting the presentation up and running. I --

UNIDENTIFIED SPEAKER: Can you speak

up just a little.

LYNN HAMPTON: Let's just make sure there's amplification on that mic. Okay, thank you.

MARY ANNE FITZGERALD: Is that better?

LYNN HAMPTON: No.

MARY ANNE FITZGERALD: Okay, shall I proceed?

LYNN HAMPTON: Please do.

MARY ANNE FITZGERALD: It sounds like the microphone is working now as well. Well, as Andy just said, the last time we came before you we gave a background on how we develop air quality plans and some of the more technical details of the planning effort that we did. So I just wanted to recap -- recap, first of all, that there are actually three components to the thick packet that you have before you today. We have a Portland/Vancouver/Interstate air quality maintenance area in our ozone maintenance plan. We have a Salem/Keizer area in our ozone maintenance plan and many, many rule revisions, including fairly significant changes to the employee commute options program, changes to Portland's industrial emissions management program. And we're correcting the spelling of the name

of the city Keizer, which we are needing today. So trying to take care of some housekeeping changes as well. On Portland/Salem as well as Medford were considered non-ataman in the 1970's because of actions we've taken over the last 30 years. Medford is in compliance with the standards, and Portland and Salem achieved compliance in the 1990's. But this is Salem's first maintenance plan. We've never -- it's still on the state books considered a non-attainment area and we're proposing to change it to a maintenance area. And Portland was re-designated to a maintenance area back in the 1990's and we are continuing that planning process by keeping the strategies in place. Now the reason why we're doing all this is because of protecting the public health. Ozone is a photochemical oxidant and it primarily affects the respiratory system. EPA has changed the ozone standards several times over the last 30 years from one hour averages to eight hour averages and different levels. But the main reason is to try to protect people with respiratory illnesses and we don't want to aggregate any asthmatics and cause increased emergency room visits. EPA is currently redoing the standard and I'll go through that in a minute when I get to a couple more slides from now. And just as a reminder,

ozone is not directly emitted into the atmosphere, but it's a chemical reaction, and that's why it needs the presences of sunlight and heat. So we focus on emissions of volatile organic compounds and nitrogen oxides. And in the presence of sunlight and at least 90 degree temperatures it forms ozone. So that's why hot, sunny days are when you're more likely to see the summer time smog. Now this slide I was not able to get into the presentation, but yesterday afternoon I gave you an updated version of it that is in your packet. And I just want to explain a couple of things on here. Over the last 15 years the ozone air quality -- well, I think I'll just continue the thought. I know at least you have the handouts in front of you and for members of the audience, I have copies of the presentation on the back table. For the last 15 years ozone air quality has declined and because f the way EPA averages the three year average of the fourth highest value, it's remained relatively stable in the last five years.

STEPHANIE HALLOCK: Mary Anne, I think it's fine to just proceed from the written copy. Everybody's got it and they're available for the audience. So don't worry about the --

MARY ANNE FITZGERALD: Thank you,

Stephanie. The -- where EPA is proposing to change the standard to is in the range of .06 to .08 parts per million. And that is kind of where we sit right now. So we know that EPA won't propose the actual number until June 2007, and they're scheduled to adopt a new ozone standard in March 2008. And so they could keep it the same, they could lower it. We don't know yet. But I just want to show you that right now we're comfortable below the federal health standard, but because recent health studies have indicated that people still have health problems at lower numbers EPA may revise this standard in the future. But those four cities are the four areas where we have the ozone monitoring sites in the state of Oregon, and that's where we think most of the problem is. So the current maintenance strategies in Portland -- actually this is an abbreviated list. There are many, many rules that we have on the books to deal with reducing volatile, organic compounds and nitrogen oxides. We adopted industrial emission controls to lower volatile, organic compounds from existing sources back in the 1970's and those rules continue today. We have a new source review program that issues permits, and for the larger sources we have an emission management program that carefully

monitors what emissions we would add from newer expanding sources, and whether the air shed can handle it. We of course have had a vehicle inspection program since 1975 that continues to keep the cars clean in the Portland and Medford areas. In Portland we have what's called Stage 2 and barge loading rules. These deal with gasoline stations and gasoline storage facilities, and also transfer operations. So not only does it protect public health from DOCs, but it protects -- or reduces benzene emissions as well. That's been a very effective program in the Portland area. We have transportation control measures in place to try to reduce motor vehicle emissions to encourage people to not drive alone, but to take other alternatives like transits and walking and riding their bicycles. We have a couple of Portland specific area source control rules on the books, most notably, lowering the DOC content of certain spray paints and requiring auto body shops to have high volume/low pressure appointing systems that emit less. And we have had over the years an extensive public education and outreach program. Not only the issue air pollution advisories to tell people to not paint, to drive less, not mow the lawn on clean air action day -- or air pollution advisory days. But at one

point things like a lawn mower buy back program that encouraged people to buy electric or push lawn mowers instead of gasoline powered engines. So in the next slide, in the Salem area, because they have not had the maintenance plan in the 1990's there are fewer rules on the books that are considered strategies. But because Salem is located down wind of Portland, all of the strategies that reduce emissions in Portland also benefit Salem's air quality. So I did mention federal engine and fuel standards in Portland, but you'll see in a couple of slides that motor vehicles are a large source of emissions in the Salem area. And these cleaner cars, cleaner fuels have done a lot to clean up the air in Salem as well. On the next slide, on the pie charts, we went through this pretty elaborately in the December meeting where we talked about the different sources of pollution and I just want to summarize that for volatile organic compounds it's about half of the emissions are vehicles, whether those that are on the road and those non-road engines like your lawn mower and construction equipment. And about half the sources are area sources which are those that are associated with people or small business or other small diffused sources, including open burning and field burning, and other burning

types activities. And that is true is VOC and both Portland and Salem. If you look at nitrogen oxide emissions, the vehicles, both the on road and off road vehicles are the major contributors to these types of pollutant. Point sources are the industries -- not only industries, but any large point sources that we have at DEQ. And point sources represent 2% of the DOC inventory in the Portland area, 4% of the Knox inventory. And in the Salem area, basically 0%. It's less than half a percent of the VOCs and 2% of the point sources in 2002. So on a relative scale, the industrial sources are much smaller than some of the other ones.

LYNN HAMPTON: Commissioner Uherbelau?

JUDY UHERBELAU: I have a question, thank you. In the top ten sources in both of (inaudible) is graphic arts -- graphic arts how you use it must be different than what I think of as graphic arts, so can you explain to me what that is?

MARY ANNE FITZGERALD: They're mostly the smaller print shops that use the inks -- the larger shops, like the Oregonian --

JUDY UHERBELAU: You're talking about print shops. You're not doing --

MARY ANNE FITZGERALD: -- Not the home calligraphy types of things, but printing operations. Yes, but the larger ones would be under permit. They'd be considered the point sources. Btu all those small little corner print shops add up. So as you jump ahead here, on the Portland VOC growth projections three out of the top five are the area sources, and that's why we're so concerned about the summertime painting projects, the driveway refinishing, the deck projects and those are projected to grow because they're related to population. That's who we project the emissions through population sources. Consumer solvents is another group. All those sprays, the cleaners that you use around your house, they can be significant. EPA is considering rules that would deal with both architectural coatings and consumer solvents, but those rules are still -- they haven't been proposed yet. But nationally it's better because these types of -- these categories are a problem everywhere in the country. It's not just Portland.

(End of Tape 2 Side 2A).

MARY ANNE FITZGERALD: So generally the manufacturers prefer if the federal government does -- if we don't need additional controls in Portland we have not requested additional controls on

these sources yet. But I know at your last meeting when we were talking about things that we could do to improve air quality, area sources was one of the things that you asked DEQ to look at.

JUDY UHERBELAU: Thank you. In the Salem area, when you talk about open burning agriculture, there's a bill out in front of the legislature about banning that, but do have a position on that, DEQ?

ANDY GINSBERG: Commissioner Uherbelau, we haven't taken a position on the field burning statute. We're providing technical information to all parties that are discussing that particular piece of legislation. We do have a bill that we have introduced, Senate Bill 235, that would bring agriculture under air quality regulation for the firs time in Oregon, but it doesn't specifically address field bringing. That's a separate bill that DEQ didn't --

JUDY UHERBELAU: But it would, in a sense, have an effect on that, right? In the past?

ANDY GINSBERG: It would. The one thing to think about thought is in terms of this chart where we're looking at top sources for ozone,

we're talking about summertime emissions, and field burning -- the concerns around field burning typically are around the smoke impacts from, you know, when burning occurs in a day that -- and the meteorology changes and it happens to impact an urban area. And that's more of a particulate or fine particle issue. And typically the field burning does not contribute to violations of that standard because it doesn't occur in the wintertime when fine particle levels are high. It does -- we have said that field burning can create some short term health concerns, especially for people with pre-existing heart and lung conditions. So there are potential health effects. They're not all that well quantified, but it doesn't necessarily contribute to violation of federal standards. So it's a complicated story that we're trying to convey.

MARY ANNE FITZGERALD: And the other thing is that on days you would likely form summertime smog, they wouldn't be allowed to burn because of the air conditions. Okay, now I wanted to get into the more current sides that we have not gone over yet and talk about public outreach and the public comments that we have received. We did hold several informational meetings with local governments in the Portland and the Salem area. Particularly in

the Portland area we've reached out to the transportation management associations and others to make sure that they understood that we were proposing changes to the employee commute option rules and the other rules on the books. We did have a resolution adopted by the metro counsel that supported the plan that we proposed. And we had a formal public comment period from June 1st through July 13th. We extended it because of the holiday season. And we really had very few people come to the hearings and very few people testify. But attachment B in your staff report has a summary of the various comments that we received and the department's response to comments. So on the next slide I just wanted to give you a quick overview of the comments that we received. And as far as the numbers go, a number of citizens asked us to not change the control technology requirements for new sources in Salem. They were very concerned that it was a slippery slope and that the air was clean, we want to keep it that way, so please don't change the standards for new sources in Salem. But we also received comments from industry groups in the Salem Chamber of Commerce that said, "The air is clean. The air can handle new industrial growth, so please make the rules in Salem equivalent to the

rules in Portland and please allow new sources to locate here fairly easily." So that was something that DEQ -- we considered both sides of the story. We looked at the air shed of the sources of pollution, and considering that the industry is a very small percent of the emissions, and we did keep our proposal to change the industrial standards for new sources from the lowest achievable emission technology, LAER, emission requirement, to back the best available control technology, which is similar but not identical. We spent quite a bit of time going into the difference, and I wasn't planning on going into it now unless you want me to. Good. The other area that we received comments on was on the growth allowance in Portland or the growth limit. And in the 1996 plan, because we were still considered a non-attainment area, we had an emission offset requirement for the Portland area that limited industrial growth so that no new major sources could come into the Portland air shed, unless they off-setted with an equivalent amount of emission reductions elsewhere. But in the 1996 plan we did set aside a certain amount of tons of volatile, organic compounds and nitrogen oxides to accommodate new growth without having to find the reductions

elsewhere. That program is still in place. We still have tons of pollutants left within the growth limit, but in this plan we proposed to enlarge it to 5,000 tons for both volatile organic compounds and knots. We received one comment that was opposed to using any growth allowance in Portland or anywhere, and we received several comments from industry groups that felt that it was reasonable and that it should be adopted as proposed, or even enlarged. So again we looked at both sides of the argument, we looked at the modeling. We looked at the air shed capacity and felt that it was reasonable to continue that approach. And so we recommended adopting the rules, as proposed. And the third significant comment was from the Western States Petroleum Association talking -- or asking about the impact of the bio fuels legislation in Portland on the air shed and whether the air shed could handle the increased emissions, particularly from the use of ethanol in the summertime. We did a quick calculation last summer and determined that it would not have a significant effect on the air shed, just based on the emissions and our calculations. We recently completed some modeling that we haven't quite written up yet, and the modeling shows that the bio fuels will not have a significant impact on air

quality. So we did look at it and decided that we didn't need to re-analyze the maintenance demonstration, that we were still gonna maintain air quality standards even with the bio fuels mandates. So we did receive other comments. Like I said, they were all summarized in Attachment B. So if there's any questions I'd be happy to answer any more on any other comments.

BILL BLOSSER: I have one question. In the staff -- is this the right time?

LYNN HAMPTON: I think so unless there was something else you needed to cover. Are you done?

MARY ANNE FITZGERALD: I was just gonna talk about Next Step, so I was just gonna wrap it up if you want. You know, we're recommending that you adopt the plan and this thick packet of rules. And following ECQ action we will be submitting this to the US Environmental Protection Agency as an amendment of Oregon's state clear air act implementation plan. The two things of the emerging issues, you know, where we're not sure whether we'll need to bring this plan back to you in the near or far future. There was a court action in December where the courts essentially vacated EPA's ozone

implementation rules. And we base this plan on the best information, on the best rules that we had available at the time, and we addressed all the EPA requirements as they were in place. There were a couple of little details that are very technical in terms of or conforming transformation plans with air quality plans and with contingency plans. We think we're okay but we're just waiting for EPA guidance, but EPA, I figure, will take a long time before they address the court case and come out with guidance. So since this plan is due in June, we're recommending that you adopt it now and if we need to revisit it we'll bring it back, based on what we know. And then the second thing I already pointed out is that EPA is considering revising the 8 hour ozone standard. And depending on what they do with the standard you may need to look harder at some of the sources. So that's it.

LYNN HAMPTON: Commissioner Blosser?

BILL BLOSSER: I just had a clarification. Back on Page 12 of 15 of your staff report you -- extra story on Page 11 that lists how our program is more strict than the federal program. And there's one, two, three bullet items. And then at the very last part of this says some people commented

that we should defer to the minimum federal standards. And I've referred to commenter number 8 and comment number 8. And I go look at comment number 8 and I don't see that in the comment. The comment just says, "Portland/Salem area should be consistent with the areas attainment designation." It doesn't say you should go back to the federal standards, so I'm just wondering --

MARY ANNE FITZGERALD: Okay, that's a technicality and when EPA wrote its ozone rules --that's how EPA wrote it. It said that if an area -- see, under the federal rules the entire state of Oregon is considered attainment, therefore we should be following attainment area new source review. And so that's what that commenter meant by that proposal.

BILL BLOSSER: In code it means --

MARY ANNE FITZGERALD: Yeah, I'm sorry.

BILL BLOSSER: Okay. Looks good. But what I'm confused at is one of the commenters was commenter 11, Northwest Pulp and Paper, and then I look at other comments that are also attributed to them and they're saying, for example, "DEQ should adopt the maintenance plan as proposed." And then the second one, "Industrial growth allowance is

appropriate and should be increased or adopted without change." And a third one, "Backed is," -- that one is already -- but anyway, at least those two seem to be saying, "Hey, everything is okay. Adopt it as you have it." So I'm just wondering if I'm just confused. Do you know a good explanation for that?

ANDY GINSBERG: Mr. Blosser, I believe the commenter was saying that what we have proposed is more stringent than federal. In fact, we could relax our current program because of the way EPA had re-designated the whole state to attainment and changing from the 8 hour -- one hour to the 8 hour standard. So -- and what we proposed was more stringent that. But I think they were saying don't go anymore stringent than what you proposed. What you have is acceptable. It's what we had in the past. You could have relaxed it some. What you have is acceptable, stay with that and don't make it more stringent.

BILL BLOSSER: Okay.

ANDY GINSBERG: That was the overall gist of the comment letter.

BILL BLOSSER: So in summary, the major relaxation here with quotes around it is that you're going to allow permitting of new sources in

the Portland area under this 5,000 ton rule and 1,000 ton increments, right?

MARY ANNE FITZGERALD: Correct.

BILL BLOSSER: And then you're gonna go from an LAER to a back in Salem, right?

MARY ANNE FITZGERALD: Right.

BILL BLOSSER: So I had a question. What's the magnitude of the impact of the employee commute program?

MARY ANNE FITZGERALD: The employee commute changes --

BILL BLOSSER: I mean, do you have any sense of -- does this translate into how many tons?

MARY ANNE FITZGERALD: The changes to the employee commute option would actually cut the number of employers that are covered by this requirement.

BILL BLOSSER: Cuz you go from 50 to 100?

MARY ANNE FITZGERALD: (inaudible) amount. In reality, we don't have enough staff to deal with all of these employers and we thought it would be more effective to have a smaller universe and do it well then to have a very large universe

and not be able to handle it. And so we projected no changes and emissions. It's essentially going to be the same program that we have today. Some of the real changes cut out some of the loop holes, like if an employer claimed an exemption we never went back and checked up on that. So now we'll be asking the employers to verify, through a written statement, that they still are exempt from the program, so that we'll have a little bit more oversight of the sources or the facilities that are left in the program. But, no, we're not projecting any change at all.

BILL BLOSSER: So this thing is sort of quasi voluntary at this point?

MARY ANNE FITZGERALD: We've enforced once.

BILL BLOSSER: One, okay.

MARY ANNE FITZGERALD: And that was a major buzz in the community. I remember a few facilities really talking about, "Oh, no. They're catching on."

BILL BLOSSER: So how many business out there you --

MARY ANNE FITZGERALD: About 1,200 are regulated now. I thin it will be cut in half when we change.

BILL BLOSSER: So you'll go to like 600?

MARY ANNE FITZGERALD: Something like that. (Inaudible comment). Yeah, well we figure is that 85% of the emissions -- I mean, the emission reduction credit -- see the companies still have to report. Right now they're reporting every year. We're proposing to change it to reporting every other year, because the data doesn't change that much from year to year. So we know that 85% of the emission reductions come from those larger sources with the 100 or more employees. They're more likely to provide the annual bus passes. They're more likely to encourage carpools. And it's to their advantage to have alternate ways for their employees to get to work. So we think that the effect will be the same. We don't think that they'll be a drop off and people taking commute options. But we think that administratively, the rule changes that we have proposed better reflect how the program is operated.

BILL BLOSSER: But that all looked pretty positive. It made it simpler. You had fewer people to regulate and get about the same impact. I mean, it's like --

MARY ANNE FITZGERALD: Right.

Right. And early on we did talk to the transportation management association who did not want us to reduce the number of employees covered by this rule, but they understood it was a function of resources. And they would prefer that we have more resources to run the program, but I know the state of Washington has similar requirements and they have many more employees than we do to run the program.

BILL BLOSSER: So if you look at the big variable in all this it's really -- the efficiency of knots [phonetic] emission from cars, primarily, and trucks and the control of the EOC from paints -- I mean, if you really look at the gorillas on the block here, right?

MARY ANNE FITZGERALD: Right.

BILL BLOSSER: And so we can make cars more efficient and they're doing that every year. That's something that we can actually -- you know, mechanical engineers are pretty good at. And then hopefully society will move to more water-based paints and bring the other one down. So it looks to me like we're on the right trajectory here, as far as controlling the ozone.

MARY ANNE FITZGERALD: And we do feel that, you know, we call them multi pollutant

strategies -- any time you deal with engines or boilers you're reducing green house gases, you're reducing toxics, you're reducing smog producing chemicals, you're producing -- you're reducing a number of pollutants at the same time.

LYNN HAMPTON: Commissioner Uherbelau?

JUDY UHERBELAU: I have a question and a comment. The question is -- once this program is okayed and approved and everybody is on board with it, will you do, at least for a certain period of time, more intense (inaudible) training to make sure you're not going backwards?

MARY ANNE FITZGERALD: Yes. Well, I have a couple of things that we're planning on doing. As far as the employee commute option program -- we're eager to do a full court press on reaching out to the employers and monitoring that program a little bit better than we have before. That's why we want to move forward with this package. Then our contingency plan is our normal way of monitoring the air quality levels, monitoring the emissions. We do an emission inventory every three years. And we have a unique thing in this plan actually that's tied to vehicle miles traveled, because the Portland/Metro government

understands the connection between cars and air quality, and they know that if cars cause an excedance [phonetic] of the air pollution standard industry will get hit hard. And they want to balance the economic development, as well as travel within the Portland area. So we are monitoring vehicle miles traveled, ambient air quality, and the emissions increases. And so we have triggers built into the contingency plan so if it looks like we're approaching the standard we will do something about it.

JUDY UHERBELAU: Which brings me kind of to my comments as I live in the Rogue Valley. We're still hemmed in by the mountains, that hasn't changed. Our population has increased enormously, the air still stinks and yet, we're supposed to be in compliance. How often are you measuring there?

MARY ANNE FITZGERALD: Well, ozone is continuous. We measure that from May 30th through September 30th of every summer. And so summertime smog has not violated, or has not exceeded the standard. Actually, last year it did not exceed it at all.

JUDY UHERBELAU: That surprises me.

MARY ANNE FITZGERALD: That's why there's different kinds of pollution, whether it was

the woodstoves, the particular pollution, it might have been some other type that --

JUDY UHERBELAU: There's been a lot of articles in the paper recently about the increase in asthma and upper respiratory conditions in the woods -- we still have a lot of the very old woodstoves. You can't get people to change them and everything like that. And I see some difference in the environment over the years -- I mean, in the air, but it's still crumb -- so I wonder how well it's being monitored.

ANDY GINSBERG: Commissioner Uherbelau, I'll just mention that we have had significant reductions in our monitoring since 2001, both because of cuts on the state level and on the federal level. We lost monitors in the Medford area. We're monitoring them -- we're checking them less frequently and it's a major concern, especially given now that EPA has lowered the pine particle standard, and Medford is right below it. I mean, they were just, just below the standard. So we have in our budget proposal for this upcoming -- this current legislative session a request to increase funding for monitoring. We also have -- the Senate Environment Committee has introduced a bill that would address

some of the woodstoves -- the older woodstoves by having them removed when people sell their homes. So there are things that will be done, but you're absolutely right, the monitoring is a significant concern.

MARY ANNE FITZGERALD: Thank you.

JUDY UHERBELAU: Yeah.

LYNN HAMPTON: Further discussion, commissioners?

BILL BLOSSER: I would just echo Ken's comment that we may look at the 2015 VOC projection for the Portland/Metro area. Surface coding just leaps out as -- and so it seems like if we have to go back that would be the place that you're gonna get the most. I was pretty shocked -- the other day I bought water-based latex and they told me the range of EOCs in latex, from zero up to huge amounts, just in latex. It's not water-based. It's just in latex there's a huge range and I can just think of all the houses being painted, apart from the cars and everything else. None of that, of course, is any vapor recovery. It just goes out the window. So anyway.

LYNN HAMPTON: All right, if everyone is done with discussion then we'll need to

entertain a motion about this agenda item.

BILL BLOSSER: I move to adoption of the proposed maintenance plan and supporting rule revisions for Portland and Salem. Second.

LYNN HAMPTON: Larry, any suggested changes?

LARRY KNUDSEN: No, I think we will understand that means a sit out in attachment A and that should be fine. Yeah, that actually is -- I think did you say as --

BILL BLOSSER: As proposed in Attachment A.

LARRY KNUDSEN: -- Okay. Well, maybe I can clarify then. What we really -- I think what the motion really is is to adopt the Portland/Vancouver and the Salem/Keizer area ozone maintenance plans as a (inaudible) provision and to make the related amendments to the DEQ rules, set out in Attachment A2 as sep provisions.

LYNN HAMPTON: Is that a good (inaudible)?

BILL BLOSSER: That was my motion, exactly.

LYNN HAMPTON: And Bill, do you second that?

BILL BLOSSER: I second that. That's exactly what I was saying.

LYNN HAMPTON: Thank you. It's been moved and seconded to approve the air quality maintenance plans set forth in Attachment A1 to Agenda Item D. And will those in favor please (inaudible) by saying, "I"?

IN UNISON: I.

LYNN HAMPTON: The motion is carried. (Inaudible) is approved. Thank you. Thank you very much for compressing your presentation to the available time too.

STEPHANIE HALLOCK: Madam Chair, as Helen is bringing you the people who signed up I just asked her to write a note. I will try and write our staff report so that we put the recommendation to you in the language that you will need to make a motion, which will probably help a little.

LYNN HAMPTON: Sometimes that can be done and sometimes you can't. We have to do our part too.

JUDY UHERBELAU: It makes it more interesting while we don't --

LYNN HAMPTON: Now, are these in the order that people signed up, Helen?

HELEN LOTTIRDGE: No.

LYNN HAMPTON: Okay. Bill, did you want to say something? All right, we have one, two, three -- we have four people who have signed up to speak. I'm gonna read the names off. If you're here and haven't signed up but want to speak please raise your hand. We have a Heidi Dalyn, Nancy Hatch, Carol D. Johnston, and Ellen Twist. Is there anyone else that wants to speak? All right, this agenda item is allotted 45 minutes, so you have approximately 10 minutes each, and why don't we begin with Heidi Dalyn. Is it Dalyn?

HEIDI DALYN: Dalyn.

LYNN HAMPTON: Dalyn, okay.

HEIDI DALYN: Thank you.

LYNN HAMPTON: Good morning.

HEIDI DALYN: Honored commissioners, good morning. My name is Heidi Dalyn and I am a resident of Oregon City. I am a mother of two, soon to be a grandmother of one, and I work as an educator for Oregon City School District in technology education. I have lived in Oregon City for over 24 years now and I love my community. I am concerned about the health of our town, and specifically to our children due to toxic mixing zones. And I'm here

today to urge you to work to eliminate mixing zone permits in Oregon water ways. For those of you who don't know my city's proud history we are the end of the Oregon Trail. Our town is sited at the Willamette Falls and we have always had a close identity with the Willamette River. We have a major community park at the juncture of the Willamette and Clackamas Rivers, a prime salmon fishing area just down stream of the falls, several public boat launches, marinas, and public docks. Native Americans -- Native Americans fish the eel populations at the base of the fall, children regularly swim at Clackamit Park and Meldrum Par Park in nearby Gladstone in the summer. Our community lives near, works by, and recreates in and around the river. But also sited at Willamette Falls are two paper mills, Blue Heron and West Lynn Paper, who together hold several permits to legally dump toxic materials, including lead, mercury, arsenic, chromium, aluminum, and zinc at levels far above DEQ's standards directly into the Willamette River. This is done via toxic mixing zones with the premise being that these chemicals will be diluted and that this will somehow make them safe. These chemicals are dumped into the river less than a half a mile from Clackamite and Meldrum Parks. Those same parks

mentioned above where children swim, people fish, kayak and water-ski. And it is not just these two mills dumping affluent into the river; rather they are two of many, many mixing zones, both up and down stream, which dump toxins into the river. I ask you, how many of you, if you were parents, would allow a stranger to come into your house and dump a small amount of mercury into your child's bath water? Would you feel safe if they told you that it was only a small amount and the water would dilute it? I used to take my kids along the river all the time to view the falls and I must confess that I am outraged that this spray that we felt on our faces was contained -- contaminated with heavy metals that were dangerous to our health and that this is legal. So where does this mercury and other chemicals go? Does it disappear and cause no harm as I've heard claimed? I urge you to look at a can of tuna. It warns that pregnant and nursing women should not eat more than one can a week due to the mercury content. Children should be limited to three ounces or a half a can per week. We know a lot about mercury that we didn't know just a few years ago. We know for example that now one out of every three American women has so much mercury in her womb that her children are at

risk from a grim inventory of diseases; autism, blindness, mental retardation, heart, liver, and kidney disease. We have 630,000 children who are born in America every year that have been exposed to dangerous levels of mercury in their mother's wombs. We certainly know that mixing zones are not the only source of these toxic chemicals, but if we know that there is a problem with mercury entering the food chain why would we legal allow companies to further add to the problem? I've heard the argument that it will cost money for industry and municipalities to deal with waste responsibly. I have heard that the complaint that it costs too much. I think we're smarter than that. New technologies can be implemented and jobs can be created in green industries. For myself, I work in technology education. That's what I deal with every day. But I am currently half way through a master's program and at 46 years of age this is my fourth career change. According to statistics, I've got one more to go just to be average. Change is part of life and it doesn't make sense to continue doing something wrong just because we have done it for 100 years. And what is a health community worth in dollars? Why are we willing to sell our community so cheaply? Three

years ago when I began volunteering for the Sierra Club's Building and Environmental and communities program I personally conducted a survey of friends, family, people I met in the grocery store, and I asked them the question, "What is your major environmental concern in Oregon?" The overwhelming response was clean water. Average citizens, such as myself, we want clean water to drink, we want clean water to recreate in. We depend on the government to protect us and our children. I do not believe that industry and municipalities will voluntarily stop dumping toxins into the river on their own. Face it, it's cheap and it's easy to do. When I moved to Oregon in the 1970's I remember the efforts by Oregonians to clean up the Willamette River and to leave a legacy of clean water and a healthy environment for future generations. 30 years later here we are. The Willamette is still one of the most polluted water ways in the country. I do not believe that we have another 30 years to debate this issue without causing irreparable harm to the river, its inhabitance, and our communities. Thank you.

LYNN HAMPTON: Thank you very much. Any comments? Thank you, Miss Dalyn. Next up is Nancy Hatch. Thank you.

NANCY HATCH: Good morning. My name is Nancy Hatch and I'm a resident of Northeast Portland. I want to thank the chair and the members of the Environmental quality Commission for holding this public forum. Last summer I was riding my bike along the Willamette between Omsi and Sellwood bridge in Portland and feeling a sense of peace and contentment while watching the river flow by. However, those good feelings quickly came to an end when I started to think about all the toxic chemicals and heavy metals being legally discharged into the Willamette every day. I began to think about all the Oregonians who also feel drawn to the Willamette because of its natural beauty, but who are unaware of the existence of toxic mixing zones or at least of their locations. I believe that it is bad enough the DEQ continues to permit toxic mixing zones in spite of the clean water act, but even worse, that there is no way for the general public to know if their locations or contents. I believe that Oregonians have the right to know the existence and location of mixing zones through buoys in the water, signs on shore, and maps on DEQ's website. Also it is imperative that DEQ begins to thoroughly test/monitor water, plants, fish, and river sentiment within and

downstream of mixing zones. Doing sd will definitively show the hazards of toxic mixing zones. The DEQ already warns the public about air pollution. Why doesn't DEQ do so for water pollution, particularly point source pollution? Thank you for your support of increasing toxic monitoring. Please fully fund toxic mixing zone moderating programs and please make sure that the public knows where our rivers have chronic levels of toxic pollution. Thank you for your consideration.

LYNN HAMPTON: There's a question from commissioner Uherbelau if you'd like to engage in discussion.

JUDY UHERBELAU: First, it's a comment. I certainly think fully funding/monitoring of every sort is what we would all like to do, but I would urge you to go before the legislature and when - - in the budget hearings and say -- I mean, one of our problems is that the money that DEQ has is not nearly enough to take care of all of its needs. And I think the public needs to consider that and certainly you speak to their legislatures about it. The other question I really have for you, Stephanie. Do we not have on our website where these zones are?

STEPHANIE HALLOCK: Commissioner

Uherbelau and member of the commission, we have some information but, in fact, as you just alluded to, part of the budget request that we have in this session of about $2 million dollars would in fact allow us to make this data much more available than it is now. It takes a lot of manual work. When Lorie Aunen is up this afternoon on her other water quality issues she can give you more detail, but it is not anywhere the way we would like it to be, in terms of accessibility, which is one of the things we hope to get with the funding this session.

JUDY UHERBELAU: So march on Salem.

NANCY HATCH: Could I make a comment in response to your -- you know, I realize that the funding is limited that's been available to DEQ and I've heard comments that part of the issue is that funding often comes from doing things like permitting. And it's my understanding that the permit fees that dischargers have to pay are fairly minimal when you consider what they're allowed to do. And one thing that I would think would be quite reasonable to increase funds for things such as monitoring and also marking of locations would be to simply increase permitting charges. I -- and I think most citizens of Oregon feel that being able to discharge chemical

and heavy metals into rivers, especially above EPA and Health Department standards, isn't a privilege -- pardon me, isn't a right, it's a privilege and that you should have to pay for such a privilege.

JUDY UHERBELAU: How are permit fees arrived at?

STEPHANIE HALLOCK: Members of the commission, first of all, there is -- in water and in air -- well, in all of our programs practically, there are proposals for fee increases this session, and when we do our legislative update for you tomorrow we'll go over that. So we are, in fact, as you know, 66% fee funded in DEQ's entire budget right now, as the amount of general fund and federal fund that we've had has declined over the years. So we do have almost every legislative session proposed fee increases. The way that those fee increases are calculated, very program by program. In the waste water program, which is the program that she's alluding to, there is a relatively complex fee schedule for different kinds of pollution, different kinds of discharges. And in the air program, for example, Title 5, is mandated by congress by the clean air act. It's an institute fee on tons of emission. And so there is a lot of variability in how

those fee schedules are arrived at. They are done so with advisory committees in conversation with anyone who wants to be involved in them. And in terms of whether or not the fees could be increased, I think it's a given the fees will be increased, because our funding declines from other sources and we are forced, as I said, to increase them every session as we are proposing this session to do as well.

LYNN HAMPTON: Other comments?

BILL BLOSSER: You have a statement here on it that maybe you could flush it out a little bit more. You say DEQ continues to permit toxic mixing zones in spite of the clean water act. What were you specifically referring to there?

NANCY HATCH: I haven't really thoroughly studied either the statutes of the clean water act or DEQ's regulations that interpret and administer those, but my understanding from talking to lawyers and those who are well versed in the clean water act that there is considerable concern with allowing -- the whole concept of mixing zones of essentially -- well, depending how you kind of saying -- whether it's saying that the levels established by the EPA and the clean water act or by congress actually in the clean water act, only apply to a

river system as a whole, not to individual parts, that that's not necessarily a viable, legitimate interpretation of those. You know, you have to refer to someone who's an expert, but that's the way it's been explained to me that there has been --

BILL BLOSSER: Okay. I was just wondering what you were referring to there.

LYNN HAMPTON: Any questions or comments.

BILL BLOSSER: Just commenting on this fee thing. The fee increases we're proposing basically just bring us back to an even place. They're not to start anything really new like monitoring. She's suggesting where the monitoring ought to be -- we ought to charge those people in order to do good monitoring. Really the fee increases isn't proposing anything like that. We've got the monitoring in a general fund package.

LYNN HAMPTON: That's correct this session.

BILL BLOSSER: So if you wanted us, instead of asking the general fund, which means the people of Oregon, to pay for this monitoring, then you certainly should go to legislature and say, "No, that's not fair. These people ought to pay for

it and it ought to go into a fee increase." And the fee increase shouldn't be what we're proposing. It should be double that or whatever it would have to be.

NANCY HATCH: Well, I would hope that there would be a possibility of a combination of funding sources for that.

BILL BLOSSER: so that would be your argument you could make to the legislature. And now is the right time cuz they're having hearings on these things now.

STEPHANIE HALLOCK: And if I may make one point of clarification, particularly with regards to earlier testimony on this issue of funding, that we often in this conversation talk about the fees paid by the point sources. And I think the earlier commenter made a very important distinction about municipal sources, because municipal sources are of concern in this debate, as well as industrial sources. And I don't have to tell you all that when we talk about who pays for the increased cost of additional controls on municipal waste water plants we're all sitting in this room.

LYNN HAMPTON: But the point being that as well as being the people who pay in municipal

systems we are the people who pollute.

STEPHANIE HALLOCK: That is correct as well, which engenders a whole new avenue of conversation.

JUDY UHERBELAU: But you also have to consider and we here seem to have problems doing -- and I mean, here in our country, in our state, or whatever, that for example, if our water is dirty and people are drinking it then there's health problems. And that in itself is very, very expensive and given our health system, so it's like a vicious circle. So somewhere we have to stop, address it, and you know, stop the circle from just getting worse.

LYNN HAMPTON: Thank you and we appreciate all public comments. Thank you. And on the issue of health, Carol D. Johnston, whose affiliation is physicians for social responsibility, Oregon Chapter. Welcome Mr. Johnston?

CAROL D. JOHNSTON: Thank you. And good morning, commissioners. I apologize, I only brought one extra copy and I'll leave this one later. I have a number of concerns that are related and the first relates to the connection between health issues and the permitting issues. Public health and environmental damage should have a much greater weight

when the Department of Environmental Quality sets permit limits on toxic emissions. The current limits for toxins such as mercury or dioxins from the incinerator in Brooks, for example, rely on best available control technology and do not appear to take into account actual amounts getting into our food and water, nor the actual health effects. Much more attention should be paid to actual measurement of toxins in the air, water and food when deciding what amount of a given toxic emission should -- is to be permitted from a particular source. DEQ staff have told us that measuring health and environmental effects is not their responsibility. It would be helpful if there was much greater cooperating between DEQ and other agencies, such as state and local public health agencies, to identify health trends down wind from toxic pollution sources such as the Covanta Waste Incinerator. The most vulnerable members of the public, such as babies that are still forming neurological structure, should especially be considered when assessing the health defects. Many of the toxic pollutants are bio-cumulative, so the actual harmful effects can build up over a period of years, even though emissions within a specific year might seem to be at acceptable levels. Toxins can also have

cumulative effects across types and sources so that atmospheric mercury from Chinese coal powered electricity plants, benzene from Oregon gasoline and pesticides from local farms need to all be part of the equation when deciding how much mercury and dioxins to allow from the Covanta Waste Incinerator, for example. Toxins don't want to attack us one at a time, so they should be regulated collectively. Some toxins that are emitted by waste incinerators, such as polychlorinated bifinals [phonetic] - (End of Tape 1 Side 3A)

CAROL D. JOHNSTON: -- are not included in the permit limits at all. Even though levels might be relatively low they can still be part of the cumulative effect on health and need to be considered during the permitting process. Another issue has to do with the way the permits are written. It would be very helpful if the Environmental Quality Commission would initiate a policy that requires the Oregon Department of Environmental Quality to include in (inaudible) permits a plain English statement and a common English measurements, such as pounds and ounces, that specifies the actual upper limit of each pollutant that the permit would allow within a specified period of time, such as per year. These

should be understandable by an average high school graduate. The plant -- the PSEL table that is given, sometimes in tongues, does not do this adequately since there are other annual measures included in the permit. The whole thing is confusing to the average reader, I believe. In this plain English statement the use of scientific notations should be avoided for the benefit of those who do not understand it. Just using decimal points and zeros would probably get across better to many people. The actual amounts of emissions and the permit limits for the preceding year or for multiple preceding years should also be presented for comparison to the new limits. The same plain English presentation should be used for these figures. As an example of why this policy is needed I want to point out that it is literally impossible to calculate the annual number of pounds of mercury allowed by the new Covanta Incinerator air quality permit using only the information contained in the permit. In addition to requiring knowledge about mathematical calculations and conversion factors to and from the metric system it also omits required information about the amount of exhaust gases that escaped through the incinerator smoke stack and the specific number of bays that the incinerator is

expected to be shut down for maintenance each year. Without this information a person cannot calculate the pounds of mercury permitted, nor the pounds of actual mercury emissions based on the annual test for mercury. Current reporting methods obfuscated this information for the average citizen. Number three, as I was against (inaudible) the proposed Covanta incinerator air quality permit this morning, I came to the conclusion that the amount of mercury emissions allowed is virtually limitless. The permit has no plant site emission limit for mercury at all, and the only other real limit is at least 85% of the mercury be removed between the control device inlet and outlet. And since this could be at least restrictive in the way it's stated when compared to the alternative way of measuring, which is .08 milligrams per dry standard 2 meter [phonetic] located on Page 8 of the draft permit. You really -- that leaves 15% of an unspecified amount that can be emitted from the smokestack without violating the permit. That kind of regulation, in my opinion, accommodates the facility owners and does not adequately protect the health of our citizens. And you'd have to look into the mathematics of that to understand what I'm talking about, but if you read the permit carefully that's

the conclusion I had to draw. Number four; many of us in the Willamette Valley are frankly concerned that when Marion County's contract with Covanta expires in 2014 the waste incinerator will be converted into an even more lucrative enterprise by becoming a regional or national medical waste incinerator. Because the PVC plastic and heavy metals and medical waste create so much dioxins heavy metal's emissions and other toxic pollution, we oppose this and would like to see regulatory polices that would help prevent this eventuality. And finally I want to refer you to a specific document that I am giving to you today. I've given it to Miss Lottridge here. It is entitled, "Waste Incineration, a dying technology." I hope you will find time to at least scan the pages relating to the many undesirable outcomes from waste incineration. And I especially would like to have you read the section about alternatives to waste incineration that begins on Page 39. The recommended alternatives do not rely on land fills, which can pollute ground water and produce methane gas. I would like to see the Environmental Quality Commission's future rules and policies direct our communities toward the zero waste principles and practices that are described in those pages. In general, those principles direct us toward

waste reduction, recycling, holding manufacturers responsible for the life cycle of their products, for example, reclaiming and recycling TV sets and cars and so forth. And outright banning toxin producing products that cannot be disposed of safely. Thank you.

LYNN HAMPTON: Discussions or questions? We do have a few minutes left in Mr. Johnston's presentation. Thank you very much.

CAROL D. JOHNSTON: Thank you.

STEPHANIE HALLOCK: Madam Chair, I could -- if could just comment on two things.

LYNN HAMPTON: Yes, why don't you have a seat.

STEPHANIE HALLOCK: Well, I was just gonna say, I totally agree on the better links with the health folks and Gayle Shibbly heads up the -- I think it's now called the division -- either Division or Department of the Environmental Health within Health and Human Services. It's its own division. And she actually was over last week meeting with our senior management team for the expressed purpose of having a discussion of how we can have a better nexus. In some states these are all in one place. They're not in ours, so you have to put a little extra effort into that. And then secondly,

amen on the plain English. As a matter of fact, Nina -- what's the name of the -- do you remember the name of the plain English for bureaucrats things that I've asked you to try and --

UNIDENTIFIED SPEAKER: Plain language (inaudible).

STEPHANIE HALLOCK: Yeah, it's an initiative. It was written up in the paper, I clipped it, I gave it to Nina and she's been talking statewide to her public information counterparts on how we can do this. So we will strive mightily to get it.

CAROL D. JOHNSTON: Excellent. Thank you.

LYNN HAMPTON: Thank you very much.

STEPHANIE HALLOCK: And we will get copies of all of his materials to you as well.

LYNN HAMPTON: Great. Yes, I'd like to see them. And the final person who signed up is Ellen Twist and her affiliation is individual. Thank you. And welcome, Miss Twist.

ELLEN TWIST: Thank you. And thank you for the time to listen to the public. My name is Ellen Twist. I live here in Salem and I love it. I too am interested and concerned about the

application of Covanta for extending their permit and raising emission levels. What bothers me the most -- this is air quality. I began to look around to try and find who did soil and water testing or humans, animals in the vicinity of Covanta, although we all know this goes around the world. I was astonished to find not DEQ, not EPA, not Marion County commissioners, not the Heath Department, nobody is responsible for testing any of those four; people, animals, soil, or water, regarding the emissions from Covanta. There have been countless people writing and testifying to the solid waste management advisory counsel of Marion county urging testing for the land and some of those subjects I mentioned, and yet nobody is stepping up to the plate to do it. I think before anything -- any of these permits are raised, the levels are raised, that there should be a base and we don't have it. I testified before DEQ a number of times and I just happened to come across a December of '97 testimony. In that I said, "Looking at the first page of the September 5th, '96 DEQ memorandum the department recommends that it acts as a facilitator between Marion County and one of the affected sources, which at that time was Ogden Martin, is currently Covanta. To initiate discussions or the

possibility of a waste separation plan to segregate coroneted plastics from Ogden's waste (inaudible) to minimize dioxin formation from this facility." Further on, "It is also acknowledged that some of the types of waste could be removed before incineration. There would be a net environmental gain. This activity would involve a concerted effort by both the solid waste and air quality divisions within the department. It should be noted that the new source performance standards that are included in the proposed rule making for new sources do include provisions for developing and evaluation material separation plans. I've been watching activities regarding dioxin, PVC, in particular, and this Covanta plant, and other than one freight pickup a year and some education, Marion County really is not making a consorted effort to divert PVC from the way stream incinerated. As far as DEQ's part in this, I'm aware of nothing. I would like to be on a list and informed if indeed there is anything. I listened to commissioner Uherbelau? You know who I'm talking about, comment about every monitoring costs money. It wouldn't cost you anything not to grant that permit, but get a base and go from there. Thank you for listening to me.

LYNN HAMPTON: Questions?

BILL BLOSSER: As we do permits can we require monitoring?

UNIDENTIFIED SPEAKER: Yes.

BILL BLOSSER: Other than emissions monitoring, but the kind of monitoring she's talking about of where those emissions go and where they get absorbed in animals, people, water, whatever?

STEPHANIE HALLOCK: Commissioner Blosser, I'd have to double check on the limits, but air monitoring, obviously we can, but in terms of additional monitoring I don't know. I mean, the theory behind the regulations is the goal is what's coming out of the stack is in compliance with standards, and the theory is, ergo, that you are not causing the type of contamination that -- about what she's concerned. So arguably do you really need to do that monitoring? I can certainly appreciate the concern of why one would need to do it, but I can get you more specific information about the parameters of our authority to do the monitoring beyond the monitoring of the facility.

ELLEN TWIST: Well, underlying my concern too is this is now -- what it started in '88 so we're that many years into accumulation. This

stuff isn't going away and our bodies are in the land. Thank you for listening. You really did.

LYNN HAMPTON: Commissioner Uherbelau?

JUDY UHERBELAU: I have a comment, I guess to Stephanie. If it's assumed that what they're allowed to do under the permit is safe, so to speak, but we're not monitoring the things that she discussed like the soil, the water, people and animals, and so forth. We haven't established a base and then we don't continue to monitor. Isn't our assumption based on false premises?

STEPHANIE HALLOCK: Well commissioner, is Andy still here? Andy Ginsberg is the air quality administrator and I think it would be helpful, if you don't mind taking a couple minutes, for him to just talk a little bit about how monitoring is supposed to work under the regulatory scheme rather than have me give you misinformation.

LYNN HAMPTON: Thank you, Miss Twist. Hello, Andy.

ANDY GINSBERG: Commissioners, for the record, Andy Ginsberg, air quality administrator. I guess I would start by saying that standards are set sometimes in two different ways. One are what we

call technology-based standards where we look at what can be achieved in that particular type of operation. And typically those are set nationally by EPA, but we set some ourselves. And you look at the best performing sources that are out there and you establish a standard that says, "We know technology can get you this far, everybody should come up to this level." Typically they're more stringent for new sources than existing sources, because it's possible to build it into the design for new sources. Not always though. Sometimes existing sources have to meet the same standards. So that's a technology-based standard. Then we have what we call health based standards, and those would be more like, for example, when we were talking earlier today about ozone, we have to meet the ambient ozone concentration for Portland even though that means some or many sources have to reduce emissions beyond what would be required by national technology-based standards. And so that's when we go and adopt specific requirements to protect air quality in a particular area. So we can have health-based standards or risk-based standards versus technology-based standards. In the case of the Covanta permit we're talking about technology-based standards. These are set based on what can be

achieved by this particular type of facility. When we talk about something like mercury we're -- we know that we've got many contaminated streams in Oregon, we've got fish concentrations of mercury that have led to health advisories, and look at what are all the sources of mercury? And we find that air deposition is a significant contributor to mercury concentrations and fish. A lot of it's coming from global sources. We can't eliminate it by regulating local sources, but we can reduce it as much as possible, for example, in the rule you adopted recently to look at the mercury emissions from the (inaudible) power plant and the discussions we've been having about mercury emissions from the ash -- Ash Grove cement plant. Covanta, as an example though, is a very well controlled source. Meaning the types of limits that we've just recently set for other facilities. They have very good technology in place. There probably isn't a lot more that can be done, in terms of end of pipe type controls. The waste separation is a potential avenue, but that facility does operate at a high level of technology. If we go and look at mercury concentrations in the area we'll find that lot of it is from global sources. It won't be really possible to pin it down to a specific, local source. So we

need to a more global and comprehensive solution. When we're talking about mercury, as an example, then just focusing on one specific point source. Having said that though, it's important that our permits be understandable and that our permits require the best that can be done at that facility. I don't know if that answers the question fully.

JUDY UHERBELAU: I can understand the distinctions between the technology. If you're using the best technology available that's known, that's one thing. But at the same time that should not stop us from monitoring and testing starting, you know, from the day you start the technology to, you know, periodically every two years, every three years, or whatever. Again, I know there's the global issue but you ought to be able to divine something from that continuous -- an I'm talking about not just the air, but what was mentioned, the water, the land that's around that area that's discharging the waste, but we're not doing that, right?

ANDY GINSBERG: Commissioner Uherbelau, that's correct. They don't have resources to do that type of monitoring on a routine basis. We do that though if we are, for example, developing a new regulation for a particular emission source.

We do have the ability to do first stack testing that identifies what the emissions are, dispersing modeling to figure out where those emissions go and potentially, exposure modeling to figure out how people are expulsed to the emissions once they disperse, all the way to the point of epidemiology work to see if there are health affects in the area. As you move down that path it gets harder and harder to associate it back to an individual, specific point source when you are dealing with emissions that come from many, many types of sources. And it gets increasingly expensive and the science becomes less certain. So it's done, we don't have a lot of resources to do that here. We rely a lot on EPS does, what California does, but we have done it and we can do it in specific cases, but we have extremely limited funding.

BILL BLOSSER: Do we have any way in a permit -- or any other way -- to try and reduce the problem by the separation -- using the separation mechanism rather than, you know, technology? Maybe they're at the best you can be, but clearly if you don't burn mercury or dioxin you don't have to control it. Do we have any way of encouraging -- more than encouraging, a better degree of separation

so it doesn't even have a chance to go out the smokestack?

ANDY GINSBERG: I'm not really an expert on that whole area. I'll turn to Larry a little bit, but I would think that you have the authority to require that probably by rule. I don't know whether we have rule authority to require it in a specific permit at this point in time. It sounds like the (inaudible) performance standard does.

MARY ANNE FITZGERALD: Well, the other thing is they probably have a solid waste permit too. I haven't looked at this for a while and I don't know if any of our solid waste people are her. But through that solid waste permit this business of source separation is probably more likely addressed than through the air permit. But I'll get back to you on what's in the solid waste permit.

LARRY KNUDSEN: Well, we certainly do that on the water side. I mean, we limit -- people have to have a toxic reduction program and present for these municipal facilities so they're going back and trying to find the sources, you know, which is trying to keep it out of the water stream. I think on the sampling thing we have to realize that when you get that data -- I mean, even if you had

the data, it's very hard to interpret. And one of the factors that's in there is just how much of this is available. And so for most of these things -- most of the mass is in the soil, okay, for most toxins. And for the soil you just don't know how available that material is in there. So you got the numbers, but trying to interpret them is really difficult. Now, when we set these standards about how much we're gonna allow discharge we try to deal with that by putting in, essentially, safety factors. So we throw a safety factor of 10 in there, because we think some people are more sensitive than others. And we throw a safety factor of 10 in there, because the toxicity data we have is typically not on human beings, but it's on rats. And then we throw a safety factor of 10 in there, because we know -- we don't understand this as well as we hoped to. So when you add all those up you got to realize that we take the concentration that we think is going to impact you, the environment or humans, and then we step back from that by at least a factor of 1,000. And for carcinogens we try to step back by a factor of a million. So from, you know, we could make our best guess at, we do try to put a safety factor in this thing that protects people's health. That's sort of

the state of the art of how people do this. And there's people who spend a lot of time and a lot of money and a lot of effort trying to set these standards that we allow people to discharge to. But again, it's a very, very difficult issue. And certainly anything we can take out of the waste stream is our future. I mean, that's how we can best deal with this and I think it's a great suggestion of trying to separate these things as much as possible, both on the air and the water and the solid waste side.

LYNN HAMPTON: (inaudible) might be interested in hearing maybe from Al or his (inaudible) about how that's handled at that point.

STEPHANIE HALLOCK: Sure, we can do that and the other thing I would just offer, cuz I don't know if you know this or not. There used to be two -- we old folks refer to them as garbage burners, but I guess municipal waste incinerators is the proper term. There used to be two. There was one in Coos Bay and this one, and I don't even know if the Coos Bay one is still there. And as you know from dealing with the Umatilla chemical weapons incineration facility, incineration facilities of any kind are highly controversial. They use garbage

burners, if you will, in the east way way more than we do here. They're relatively common, or they have been historically. And to the comment that was made earlier -- if I were in the business of predication I would find it very difficult to believe that we would ever expand the Marion facility to be some kind of regional facility. And I will also predict that you will never see another incineration facility sited in this state. I mean, they're just -- through the land use process and the environmental permitting process they're highly controversial people get very, very passionate about them and that's just sort of the state of the situation. And we'll give you more background on the source separation, but we are not a big state in this issue, whereas if you go by -- if you've ever been in the northeastern United States you'd be amazed at the different --

JUDY UHERBELAU: So, Stephanie, if we -- if you don't envision us building any more or enlarging it, do we send it to someone else and then they have to live with it?

STEPHANIE HALLOCK: As the point was just made, we have a lot of opportunity in terms of how we manage waste. For a, not generating so much of it in the first place, and b, figuring out

how to source separate, reuse, reduce, recycle, all of those things that we strive to do in the entire waste system. That's of course the most beneficial. There are -- on the hazardous waste side of the equation it -- you're absolutely correct. For example, if there are hazardous waste that can't go to the Arlington land fill facility they are in fact shipped to other states that have hazarddous waste incineration capacity. That's one of the reasons that under the commerce clause you can't restrict the flow of waste across borders, because you have to deal with it somehow. But the bottom line is for us, as a society, to figure out how not to generate so much of it in the first place.

BILL BLOSSER: And the fatal flaw here is really of a society where we have polyvinyl chloride that gets into the waste stream. That's really the fatal flaw, and nobody really sorted that out a long time ago when we started using all this PVC. But that's the thing that's being just really drawn into question is -- and there are plastics that work as good as PVC for most uses. And then on top of that we have mercury in these waste streams, and so we have mercury and we spread it all through our society and used it for (inaudible) and things. And

we're trying to move back from that. So it's like people understand this thing, but then you have these incinerator plants that were built a long time ago. So it just goes on and on. I mean, we do make some stupid decisions along the line and, you know, incinerating PVC is not a good idea. I mean, clearly we know that and using mercury and thermostats and thermostats and amalgam teeth and a whole lot of other thing. Those weren't good ideas either, but we did them and now we have to try and back away from them as fast as we can. It's challenging, yes.

LYNN HAMPTON: My favorite words.

ANDY GINSBERG: I'll mention one other thing to remind you that back in 2003 you adopted the Oregon air toxics program. And one of the concepts of that was to look at air toxics more comprehensively than just one source at a time like we've been doing into the federal program. Unfortunately right after you did that most of our budget to implement it got cut. But we are --

LYNN HAMPTON: Hopefully there was no relation.

ANDY GINSBERG: -- but we are asking for -- in the governor's budget we're asking for resources to implement that program, including

doing the monitoring on their technical work involved. And that really is the way we want to look at air toxics to the extent possible, because there is the cumulative effect of multiple sources within an area and multiple pollutants within an area. And if we can look at it comprehensively you can possibly even get some synergy with what you're doing to reduce ozone, as Mary Anne mentioned. So we'd like to get back to looking at it that way if we can get that budget approved.

LYNN HAMPTON: That's an echo of Mr. Johnston's comment. He was talking about that. Well, thank you. I think we are ready to recess for lunch. Any -- seeing that the consensus is reached we'll recess for lunch. We'll take up back in this room at 1:00 p.m.

(Break for lunch)

LYNN HAMPTON: And we are now proceeding to Informational Item Agenda Number -- Letter F, Fish Consumption Update. And Helen, should I give these public speaker slips to you?

HELEN LOTTRIDGE: Yes.

LYNN HAMPTON: I'll give those to you while they're coming up then.

JUDY UHERBELAU: Helen, do you have

copies from that material, the guild (inaudible)?

LAURIE AUNEN: Good afternoon, chair Hampton, members of the commission. For the record, I am Laruie Aunen, administrator of the Water Quality Division. With me today is Jordan Palmere, who is leading DEQ's work on the Oregon Fish Consumption Rate project, and Donna Silverberg, who's a workshop consultant. And both of them will be talking a little bit more after my overview here. Before I get started, I wanted to actually put on the record thanking the Environmental Protection Agency for providing the resources to support the workshop. And thank the confederated tribes of Umatilla. Indian reservation bears a support and partnership in this effort. As you'll hear and as you're material is showed, the project planning team are working very hard and they're making good progress. One change I wanted to make you aware of -- and you may know this already, but Bob Boundgardner, who has been DEQ's water quality deputy administrator and was working with Jordan on this project, left DEQ for another job. So he's now gone, but I'm very grateful to Jean Foster who's providing technical support for the effort. And also Keith Anderson, who has stepped into the interim deputy administrator through the end

of the legislative session. And I'm gonna apologize, I'm gonna have to be drinking water and clearing my voice, because I have some vocal chord issues. So if you can't hear me tell me to repeat myself. So before I turn it over to Jordan I want to emphasize that the fish consumption rate is an important health and water quality standards issue. And the scale, scope and effect of this issue are an indication of why the water quality standards work is so difficult, resource intensive and controversial. We do have only two staff budgeted to do this work and we have a large back log of standards work that we cannot get to right now. I bring this up because whenever I talk about standards, I want to talk about the resource needs. We did ask for additional funding for standards work, it's not included in the governor's recommended budget. Director Hallock has stressed its importance if the governor desires to add additional funding for DEQ as part of what's called a possible add back process during ways and mains. But the fish consumption rate is our top priority in standards work right now, even without additional funding. But if standards funding is not added back to DEQ's budget during the session we're going to be talking with you and EPA and the stake holders about what that means

to whether we can do really any other standards work. So with that, I'll turn it over to Jordan.

JORDAN PALMERE: Hello, chair Hampton and members of the commission. Again, my name is Jordan Palmere and I work in the water quality division in DEQ. So on October 6th, DEQ, EPA, and the confederated tribes of the Umatilla Indian Reservation presented a plan to the EQC to begin a collaborative review of Oregon's fish consumption rate. At the time EQC expressed support of the plan that was presented and instructed us to move forward in the planning process. As a result of that October 6 meeting, there were two major follow up items that were asked by the commission or the department to follow up on. The first one was that Chair Hampton and Director Hallock write a letter to the confederated tribes of the Umatilla Indian Reservation expressing DEQ and EQC's commitment to this process that this is in fact the process that DEQ and EQC has chosen to address the fish consumption rate issue. That letter has been written and it is Attachment A in your packet. The second follow-up item was that the commission asked the DEQ to take a hard look at the timeline. We've -- the timeline is laid out about over a year and a half

for the public workshop process that we outlined, and it was thought that that was a long time. As a planning team, DEQ, EPA, and Umatilla tribes have looked at the timeline and have determined that we are just unable to speed up the timeline at this point without sacrificing the quality of the project. Simply there's a lot of information to gather and a lot of information to present to you as a commission or you all to make a good decision at the end. So that's where we basically ended up on the timeline decision. We have identified a couple opportunities to speed up the timeline, should this process move towards a rule making once we make recommendations to you in the end. And some of those opportunities to expedite the rule making would be developing a fiscal impact statement prior to rule making, seeking significant stakeholder involvement, which is exactly what we're doing through the facilitated public workshops, forming an internal review team within DEQ, keeping the EQC involved, which is what we're doing now, and forming, potentially, rule making advisory team prior to a rule making. Again, these are all just ideas and we're not at the point in the process where we're ready to execute any of them, but they are just options for speeding up the timeframe on the

rule making end of things. So now I just want to start talking about our first workshop. So our first public facilitated workshop will happen on March 15 in Portland. It's going to be from 10:00 to 4:00 in the Oregon Department of Transportation building, and we're gonna repeat the content of that workshop the next day in Coos Bay at the Coos Bay Public Library. And we've decided to repeat the first workshop to really gain as much public involvement as possible in the process. Geographically we chose Portland and Coos Bay to space it out and just to literally get as much people involved as possible. We have received some feedback about future meetings that people would like to see those meetings also around the state. At the time right now, all the future workshops, and there are eight workshops planned, are planned to happen in Portland, and because of the funding issues we're really not able at this point to have them travel around the state. But we are exploring possibilities of looking into web casting and video conferencing so people in other areas of the state are able to participate in these workshops. Let's see, so the first workshop agenda, which is Attachment B in your packet, we're very luck to have Chair Hampton participating in both the workshops in

Portland and Coos Bay. Director Hallock will be there, as well as Laurie Aunen, and including EPA leadership and CTUIR leadership as well. So I think that speaks very well for the importance of this project. Overall the first workshop is going to be covering the background and scope of the project as a whole. The structure of this first meeting, in particular, will be primarily a presentation style with plenty of time for people to ask questions and express their opinions. That's just grounding people and the background and the scope of the project. I know there's a lot of opinions out there about fish consumption rates and there will certainly be opportunity for them to be expressed at these meetings. So again, we're just going to discuss the role of water quality standards, the roles of people involved in the process, the history of the topic of which many of you know much about, the scope of the future workshops, and most important is how the participants can become involved and why their participation is so critical to the process. So invitations for this meeting have been sent out and they've been sent out to two different groups of people. One is what we've identified as a core team of participants, and the other one as just a general

group of participants. And this point talking about public participation and these different teams I'm gonna turn it over to Donna Silverberg, who's consulting with us on this project. Thank you.

DONNA SILVERBERG: Chair Hampton and members of the commission, my name is Donna Silverberg and I am the principal of DS Consulting, which is a conflict management mediation and facilitation firm out of Portland, Oregon. It's a pleasure to be here with you today and really a pleasure to be working with DEQ, with the tribe, and with the EPA on a project that is hopefully going to be a three sovereign discussion about what's going on with a great deal of involvement from the public and interested folks. We were hired to do this work through the EPA's program that brings in third party neutrals and impartial facilitators of potentially contentious types of issues, and this is when one that the identified would need some outside assistance. While we have a contact with EPA, we're not working for EPA, we're working for the three sovereigns and when we get to the workshops we'll be working for everybody who's at the workshop. I say that because in conversations that we've had with folks whoa re interested in this topic that has been something that has come up, you

know, that - - are you working for EPA? Are you working for everybody? What's going on here? So I just want to have that shown on your record, as it were. Our role in this process is three fold. One is to help with the planning process right now, to help the three sovereigns have conversations about what they want and need to come out of these workshops. The second is to be facilitating the public workshops once they occur, and third, is to serve as a bridge between the agencies and the public and this core team that we've identified of affected groups that have a real significant interest in this issue, and that the three sovereigns have identified as people -- people or groups who are critical to making any kind of legitimate decision at the end of this process. So that's who we've identified as core team folks. We've spoken with nearly everybody who is on the list that you have as Attachment D at this point, and we're getting information from them about the topics that ought to be on the agendas and the future kind of needs and questions that they have, and trying to identify if there are any other people who really ought to be reached out to, other than the 600 members of the public who've received some notification of this already. But is there other

people that we really need to be bringing into the fold on this? The goal of the workshops is on Attachment B in your packet. And the goal that the three sovereigns have discussed is to engage the public and interested stake holders and tribal governments in an exchange of information and ideas about fish consumption rate and use in developing Oregon's human health criteria for water quality standards, ~~the reasons to review~~ those standards, and the potential effects of a higher rate statewide. These workshops will help to inform your staff and their recommendation to you, as well as the EPA and Umatilla tribe staff as well in their recommendations to their governments. So I think that those are important things, but of course at the end of the day the decision is yours and that is something that we will be making very clear throughout these workshops, that the goal is to be having this fair and balanced conversation to get as much input from people out there that you may or may not have access to, and to make sure that the public and the interested groups have an opportunity to be educated by and to educate the three sovereigns that are part of this process. I do think it's important to stress that what the -- the project that we're doing with these workshops is

not a decision making process, but is one that's intended to help you all gather information and data that wasn't available the last time you addressed the fish consumption rate issue. So fact finding, data gap analysis, that sort of thing is what we're hoping to facilitate here. Now regarding the attachments that you have here, there will and already are being changes to the information that's there. So the workshop agendas -- as I said, we've been doing these interviews with folks that are on the core group list. They've been giving us ideas about what the future workshop should look like, so you will be seeing changes to those along the way. The first workshop, primarily, that one is set there. It's to get people grounded in what this whole process is about, make sure everybody is starting from the same playing field with that information, but then we will be changing some things. So I just thought you ought to know about that. We've been getting feedback from the core group at this point about the process, about the topics that should be addressed, and their desire for participation. So some of the folks that are listed on your core group list have chosen to have a person represent maybe three different people. There's been some shifting there. I just want to let you

know that right now, okay? So if you have any questions specific to the workshops I'll be happy to answer that after Jordan and Laurie have finished their presentation. Thank you very much.

JORDAN PALMERE: Thanks, Donna. So we just have a couple more updates and then we'll open it up for any questions you may have. So still in the realm of public participation, we do have a DEQ website that is currently up and running, and on this website we have the agendas for these workshops, a general Q and A document that's very informative, background information, all the information that went in front of the commission in 2004, and all the reports and attachments. We're gonna post the meeting minutes from all of the facilitated workshops up there and potentially the presentations that are given as well. So far we've gotten a lot of feedback on the website and it's been very useful for people to learn about the process, what we're doing, rather than calling individual people all the time. And we've got about 65 to 70 people already to sign up for an email list that will send out emails, giving updates about the workshop schedules. So real quick on other updates we, we meaning DEQ, have been meeting with other people -- like we just had an EPA tribal

conference call the other day to reach out to the tribes, and just another avenue to inform them what's going on, what are we doing, what sort of involvement do we want from the tribes. We've been doing the same thing, meeting with ACWA, The Association of Clean Water Agencies. We've been to a couple of their monthly meetings, walking them through the process, what we're trying to achieve, and how we'd like to see their involvement as well, and similarly, done something with the pulp and paper industry recently. I now want to turn yore attention to Attachment E, which is a funding letter that jointly DEQ and the confederate tribes of the Umatilla Indian Reservation sent to EPA. Basically we needed more funding for this project. A lot of that funding -

(End of Tape 2 Side 4A)

JORDAN PALMERE: -- we haven't heard a response yet from EPA on that letter and we're just kind of in the waiting process right now, hoping in the next couple weeks. And then finally is Attachment C, and Attachment C is the themes for the future workshops. As a planning team we needed to think about all the possible science and policy questions that need to be answers so we can give the commission as much information as possible to have you

guys make an informed decision. The themes for these workshops are very much in draft mode and we are seeking input from both the core team, interested parties, you yourselves as the commission, really anybody who wants to comment on these draft themes for the workshops. We did our best job to organize them into topics that make sense and right now we are looking for feedback, because this isn't -- this isn't in stone about how we're carrying on for the future eight workshops. So without going on too much about this I think at this point we want to open it up to any questions that any of the commission may have.

JUDY UHERBELAU: Do you have the future workshop dates worked out yet or is that something that will happen in the future? Did I miss it? (inaudible).

JORDAN PALMERE: If you look on Page 2 of your memo there's a -- under Current Timeline it has a little chart there --

JUDY UHERBELAU: But it doesn't have other workshops. It has these two, the one for -- the Portland one and the Coos Bay one, but it's my understanding -- oh, I see, Human Health -- you're not -- you didn't put workshops after it, so I didn't catch that as a --

JORDAN PALMERE: Right. So in the last memo we sent you we actually labeled them as workshop one, two, three, four, five, and six, but now that we have themes and topics for them we're just putting the themes there instead.

JUDY UHERBELAU: Okay, got it.

BILL BLOSSER: What if you don't get money from EPA?

JORDAN PALMERE: I think that's a good question. Personally I don't know if DEQ has the expertise to do specifically an economic analysis of what the potential impacts are statewide. We may be able to call the expertise for an engineering analysis, meaning from an engineering perspective, what -- let's say waste water treatment plants or industries have to do to control pollution at the end of the pipe? But from an economic standpoint, I really am not too sure what we would end up doing if we didn't get the funding. The last time around in 2004 when the toxics criteria were in front of the commission there was a fiscal impact statement that was filled out, and a large majority of that fiscal impact statement was pulled from the California toxics rule. Virtually the same people who wrote the economic impact statement for the California toxics

rule are those that we are seeking to write our economic analysis as well. So I imagine that if we did not get the funding we would pull from other economic analysis again, such as the California Toxics Rule and the Great Lakes initiative.

BILL BLOSSER: When we had the meeting with the tribes down in Coos Bay, I mean, Astoria, this issue came up and everybody of course says ask the feds for the money, and maybe they have it and maybe they don't. But off to the side we discussed the fact that, gee, the people pushing this are the tribes, why don't we send them a letter also asking for the money. Now, I can see why we would ask the feds first, but it seems to me that would be something that we keep in reserve that if they care that much about this we ought to -- your list there of core people, there's 12 tribes or 10 tribes, if they each threw in $15,000 they'd have it. And most of them all have casinos and they have sources of funding. You'd think that it would be important enough to them that they could look at their own economic development funding that they already have from the casinos and they could cover $125,000 pretty easily. So I just think you ought to keep that in mind -- to go to directly -- rather than EPA -- you

get the letter from EPA and they say, "We can't do it," and then we spend three months going around in circles. I would have the letter ready the next day to go to the tribes, "Well, how about you guys," and let them say no. My comments and my advice.

JORDAN PALMERE: Thank you for the comment and I'll certainly follow up on that and, you know, the tribes are one of our partners in this process and they were co-author for the funding request. But thank you for the suggestion and we will certainly follow through with that.

LYNN HAMPTON: So if EPA says no I presume then that these co-authors will get together and look at Plan B?

JORDAN PALMERE: Yes.

LYNN HAMPTON: Whatever Plan B they come up with.

JORDAN PALMERE: So again, I think Plan B -- Commissioner Blosser just gave us a Plan B, partially, and I think the Plan C would probably be looking towards economic analysis that have been done in other areas of the country, which there are many. And that's how we, again, pulled together the fiscal impact statement of the 2004 rule making.

LYNN HAMPTON: Commissioner

Uherbelau?

JUDY UHERBELAU: Are any grants available for this type of thing that you can do a grant proposal? I don't know.

LAURIE AUNEN: Chair Hampton and Commissioner Uherbelau, I don't know if you're referring to private foundation grants. Most of our grants come from EPA and so --

JUDY UHERBELAU: How about private grants from --

LAURIE AUNEN: -- Private foundations really aren't very thrilled about giving, say, government's funding, so it's not usually a fertile area to try to get funding. I used to work in the non- profit sector and grants were our non-profit, but that's where those types of dollars tend to go.

JUDY UHERBELAU: Cuz I mean, I can understand where Bill is coming from, but I have a little problem with it. The tribes are our constituent, so to speak, because they are the ones who are suffering or may suffer from if the load is too high. And so to make them pay for something that, I don't know, I just have trouble with that.

LAURIE AUNEN: if I could speak, I

think we'll take that suggestion and if there is to be a Plan B I think the partners will have to talk about what the partnership does and whether that is something that together they choose to do or not.

BILL BLOSSER: (inaudible) choice. I have another question. Do you have one?

LYNN HAMPTON: No. No, go ahead.

BILL BLOSSER: I'm puzzling over the two initial workshops and then thereafter there's a single workshop in a single location. I'm just wondering. It seems like a waste of time to do two -- one clear down in Coos Bay and then everything happens in Portland thereafter. The other part of my confusion is if you get all these people to these workshops at first and you get them within -- the first workshop kind of sets the stage and gives background and gets everybody oriented. If you don't have that same group of people follow through at the subsequent workshops you'll be repeating that over and over again, it seems to me. And so I'm wondering a little bit why you haven't just created an advisory group that moves through all of the workshops, or at least a core advisory group that stays with you all the way so you don't have to keep retraining people that come in at the last workshop and ask -- haven't

gotten any of the previous stuff, ask a whole lot of questions, and frustrate everybody. I mean, you obviously had a reason for not choosing the advisory group model and I'm wondering why. And then also what good is the one in Coos Bay if those people are now -- they're not repeating it -- they're -- are they gonna be kind of disenfranchised? And they're gonna be pissed because now they're all in Portland or anywhere.

DONNA SILVERBERG: Chair Hampton, commissioner Blosser, we did have a lot of conversation about that, about how can we -- with the limited funds for travel and the sort of things that are going on, what is the best model for this? And first, the core group that I was speaking about, that's your Attachment D, that's the group that we're hoping will be there throughout the entirety of the process.

BILL BLOSSER: For all the workshops?

DONNA SILVERBERG: For all the workshops, and we've spoken with nearly all of those folks. I would say 85% of the folks on your list we've had good conversations with and they are committed to coming to as much as they possibly can

of this. Many of them are also working legislative issues, so may not be able to attend them all during the legislative process. We chose to do the first workshop twice with the intention of getting folks at least oriented to what it is we're going to be doing, and then on an as needed basis, or interest basis with the workshops coming, they could then self select which ones they want to come to. But the core group was the one that we -- we asked the three sovereign entities to say, "Which do you -- who do you think are the people that will have the biggest interest in attending these? Who will have the most information to provide to you all? Who can really help engage and chew on this information with you?" And that was that core group list that we've got there. As I've said, when we talked to those core group members they then gave us a few other folks that we've added to the list now that I don't believe you have in front of you yet. So that -- I imagine it will be a -- the whole process will be evolving as we move along, but I think we're trying to work with a limited amount of funds and get the information out to as many people as possible. And the folks that we spoke to said either Bend or Coos Bay would be better. As we talked more to folks we realized there are more

fisher people who live on the coast in that region down there that would be most interested in coming and most affected by what's going on with fish consumption issues. So --

LYNN HAMPTON: And also have the longest drive if they wanted to come to Portland.

DONNA SILVERBERG: And would have the longest drive, right.

BILL BLOSSER: But your core group is almost 50 people, and it doesn't seem realistic to think that you're gonna get 50 people to six workshops.

DONNA SILVERBERG: Or eight.

BILL BLOSSER: So is there a core, core group? Is there even a -- or are you not -- I'm just worried about the continuity and making sure you don't have to keep repeating and going over -- you actually end up being able to tell the staff and commission something. It really won't be a consensus but will be a sense of the group that would --

DONNA SILVERBERG: I think that's a very important distinction. We're not looking for a consensus through these workshops. It really is an education process of your staff educating folks about what they know and them educating your staff and the

tribes and EPA about other things that ought to be known. So -- I mean, we're really looking at trying to educate the citizenry that's gonna be giving you all information through your staff and through their testifying to you that will allow you to make some change to public policy. But I think the equation process is the one that the three sovereigns in conversation at determined was the most important part of this, not reaching consensus with the group. So we're approaching it differently than we would if this were a consensus building process and hopefully that answers your question on that.

LYNN HAMPTON: The only comment that I might add, as you'll recall from earlier discussions, is when we went through this for the first round we used the traditional advisory committee model and did not really come out the other end of that process with the outcome we'd hope for. So I think we are consciously trying a slightly different model. If it is helpful in your deliberation for them to keep track of which participants are there most of the time so you can get a sense of which organizations have continuity through all the workshops I'm sure they can do that.

DONNA SILVERBERG: We already have

the excel spreadsheet set up and ready to get that exact information for you, so you will know which topics, who attended, what were the issues, and at the end of this process we will have a report for you on what the issues were that came through this process.

BILL BLOSSER: So -- this is (inaudible). We seem to be missing Page 2 of the letter.

DONNA SILVERBERG: You're actually missing Page 2 and 4. I apologize. There was a copying error and so we will get a full --

BILL BLOSSER: Can we get those? Yeah, that would help to fill in exactly what you're trying to do here. I just had a -- I mean, you're going to this big educational, opinion gathering exercise, and I'm just trying to just check out some assumptions I have about how this system works, okay? So when we're looking at impacts on human beings, this system is driven by some hard chemicals that don't degrade, they concentrate in fish, people eat the fish, and the concentration of the fish is driven by the concentration on the water. And that's an entirely linear model, okay, so that if we increase the fish consumption rate from 17.5 to 175 then the

water quality standard has to be divided by 10. Does that -- is that how you see this? I mean, is there any way out of that just hard, brutal fact?

JORDAN PALMERE: Well, there's a certain way that -- following the clean water act we have to develop our human health water criteria. And you're right, and it's very linear in a sense that there is an equation and part of that equation is a fish consumption rate. And if you raise the rate it's basically -- the water quality criteria will be decreased or become more stringent. That's the function of the equation and a function of the other variables that are in the equation. There's a lot of exposure factors that are also in the equation for calculating our human health criteria. The fish consumption rate isn't the only one. In this process we've proposed to just review the fish consumption rate, because that was a large topic of debate in 2004. And in Oregon we're in a very unique position where we do have a study that demonstrates that there are populations that do, in fact, eat more fish than our rate currently represents.

BILL BLOSSER: I understand that, but we're talking about chemicals that are driven by the exposure rate being greater than 90% coming out

of food. I mean, that's the ones that we were arguing about before, so we've got this linear model. And so this is the hard, brutal fact and it's not gonna make any different what anybody's opinion is or whatever, that's just how the system works and it's building a wall. Then you step back from that, this thing is driven by the water quality concentration of these chemicals. But if you look at, for the Columbia system, that water quality value is driven by the sediments in the upper basin. And we're not changing those sediments. So I mean, it's not a matter -- I mean, you look at your economic analysis, it's not a matter of changing somebody's NPDS permit or whatever. That's stuff that sits in the upper reservoirs and is driving the concentration of PCBs and DDD and DDE in the lower Columbia, and there's no way to change that. So we got a system that is absolutely fixed, the way I see it. I mean, am I confused here?

LAURIE AUNEN: Commissioner, I think what you just said is the reason that this issue is going to be difficult, contentious, because at the same time we're looking at the fish consumption rate, which we've committed to do, there's also an effort going on, led by EPA, to look at a lower Columbia -- the Columbia River toxics issue, which in large, part

of you are correct. There are a lot of issues of legacy, chemicals and non point source pollution, and the core of that effort is to try and get your arms around what can be done to reduce toxics. I believe that topic is going to come up as part of these workshops and as a part of these issues, and the reason -- Jordan is absolutely correct about what our equation is, what the policy choices that you are gonna face are looking at all these variables and saying, "What do we want to do for it?" And so all this stuff is going to come up and I think that's why we're gonna need the time to get the workshops, to get the debate going, to really say, "What's the recommendation that we bring to you looking at all these different factors?" So that's how I see it.

KEN WILLIAMSON: It's not clear to me what the debate is.

DONNA SILVERBERG: The debate is going to be about permit limits, is what the debate is going to be about.

KEN WILLIAMSON: Right, but this system isn't driven by anything that's coming out of the pipe.

DONNA SILVERBERG: I understand. I understand that's what the debate is going to be

about.

KEN WILLIAMSON: I understand that that's really confusing and there's -- you know, it's hard to get your arms around that, but I'm just checking to see --

DONNA SILVERBERG: And not only about permit limits, let me restate that, about the appropriateness of permit limits for all the reasons that were just discussed. Because what we're trying to ascertain is to, in fact, empirically defend or not the statement you just made about where the pollutants are coming from. And then once you figure it out, and as you also correctly stated, changing the fish consumption rate potentially drives certain decision. Are those decisions equitable or not, given what you have figured out about where the pollutants are coming from? That's why you have various people in the audience representing various constituencies who obviously have great concerns about what that outcome is.

KEN WILLIAMSON: But, I mean, there's sort of the scientific part, which is links -- the allowable water concentration to the fish consumption level, and those are linear linked. You double one you have the other, okay? That's how I

see it. And then there's this hard, brutal fact that these chemicals are in the system and they're not controlled by permit, and they're not going away very fast, because they're degradation rates are so low. So you sort of have this capacitor in this system of these pollutants that are just there. And you know, so -- I mean --

BILL BLOSSER: Ken, you're reaching the -- a conclusion that I happen to think is correct, but what they're setting up is a process to see if everybody else comes to the same conclusion.

KEN WILLIAMSON: So -- and that may be the goal of these workshops, okay? And the goal of the workshop is like, you know, getting people to understand the complexity of the system in a way that they just realize how constrained this thing is. But I think clouding it -- putting it forward as some sort of a debate or an opinion or whatever, I mean, I don't know what the debate is gonna be about. I don't know what makes any different what somebody's opinion is. I mean, the policy thing is, yeah, if somebody eats a 175 grams of fish a day, we would like to protect them, you know? I mean, we would like to protect everybody, but even if you decide, well, we really need to

protect all the people that are eating 175 grams. I'm not sure that that option is available to anybody, even with the system that we got. That's a pretty -- and that's a pretty harsh place to end up here after six workshops. It's -- so is there some wiggle room here that I don't see?

BILL BLOSSER: No. No, there isn't.

KEN WILLIAMSON: Okay, so I'm glad to be reassured that -- where this is going, but I wish you luck.

STEPHANIE HALLOCK: Well, you also heard part -- you also heard part of the debate in the public forum earlier today. This issue gets focused on point source discharges. That's where it gets focused. And one can argue about whether or not that's appropriate but that's what happens in this debate.

KEN WILLIAMSON: Well, I can understand that, but in the debate this morning, you know, you have a system, you have mixing zones. You can cut back on the concentration you're gonna allow in a mixing zone, so you go back to the treatment plant and you either build a bigger one or you get some better technology, but you pour some money into that thing so it works better. You don't have that

option here. There's not knob to turn. That stuff is sitting in Roosevelt Reservoir.

STEPHANIE HALLOCK: I don't disagree with you, but there will be people who still want to have that conversation in this debate about the value it gets to the -- the discussion you've had, whether it's about PGE Boardman or whatever, that shouldn't we be doing whatever we can to control these thing? If you want to get into a mega debate there you have it.

BILL BLOSSER: It's not unlike the argument we had over mercury or PGE, you know? Cranking down on their mercury didn't materially change the risk that Oregonians are facing from Mercury, cuz most of it is not coming from a PGE plant. But we cranked it down anyway because that was the knob we could turn.

KEN WILLIAMSON: Right.

BILL BLOSSER: And that's what people are worried -- and we have several sitting in the audience that are worried that we're gonna crank the knob on that once again and it won't materially -- it will cost a lot of money, won't materially change the risk factor.

KEN WILLIAMSON: Won't change it at

all.

STEPHANIE HALLOCK: And it won't affect, at all, the fish that people are buying out of the supermarket that come from Wisconsin or wherever it comes from. So framing what it is we're debating about, I think, is going to be very important out of this process.

KEN WILLIAMSON: So there's gonna be a really, complex, educational exercise that you have.

DONNA SILVERBERG: Commissioner Williamson, Chair Hampton, I would even like to suggest that we not frame it as a debate. The way we've been framing it right now is an exchange of ideas and information. And I think that it's really important to try and pull back from focusing on a single point. It's a big, complex issue. And so if we get into just debating on a particular point, then we might lose the opportunity for some sort of innovative solution that can come out of this group of 50 people and others who are interested, really putting their heads together and chewing on these things together, looking at the data, looking at the analysis, looking to see if there's some other way then just the one that we've talked about in the past

of turning one dial? Is there something else that might work in those places where those people who eat a lot of fish live? I mean, that might be one thing that they talk about, but we're gonna really try and raise it up to a level where we can have a good, public policy conversation and exchange of ideas and information.

KEN WILLIAMSON: Well, I guess my suggestion is if you're gonna try and frame it that way, you're offering a hope that's not there, okay? And it's very similar to the debate that's not turning around global warning. There's a whole group of people that are saying were not turning this global warming thing around, okay? Now, I'm not in that camp, but I'm just saying there's a whole bunch of people. And then the question then basically becomes not the whole global warming system, how much heat is going to the ocean, and all that sort of stuff? People are just saying let's not argue about that anymore. Let's just figure out how we're gonna mitigate this thing, you know? There's gonna get some people who are gonna get hammered by excess heat. Let's figure out how we're gonna mitigate it. There's a whole group of people who are moving that way, okay? That's a whole different approach and I

would suggest you should think a little bit about maybe that's where you ought to direct this thing, cuz I don't see any way out of this thing except mitigation. That's just my opinion on it, okay? There is no technological genie you pull out of the bottle here that's gonna solve this thing.

LYNN HAMPTON: In light of Ken's comments, I have a question and maybe I'm just missing the appropriate initials, but where's the person from the Army Corp of Engineers on the list? Do we have a person? Do we have a people? I suspect that they need to be on this list.

BILL BLOSSER: Cuz they own all the sediment.

LYNN HAMPTON: They own all the sediment.

KEN WILLIAMSON: That's frankly the only person who has a knob turned is the (inaudible) dredge Roosevelt Reservoir. That is the only knob. That's not a knob that's likely to get turned.

LYNN HAMPTON: So that would be my only concrete suggestion, in so far as that's concerned. And that idea was (inaudible). Is there a practical chance of getting them to come? Okay.

BILL BLOSSER: Is the focus of

this on fish consumption in general or just fish consumption from caught fish out of rivers? Cuz Stephanie raised the thing about buying fish from Wisconsin or Sri Lanka. Are we looking at wherever it comes from and the amount of toxics in it, or are we just looking at stuff that people catch in rivers in Oregon and eat?

JORDAN PALMERE: Our fish consumption rate is meant to represent fresh water and estuarine fish in Oregon waters.

BILL BLOSSER: Caught?

JORDAN PALMERE: Caught in Oregon waters. DEQ is not responsible for what people buy in the supermarket, but if you are fishing in Oregon waters then we are. So that is --

KEN WILLIAMSON: That's certainly what the tribe is interested in. I mean, that's absolutely what the tribe is interested in.

BILL BLOSSER: Right.

JORDAN PALMERE: Correct.

KEN WILLIAMSON: So you're right on that one.

BILL BLOSSER: But -- I understand -- thank you for clarifying it. I thought that was the case, but Stephanie raised a really wonderful

question about we're supposed to be worried about human health risk, and you've got a whole workshop on human health. Maybe we should be trying to gather information on the other factor and maybe we kick that one over to the health division.

STEPHANIE HALLOCK: They're already doing it. They're already doing it.

BILL BLOSSER: All right. All right.

JORDAN PALMERE: And we do have DHS Department of Human Services involved in this workshop process. We've met with them a couple times and they will be present at the second workshop, which we'll discuss fish consumption rates and human health. And --

LYNN HAMPTON: They can share with us what they've got at that point.

DONNA SILVERBERG: There's also -- there may be others, but -- I think it's in Washington State is piloting a sort of green labeling program of fish in supermarkets. I don't know what the criteria are for how you get green labeled, but the health people have been looking at that. So, yeah, they --

BILL BLOSSER: Okay.

LYNN HAMPTON: Well, we're a little bit over our scheduled time. Is there anything else you need from us or any decision you need us to make?

LAURIE AUNENE: No, Chair Hampton, I think that would be it.

LYNN HAMPTON: Thank you very much.

JORDAN PALMERE: I guess the other thing is that -- just the last thing. I just really welcome all of you individually. You obviously have a lot of interest and it's a very complex issue, and so please contact us individually, me, someone, anybody involved in the team, because it is a big issue and we're trying to keep the scope pretty focused on this, and as you can tell, it gets bigger and bigger every time we talk about it. So please feel free to contact any of us with any questions you may have.

LYNN HAMPTON: I think commissioner Uherbelau is planning to come to the Portland meeting also, so there will be --

JORDAN PALMERE: Great. Thank you very much.

LYNN HAMPTON: Thank you. All right, we'll now proceed to Action Item G, Agenda

Item G, Rule Making, Water Quality Standards Revision to align with EPA action. And we have Laurie, no Bob Baungartener, and Deb Sturdavin.

LAURIE AUNEN: Good afternoon again. For the record, Laurie Aunen, administrator to the water quality division and with me is Deborah Sturdavin, DEQ's water quality standards coordinator. And we're here today to recommend your adoption of Agenda Items G and H, which are revisions to our water quality standard's rules. I'm gonna do a little bit of a framework before I turn it over to Deborah. First of all, the rule changes before you are routine for the world of water quality standards, unlike what we just discussed several seconds ago. These changes are not controversial and they are not significant policy changes. Agenda Item G revises the Oregon temperature and mixing zone rules to align with actions recently taken by the Environmental Protection Agency. And Agenda Item H correct errors and clarifies language in water quality standard's rules adopted in 2003 and 2004. Just a brief overview of water quality standards; under the federal clean water act they are set by states, not by the EPA. They are set to protect human health, fish and aquatic life and other beneficial uses. They are, though,

review and signed off or not by EPA. If EPA disapproves a standard the state is given an opportunity to do it over. If the state does not revise the standard then EPA must adopt it for the state. We use water quality standards in setting permit limits, in assessing the quality of our waters across the state, which is called the 303D list of impaired waters that don't meet standards. We use them in developing the total maximum daily loads and we certify certain activities, such as drudge and fill, are done to meet water quality standards. I think you'll get a little bit more direction from this from Deborah and Larry. But G and H were originally in one rule making package, but we split them up to reduce confusion. G and H deals with the same set of rules, but they're not the same issue. So you have one set of attachments attached to Item G. What we're gonna recommend is that each item be addressed separately so they will cover G and then you'll take a vote, and then we'll go to H and you would take a vote. And for Agenda Item G the rule revisions are shown in blue color on Attachment A2. And with that I'll turn it over to Deborah.

DEBORAH STURDAVIN: Chair Hampton and members of the commission, good afternoon. I'm

gonna begin with an overview of Agenda Item G, which is a revision of the Oregon temperature in mixing zone rule to align with EPA action. And then, as Laurie said, we both pause for your questions and action and the move onto Item H. So the purpose of these rule revisions is to respond to EPA disapproval of several of the temperature criteria and the alternate mixing zone provisions. In 2003 EQC adopted major revisions to the water quality standards for temperature. And although salmon and trout species and endangered species' concerns were the focus of that rule making, the standards did include criteria for oceans and bay, natural lakes, four (inaudible) and cool water species. These criteria were more narrative in nature, allowing a limited increase above ambient conditions, is the way we worded it. Then in November of just this last year, EPA disapproved the criteria for those water bodies over concerns with the term ambient and suggested we use natural condition as the basis for the allowed increase. So the department is recommending that we revise the criteria for natural lakes, (inaudible) and oceans and bays to allow a limited increase from the natural condition, rather than the ambient. We are also adding language to the rule criteria, however, that articulates our

intent to presume that the ambient and natural conditions for these water bodies are pretty much the same, unless there's been a discharge or human modification to the water body that would reasonably be expected to have altered the temperature. And the reason for that is an implementation concern of embarking on an expensive and complex modeling program to determine natural conditions in lakes or bays, unless there's some reason to expect that that has been altered. Then for the cool water criteria -- cool water species used for recommending a criteria that's a general narrative that basically just says we're prohibiting an increase in temperature that would impair cool water species. And then also a site specific criterion for the Klamath River, the cool water region of the Klamath River, which limits the increase above a natural background, but defines the natural background for that reach as the temperature of the water exiting Klamath Lake. So DEQ has shared our proposed revisions and EPA gave us suggestions in their disapproval letter and we feel like these are consistent with their expectations and we believe they should be approvable. For the alternate mixing zone requirements we are recommending that the EQC repeal these alternate mixing zone provisions that are in

section H of the mixing zone rule. If you're following along that, it would be on Page 36 of the Red Line Strikeout Attachment of the rules. The alternate mixing zone requirements were adopted in 1997 to allow larger mixing zones in certain circumstances. One example would be if the city was discharging to a small stream that had very low summer flows and didn't have enough dilution, but they could make a finding that the environmental benefit by leaving the treated effluent in the stream and providing more flow outweighed the disadvantage of the larger mixing zone. In October of 2004 DEPA -- excuse me, EPA disapproved those provisions and DEQ has not been using them at that time, so repealing this rule will align the ruling which with our current policy in practice. So I'd be happy to take any questions on this and then we would recommend that you adopt these amendments at this time.

KEN WILLIAMSON: So I got a couple of site specific questions. What do you do on the Klamath with the temperature increase that occurs in the three reservoirs down below the lake? I mean, how do you factor that in?

DEBORAH STURDAVIN: The hydro project is actually on the section of the Klamath

River that has Red Dan and Lahotten cut throat trout, for the most part, so they're working on -- and that has different criteria. We're not recommending changes to that at this time, and that's .3 degree human use allowance above the 20 degree biologically based numeric criteria. There's a 401 certification that's going along with the relicensing.

KEN WILLIAMSON: Right, but you said you based it on the temperature coming out of the lake?

DEBORAH STURDAVIN: For the cool water reach, which is from the lake down to Kino Dam, we're recommending --

KEN WILLIAMSON: Oh, so it's just that reach, okay?

DEBORAH STURDAVIN: Yeah.

KEN WILLIAMSON: I guess I didn't understand what the cool water reach was.

DEBORAH STURDAVIN: So for the Klamath River the cool water species reach is from the lake down to Kino Dam and then from Kino Dam downstream to the border of California is designated for Lahatten, cutthroat and red bin trout.

KEN WILLIAMSON: Okay, and that's a biological standard that's different? Okay, so that

was a piece I didn't --

DEBORAH STURDAVIN: The part of the project that will overlap with this reach is the reservoir that backs up above the first dam. So we'll have to be looking at that and how that's affecting temperature.

KEN WILLIAMSON: And so then on this mixing zone thing what happens in Pendleton? I mean, weren't they one of the primary users of this dilution thing?

LYNN HAMPTON: They had a temperature problem.

DEBORAH STURDAVIN: They did not -- they have not had this alternate requirement provision used in the Pendleton permit.

KEN WILLIAMSON: It was never used in the permit, but they dominated the flow in the river in the summer, right?

DEBORAH STURDAVIN: I'm not familiar enough to talk that specific, I guess.

LARRY KNUDSEN: There is a distinction between effluent dominated, dominated streams and this alternative mixing zone. So that you do have effluent dominated streams that aren't in the alternate mixing zone.

KEN WILLIAMSON: They don't have a mixing zone?

LARRY KNUDSEN: So I think that may be the source of.

KEN WILLIAMSON: Okay. I didn't understand that, so you have a confused commissioner. So can you tell me an example where you would have applied this if you ever would have?

LARRY KNUDSEN: We did. We actually had -- the main alternative mixing zone was used primarily for Oak Creek, which was where the warm met titanium facility discharged into that stream.

KEN WILLIAMSON: Okay. So that little (inaudible) creek that -- yeah, okay.

LARRY KNUDSEN: And that was kind of the concept case for the -- for the development. It was used in a few other minor instances. And then there was another component, which was the constructed conveyance, which was sort of the ditch. And we used that, in some cases, for irrigation districts.

KEN WILLIAMSON: Okay, so the only place this was actually applied was Wa Chang, right?

LARRY KNUDSEN: Right, we had to revoke coverage for like three or -- three -- two regular permits and some irrigation districts after

the rule was invalidated.

KEN WILLIAMSON: But then they moved their outfall to the main river, right?

LARRY KNUDSEN: No, that's -- Wa Chang is thinking about doing that, but what they had to do -- what Ormet actually did is reduce its effluent to the point where it no longer needed the mixing zone.

KEN WILLIAMSON: Okay.

LYNN HAMPTON: Other questions or comments?

BILL BLOSSER: I have one -- one of the major comments in here was EPA and I was particularly surprised just at their -- well, Comment 23 where they say, "The state should provide supporting documentation in this section that includes A through F." What confused me about it is we don't normally put supporting documentation in a rule, and they seem to be asking for you to revise the rule to put all that documentation in the rule, and I'm assuming you didn't do that --

DEBORAH STURDAVIN: yeah. Commissioner Blosser, I don't think they wanted us, necessarily, to put it in the rule, but I think they wanted us to put it in the response to comment so

that we had it on record and it could be part of their record when they go to approve the criteria.

BILL BLOSSER: And in this section it seems like they're going to OAR -- the one right next to it, 3-40040289 that they wanted something right in the rule. It just seemed odd. That's fine.

DEBORAH STURDAVIN: They seem to be okay with what we provided them.

BILL BLOSSER: And the Borax Lake Chug gets a lot of --

DEBORAH STURDAVIN: Would you excuse a very brief aside, because I thought this was interesting. The very week after I turned this in Oregon Field Guide had a story on Borax Lake Chug

BILL BLOSSER: It appears to me, the (inaudible) influence thing there is that that lake has been greatly augmented, the dimensions and size of it by human beings. It's much -- I mean there's a burm all the way around it that I don't think was there -- Mother Nature didn't put there, so it seems like there may be, eventually, an issue there. But it goes back to the 20 mil team borax people.

DEBORAH STURDAVIN: And that criterion --

BILL BLOSSER: Go find those people, those (inaudible), and make them fix it.

(Inaudible discussion)

DEBORAH STURDAVIN: That criterion is different from the others in that it's -- we're limiting the decrease rather than the increase.

BILL BLOSSER: It's a very pretty place, but --

LYNN HAMPTON: I have a question and it's related to Item Number 2 on Page 4, which is your report. Does revising the temperature criterion -- do you just say it there -- what is the practical effect of that? It says, "From a limited human cost increase above the ambient temperature to a general narrative that prohibits an increase in temperature that would impair cool water species."

DEBORAH STURDAVIN: Right. Okay, the practical difference -

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DEBORAH STURDAVIN: -- is that if it's an increase above ambient than you can go out and measure right now what ambient is and calculate the allowed increase above that, which would make it a little easier to implement. And that's why basically we had written it that way. A general narrative that

prohibits an increase that would impair the species means that we have to make a case by case judgment as we apply this in a permit, but we can use some screening tools to help us with that. But for example, if they can meet the red -- the 20 -- an increase above the 20 for Lahatten and Red Bin that we'd be confident that it would be protective of cool water species. If they can't then we need to look at, well, what are they -- depending on the reach of the proposed activity, we need to look at what are the local species and what are the temperature requirements of those species and make a judgment.

LYNN HAMPTON: Is there an argument? Is the argument seriously made that any increase in temperature impairs cool water species and what effect is that gonna have on the implementation of this change?

DEBORAH STURDAVIN: I think that some -- I guess that argument could be made, but that's why we would have to look at what the thermal requirements of the species present are and where the current temperature is at and make that judgment. And that does -- that's part of what makes it more difficult to make a case by case judgment as you apply a standard like that is because you have to

make a judgment about how much the change is going to impact the local use. One of the reasons we felt like we could go ahead and make this change was that there are very few permits -- there are relatively few cool water reaches in this state and there are very few permits that discharge into those reaches.

LYNN HAMPTON: And then -- and I think what I'm doing is just reflecting the comments that Bill was making about -- Okay, what's the natural condition of the lake, you know, when it's been altered from practically (inaudible) memorial? What are you difficulties going to be in determining what is the natural condition of a stream or creek or -- well, lakes, oceans and bays, natural condition, does the -- will the -- will that apply to streams and rivers also, and how do you determine what the natural condition is?

DEBORAH STURDAVIN: Right. This -- in this criteria we're only addressing the oceans and bays and lakes, except for the cool water, but we didn't put the natural condition piece in the cool water. So for oceans, bays and lakes, what we're trying to get at with the way we've written the languages, if we see that there has been discharges we gather some amount of information and see that

there have been discharges to the water body or a modification of the water body that would reasonably be expected to effect temperature. Then we would look into it with in more detail. And there's, I guess, different levels of complex -- complexity you could get into for doing that. And right now, for rivers and streams we do pretty intensive modeling when we want to determine what the natural condition is. We don't want to do that for lakes and bays if we can avoid it or unless we think there's a good reason to do it, because it is complex and expensive. But lakes, for example, the temperature would be driven largely by the morphology or the shape, the ratio of the surface area to the volume of water. So I guess we'd look at, you know, have we done anything to alter that and it's much less likely in the case of lakes than streams that the things we have done have altered that significantly in a way that would effect temperature.

LAURIE AUNEN: In one addition to that is if you look on Page 6 of the staff report you'll notice that for lakes there is one permit discharging. So we don't think lakes is really an issue. Oceans and bays there are 29, excuse me, permits. But I think that's a little bit of a

different situation. It is -- I remember when we did an informational update to the commission on this back in December and Commission Blosser was saying isn't this a case of terminology? In a large part, it is because it's a question of when EPA looked at the language we had submitted back in 2003 they said we cannot read the word ambient on its face and feel like we understand what you mean by that, as it were. So the way we've tried to define it -- they wanted us to use the word, "natural conditions," because that's what they believe the clean water act requires, but the way we have written the language is more similar to the 2003 rules. It's just clarifying for EPA how we are actually going to use this language in our standards. So hopefully that's understandable.

LYNN HAMPTON: Commissioner Blosser, thank you.

BILL BLOSSER: I was gonna move adoption of the staff recommendation on Agenda Item G.

LYNN HAMPTON: Is there a second?

UNIDENTIFIED SPEAKER: Second.

BILL BLOSSER: Is that all I need to say?

LARRY KNUDSEN: Well, again, this is a bit of an oddball one, because we've combined it

to --

BILL BLOSSER: Well, but I mean -- I'm just doing the G and we do H next, right?

LARRY KNUDSEN: -- That's right, but because we usually refer to an attachment and the attachment is both rules, so I think what we really proposing is to adopt the amendments that are set out in blue in Attachment A2 and those are the attachments to rules 20 -- I mean, the amendments to rules 0028, 0058, 0180, and 0195, if you'll accept that as a description.

BILL BLOSSER: Okay, I will. In the future, the staff recommendation will say these clearly so all we have to do is move the staff recommendation.

STEPHANIE HALLOCK: Yes, we are going to add that to our staff reports from now on. Helen has that written down.

LYNN HAMPTON: Commissioner Uherbelau, are you ready to second that refined motion?

JUDY UHERBELAU: Whatever.

LYNN HAMPTON: Is that a yes? All those in favor of Commissioner Blosser's motion, as further explained by Mr. Knudsen, signify by saying,

"I."

IN UNISON: I.

LYNN HAMPTON: Okay, that staff recommendation is approved. Let's go on to Section H.

DEBORAH STURDAVIN: Agenda Item H is a set of error corrections and clarifications to rule makings adopted in 2003 and 2004. As a follow up rule making to correct a number of errors and clarify some meaning in the rules. These revisions are shown in Attachment A2 now in red, and they're pretty much scatter throughout the division. In December 2003 EQC adopted a rule making package that included major revisions to the temperature standard, a major reformatting of division 41, and several other standards rule revisions. The reformatting condensed the rules by one count, reducing them about 170 pages and made the rules easier for the public and DEQ's staff to use by putting definitions and basin rules in alphabetical order. But the large scope of this rule making, combined with the fact that we ended up doing the final stage of the rule making on a pretty short time frame under a court order related to the lawsuit on the temperature and mapping beneficial uses, led to a large number of errors and a need for

this follow-up. In addition, the other piece this addresses is then in May 2004 the commission adopted major revisions to the toxics criteria. In those rules we identified effective dates and because the rules haven't been approved by EPA yet, we're making changes that correct those dates. Attachment A1 describes in more detail that types of recommendations, categorized first by error and then by clarifications, that the errors on Page 1 to 4 on Attachment A1. And examples are things like replacing some language that inadvertently got left out or moving language that was misplaced during the reformatting, correcting some cross references, correcting the effective dates for some of the toxic criteria, as I mentioned, and correcting several mapping errors. And then on the clarification side there are six revisions being recommended that clarify language. They are described on Page 4 to 6 of A1, and rather than walking through each one I'm just gonna open it up to questions. I'd be happy to explain any of those that you want to get into in more detail.

BILL BLOSSER: I move we adopt the staff recommendation to adopt the red changes on A2 -- anything else that Steve was to say.

LYNN HAMPTON: Is there a second for this motion? Okay, so just for the record, we're referring to Agenda Item H, which is identified on our schedule as Rule Adoption Error Corrections and Clarifications to 2003, 2004 water quality standard rules. There's an attachment to Item G, which is Attachment A2, the language in red in that attachment is what we are -- have moved for adoption and seconded. And so will all those in favor signify by saying, "I."

IN UNISON: I.

LYNN HAMPTON: All right, those changes are adopted.

LAURIE AUNEN: Thank you very much.

DEBORAH STURDAVIN: Thank you.

BILL BLOSSER: (inaudible).

LYNN HAMPTON: Now, our schedule now calls for a break. We're a little bit ahead of schedule. Fifteen minutes.

(Break)

LYNN HAMPTON: And we will take up informational Item I. Due to the dispatch with which Laurie and Deb took care of G and H we were able to have a longer break. So we're back on schedule. Informational Item I, Director's Financial Review, Judy

Hatton, Renae Mark Mangin. Welcome.

RENAE MARK MANGIN: Thank you. Good afternoon, Chair Hampton and members of the commission. For the record, my name is Renae Mark Mangin and I am the management services division administrator. Oregon accounting policy and DEQ policy require that the commission review and approve the DEQ director's financial transactions annually. And I'm here to recommend the review and approval of a summary of certain financial transactions by Director Hallock from January 1, 2006 to December 2006.

JUDY UHERBELAU: I have a question -- thank you. Everybody seems to do their financial reports in a different way, so I just want to ask you if my -- the way I'm looking at this is correct. All these things are listed, the reason for travel, the total cost amount reimbursed, net cost -- the net cost of DEQ, of course, is less than the total cost. This reimbursement, is that the reimbursement by another party, for example -- I see the reimbursements happened when she's going to ECOS meetings and that, so somebody else has paid for that, that's what that means, right?

RENAE MARK MANGIN: (inaudible) states, yes.

JUDY UHERBELAU: Okay, I just wanted to make sure.

LYNN HAMPTON: Okay, continue.

RENAE MARK MANGIN: There isn't much more to say. You know, the overall cost to DEQ was about $4,500 but the $8,108 was actually spent and then we were reimbursed for about $3,600 for that.

STEPHANIE HALLOCK: I'm a great deal.

JUDY UHERBELAU: You're cheap director (inaudible).

LYNN HAMPTON: And just for the record, we're looking at the report on Agenda Item I and the questions that Commissioner Uherbelau and Mr. Mangin were referring to arose out of Pages 6 and 7, which is the two page summary of director's financial transactions. And this -- is there anything else you wanted to tell us about this? It's pretty straightforward, I think, cuz we had it ahead of time. And I'm presuming that this last -- these last attachments are just the documentations of that summary sheet, which you've prepared as the two page report? Yeah, took a look through it. Commissioners Williamson and Blosser, do you have any questions?

BILL BLOSSER: Nope.

LYNN HAMPTON: All right. Now what do we need in this context? Do you need an approval of the financial transactions?

UNIDENTIFIED SPEAKER: You need to move and approve if you choose to do that.

LYNN HAMPTON: And it would be a matter of approving summary, which is Pages 6 and 7 or something else in this --

STEPHANIE HALLOCK: I would recommend (inaudible) that you approve Agenda Item I, the director's trans -- the Director's Transactions, as presented in Agenda I.

LYNN HAMPTON: All right, I'll entertain a motion if anyone has one.

UNIDENTIFIED SPEAKER: So.

LYNN HAMPTON: All right, it's been moved. Is there a second?

UNIDENTIFIED SPEAKER: Second.

LYNN HAMPTON: To approve the transaction, the director's transactions as set for in Agenda Item I. All in favor, "I."

IN UNISON: I.

LYNN HAMPTON: It is moved and carried. Thank you. That was a remarkably short

presentation Mr. Mangin.

BILL BLOSSER: Does this ever -- and this is a piddly little thing, but half of these are approving Stephanie Hallock and the other ones were approving Stephanie Cummings.

STEPHANIE HALLOCK: I have to sign that my name is Stephanie Hallock-Cummings is my legal name. And I'm in the state system as Stephanie Hallock-Cummings for purposes of the timesheets that are in here. That's probably what you're seeing.

BILL BLOSSER: Stephanie H. Cummings is the timesheets.

STEPHANIE HALLOCK: Yeah, but everything else, I do business under Stephanie Hallock. And I'm in the email system as Stephanie Hallock. They knew how I am.

BILL BLOSSER: Yeah, but the system obviously handles that confusion.

LYNN HAMPTON: Yes, even though it is highly refined and quite expert, the Washington (inaudible) --

STEPHANIE HALLOCK: The Washington D Mill facility does not, as do others and I won't get started on my Hillary Rodham Clinton argument. Why people can't handle three names is beyond me.

LYNN HAMPTON: Okay, all right. So now we go along to Agenda Item J, Informational Item, Annual Performance Measures Report to the Legislature. And we still have Mr. Mangin and Karen Whissler?

UNIDENTIFIED SPEAKER: Yes.

RENAE MARK MANGIN: Yes. The name, Mark Mangin again, and this is about performance measures. You may recall that last year our strategic planning discussion at the planning strategic discussions we agreed to report semi-annually on our performance results. This the first of our planned semi-annual progress reports to you. And today we will share with you DEQ's key performance measures, as reported in the 2005 annual performance progress report. Karen Whissler, who will be doing the presentation primarily, is DEQ's internal organization improvement consultant and our measures coordinator, and so she'll present the 2005 results.

KAREN WHISSLER: Good afternoon, commissioners.

LYNN HAMPTON: Good afternoon.

KAREN WHISSLER: So you have before you three documents. One is the staff report, which provides the context for this agenda item. The second

is the actual 2005 annual performance progress report, and then the third thing that Helen just handed out to you is our proposed change to the 2005 key performance measures. So what I'd like to do is go over, briefly, our performance measurement system, which can be a little confusing for those who don't work with this every day, and for those who do. And then I will go through the annual report highlighting some of our -- highlighting our accomplishments for 2006. I won't, probably, have time to go through each of the performance measures, but if you have questions I will have an opportunity to go -- to let you ask me questions about them. And then finally I would like to go through our list of proposed changes that we'll be taking to the legislative ways and means committee for approval for the 2007/09 biennium. So if you look first to the staff report I'm gonna just talk about the performance measurement system. At the highest level of our performance measurement system we have the Oregon benchmarks, which are the high level environmental indicators of Oregon's air, land and water. And the benchmarks support Oregon Shines, which is the state's strategic plan for improving the quality of life in Oregon. DEQ has responsibility for several of these benchmarks. In

the third document the list of 2007/09 performance measures you'll see listed a number of those benchmarks, which include things like the percent of air contaminate discharge permits that are issued on a timely basis, the percent of monitored stream sites with increasing and decreasing trends, and good to excellent condition, the amount of solid waste that's land filled or incinerated, a variety of other ones. Those are abbreviated OBM in the left hand column of that third document.

JUDY UHERBELAU: Is this what you're looking at?

KAREN WHISSLER: That would be it. Those are the 2007/09 key performance measures that we're proposing. So that's the highest level of our performance measures, and at the next level we have our executive measures. The executive measures reflect the agencies highest priorities and they are designed to measure the achievement of our strategic directions, as well as to provide public accountability for our performance. The executive measures themselves include both the key performance measures that are included in the 2005 report before you, as well as a set of internal, largely programmatic or administrative measures that we use to

track our performance with our strategic directions. So that is kind of the overall framework of our measures system. Does anyone have any questions about that before I go into the results? So turning to the 2005 annual performance progress report on Page 1, you'll find that in 2005 we had 15 key performance measures. Again, these are the measures that we report to the legislatures and these are the measures that we'll be using when we talk to the ways and means committee about our budget. Five of the measures track deficiency and internal management results. Seven track --

UNIDENTIFIED SPEAKER: Seven and eight.

STEPHANIE HALLOCK: It's bate stamped seven and eight.

LYNN HAMPTON: yeah, bate stamped seven and eight.

KAREN WHISSLER: Oh, I'm sorry.

LYNN HAMPTON: It's -- your own internal numeration on the document is a little different than our overall one for the --

KAREN WHISSLER: Okay, well, I'm gonna be throughout referring to the page numbers on the original document. Sorry about that. Seven of

the measures track environmental results and six track customer service results. And as you'll see, some of the measures fit into more than one of these categories. On Page 3 of the report you'll find a summary of our results. DEQ successfully met or substantially made equivalent progress considered meeting the target for 11 of our 14 performance measures. And that's a 78% success rate, so we consider that to be really good performance for 2005. One of the measures on the page in that table was not implemented in this time frame. That was the ERT performance measure, so I'm basically relaying the measures of -- the results of 14 measures.

LYNN HAMPTON: Is URT set in -- Economic Revitalization?

KAREN WHISSLER: That's correct. And during that year DEQ worked with several state agencies that also are involved in the ERT process to develop a statewide measure. The three measures that we did not achieve targets for were key performance measure number two, which is air quality permit timeliness, key performance measure number 5, which is our water quality TMDL issuance, and KPM number 6, which is the issuance of water shed based permits. So I'm gonna briefly go over what fed into why we

didn't meet those targets and then I'd like to highlight some of the performance results for each of our programs; air, water, and land. If you look in Page 9 it has the results for key performance measure number 2, which tracks the timeliness in issuing air contaminate discharge permits. This key performance measure is one of the measures that's also an Oregon benchmark. And during the past three years our performance has dropped slightly and in 2005 it dipped below the target of 90%, which was actually a pretty aggressive target for us. There are several reasons for this. One is program avenues including general fund cuts and anticipated federal fund cuts, combined with the increased cost of running the program and the fact that we have not had a fee increase since 2001, meant that we were taking a pretty cautious approach to hiring of staff to support that program. So the ACDB program has been operating below budgeted staffing levels and that impacted our ability to issue timely permits. DEQ's 2007/09 budget request includes a restoration policy package and fee increase, which will fully fund the FTE needed to support timely process of our ACDP permits. Turning to Page 15, key performance measure number 5 is actually one of two measures that track our performance in completely

clean water plans, also call TMDLs, for impaired water bodies in Oregon. This measure tracks the percent of TMDLs completed from the federal 303D list of impaired water bodies, and that list is actually updated every few years, which results in an ever changing base line. We didn't meet the target for KPM5 during this year, and in fact, the rate of TMDL completion has slowed in recent years for a couple of reasons. One is we've had a reduction in staff in the TMDL monitoring and development program. But we've also had a number of highly complex, very large TMDL projects that we've been working on that have extended the anticipated completion dates. One of those was actually for the Willamette Basin, which we completed in 2006. We now have achieved 872 completed TMDLs. The Willamette Basin was actually the largest and most complex TMDL, and the watershed covers 11,000 miles and has the largest number of industrial and municipal dischargers in the state. As I mentioned, we do have a second measure on TMDLs, which is key performance measure number 4 on Page 13. And this -- on Page 13 -- and this measure tracks a smaller universe of impaired water bodies, specifically those that are specified in a federal court order that mandates that we complete a certain number of TMDLs by 2008 and

2010. We are currently on track to meet these milestones and we anticipate continuing to meet these targets. This is a high priority for the water quality program. This second measure is one of the ones I will be talking to you at the end of this presentation about that we're proposing to delete in the 2007/09 biennium, which although we consistently good performance with the measure, it is actually duplicative of key performance measure number 5, as it's a subset of that measure.

LYNN HAMPTON: Wait. I --you lost me, I'm sorry.

KAREN WHISSLER: That's okay. That was rather confusing. So key performance measure number 5 is the total -- we base our results on the current 303D list, which is all of the impaired water bodies listed in the state. The second measure is a subset of those water bodies.

LYNN HAMPTON: You mean measure 4 is a subset of 5?

KAREN WHISSLER: Measure 4 and it consists of a list of TMDLs that we're required to complete according to a consenter issued by EPA.

LYNN HAMPTON: Okay.

STEPHANIE HALLOCK: Karen, I don't

want to interrupt your flow, but I want to make an important point of clarification here that I think you need to know. We met, oh, I don't know, a couple months ago with Paul Sebert with the legislative fiscal office. We will be going through -- and I think because she's doing such a great job today, Karen will probably be going through in front of ways and means. The performance measures would be supporting her. But both of us together will be reporting to the ways and means committee on these performance measures. We met with Paul to talk about what the legislature wants. He was very clear in saying they want agencies to start paring down their number of performance measures, that they have, in general, too many. And we went through with him -- this was one that came up where the subject really was this is duplicative. Why are you having both of these measures? And Karen will talk more in a bit about the decision process on the ones that we are choosing, which she will go over. In this last piece of paper you'll see there's more than one. We started out with, I don't know, 18, 20 measures and we're getting down to 13, 15, something like that. But that was the genesis of that is we're trying to, of course, have the best measures we can for

ourselves but we're also responding to the legislature. I'm sorry?

LYNN HAMPTON: In this context it's probably helpful for us to know which ones are getting done that the federal government is wanting us to do or demanding that we do too.

BILL BLOSSER: Yeah, similar to what I was gonna say -- between the two of them, I'd give it a five and keep four, because four is a (inaudible) and four shows more progress. Five doesn't look like we're getting anywhere at all. And if I'm going in front of the legislature I'd rather be showing them four than five.

STEPHANIE HALLOCK: Well, I would be certainly happy to convey that on behalf of the commission when we go through our conversation with the legislature, because if the other agencies experience that they're having right now -- Parks is in there right now -- is any indication we will be having extensive dialogues about the performance measures with the ways and means subcommittee. And I think everything is fair game. To me, this whole thing is iterative. We are learning every time we've gone through this we've made improvements, we've learned more, we've changed things and I think it

will evermore be like that on performance measures. So that's a very legitimate comment.

BILL BLOSSER: Well, five also appears -- not only are we way behind, but it doesn't appear like we're going to ever make any progress toward 100%. I mean, it stays -- it levels off at 80%.

KAREN WHISSLER: It's a measure that --

BILL BLOSSER: (inaudible) to the indefinite future, so it's sort of discouraging.

KAREN WHISSLER: Commissioner Blosser, it's a measure that's very challenging, because the baseline list of sites changes constantly as well, so it is something that we are continuing to look at and we do hope to come up with a better way of tracking and reporting on our performance, but we haven't -- we haven't requested a change, specifically, to that one for this.

LYNN HAMPTON: Commissioner Uherbelau?

JUDY UHERBELAU: Yes, in response, I'd like to say that I think Commissioner Blosser's comments are a little short sided. If you look at -- we're looking at five and it says how we are

doing and it says, "We've slowed due to staffing cuts." This is something that helps, I think, when you got to testify to show we're not doing any better because they're not giving us enough money. If you're showing that we're progressing this much more smaller subset, we're progressing, you're gonna have a hard time saying, "You know, we're short of staff."

STEPHANIE HALLOCK: And I think that's a good point. The other thing is as Larry just pointed out, when the consent acre measure has an end date of '09 or '10 or whatever, I mean, and the other debate is around process measures. I mean, it's a process measure. Are we getting them done? And then we get into these conversations, which you particularly get into with performance measure 10, which Karen will be covering at some point, or not depending on how much time we have. That's talking about the condition of the water and when you drill down into the measure, what we've learned is we've leveled out. You know we have about 14% of the water bodies that are improving and about 14% that are declining in water quality. So what does that tell us? And then Greg Petit who's sitting here -- see, I'm doing it (inaudible) remembering it. He gives you a very eloquent, thorough description of why

we have leveled out. And so you get into these -- what I try and argue the point that you need both. You need measures of the conditions that are actually changing in the environment and you need process, for lack of a better term, process measures like these TMDLs that show how you're getting there. But we have those debates as well.

JUDY UHERBELAU: My comments, Bill, weren't that we shouldn't cut back on the number of things we're looking at, cuz I think it's possible we can, but in that particular instance I thought we might be doing ourselves some harm --

KAREN WHISSLER: Okay, I just had one more measure where we didn't meet the target, and briefly it's key performance measure number 6, which is on Page 17. And this is the measure that tracks how we're doing in terms to shifting to a watershed-based permitting program. And in 2005 we developed permit issuance plans based on the watersheds, which we believe will enhance our ability to consider the cumulative impacts of permits on local watershed, and also to work with watershed-based stakeholders to better protect Oregon waters. Our goal is to issue 95% of our permits on a watershed basis by 2010. This is another one of the measures

that we -- when we talked with our LFO analyst, decided that we would remove from the 2007/09 biennium, mostly because it's an administrative measure that's about how we do our permitting, as opposed to an environmental result. So with that, I'd like to just briefly go over a couple of things in the report for each of the programs. Turning to water quality on page 19, this is one of our success stories and it's about our ability to address our permit backlog, which in 2001 was at an all time high of about 65% of our NPDES permits awaiting renewal. And in fact, was the highest back log in the nation. The back log resulted from increasingly permit standards and an increase in the number of sources that were actually needing permits. In 1994 DEQ permitted 2,700 sources and the number had increased to 4,000 in 2001. So in 2002 we convened a blue ribbon committee, which included industry, environmental and local stakeholders, and they worked with us to identify program improvements. As a result of that we targeted the issue of reducing the back log. We put staff resources on that and we achieved a reduction of the back log to 30% by the end of 2006 for NPDES permits. And also we are at 12% of a backlog for individual and general water pollution control facility

permits and NPDES permits. Looking at land quality, I'd like to talk to you a little bit about the situation with municipal solid waste, which is on Page 40. So Oregon benchmark 83, which we reported on in the 2005 report, monitors the pounds of municipal sold waste that are land filled or incinerated per capita. This is a benchmark that we propose to add as a key performance measure in 2007. If you look at the graph you can se that there has been a steady increase in solid waste disposal since 2001, although we've also had an increase in recycling. What we know is that recycling programs or traditional materials are fairly well developed, and there's not much room for better capture of materials that are currently going into curbside programs. And to have the biggest effect on decreasing disposal we need new programs to pursue the waste streams that are currently growing at the fastest rate, which includes construction and demolition debris, and durable and non-durable goods that are being purchased and disposed of more rapidly than they were before. Recycling alone can't keep pace with the growing amount of waste disposal, and so programs like our waste prevention strategy and electronic waste recovery and reuse are aimed at not only reducing waste

generated, but also increasing the reuse of materials. On Page 35 I'd like to talk to you about air quality, specifically key performance measure number 12, which is an Oregon benchmark, which has been DEQ's primary measure of air quality conditions for many years. We are proposing to adopt this benchmark as a key performance measure. The 2005 results show that Oregon's air was healthy to breathe 100% of the time, however the benchmark as originally written was based on a legal definition of the violation of national air quality standards and the associated designation of non-attainment areas, and it didn't adequately capture the healthiness of the air. It was also not comparable to other states. Because of new science and the fact that we have an increased understanding of exposure to chemicals in our air, it's clear that we need to look at many more pollutants. So during the last year DEQ worked with the Oregon Progress Board to develop a new benchmark for air quality that will reflect air quality challenges that we face today as well as that we anticipate tomorrow, and that will be comparable to other states. The results is that this benchmark will continue to reflect the criteria pollutants associated with the national air quality standards,

but it will be based on the air quality index, which is a national index that allows us to compare to other states. The new measure was also refined to distinguish between air quality that impacts the whole population versus air quality that impacts sensitive populations, such as children, elderly and those that have heart or lung disease. If you turn to your third handout --

BILL BLOSSER: Are we -- are you done with that one?

KAREN WHISSLER: -- I'm sort of -- I'm adding to the other thing that we did with air quality measures, but I'd be happy to answer a question about that.

BILL BLOSSER: Just one quick one. It says -- it shows 100% compliance in 2005?

KAREN WHISSLER: Correct.

BILL BLOSSER: But the text says in 2005 we experience 33 days of unhealthy air in 6 different cities. That would sound like we couldn't have gone to 100%?

STEPHANIE HALLOCK: That is probably -- Andy is here -- that's probably 100% in air quality (inaudible), right? 100% doesn't mean 100% perfect? I think that -- now, I'm guessing.

BILL BLOSSER: I was comparing the text under how we compare says, "We had 33 days of unhealthy air."

KAREN WHISSLER: Even though we're 100%.

BILL BLOSSER: That would be like 99 or 99.9% or some' --

ANDY GINSBERG: So commissioner ~~Bloominhour -- Blosser -- Mr. Blosser~~, Andy Ginsberg -- (inaudible) suffering from a cold. The -- that's the reason that we're actually changing that benchmark. It's a technical definition of violation of an air quality standard. You have to have so many excedences over a three year period, average the 99th percentile to actually count as a violation. What we want to count now is time from the air quality index was showing unhealthy, which would look at individual days, not ones that technically violate the federal standard.

BILL BLOSSER: So this thing over here -- the graph is your technical thing that no violations -- the title of it says, "Percent of time is healthy to breath." It doesn't say, "Percent of time we didn't violate the air quality standard."

ANDY GINSBERG: Right. You'd have

to look at the footnotes, but it was defined as a violation of federal air quality standard. That title was put on to make it more understandable, but it actually makes it less understandable.

LYNN HAMPTON: So it's likely that when you change this benchmark next year will show not meeting 100%, because you'll be actually taking into account specific days of unhealthy air in various locations in Oregon.

ANDY GINSBERG: The other different, commissioner Hampton, is that the -- this -- the benchmark that you're looking at is when EPA had the old PM 2.5 standard, and we were actually -- the index -- we had already been looking at the new standard and showing unhealthy days, even though the federal standard hadn't change yet, and so you're seeing that difference as well. Even under the old formula we would show unhealthy air now that we have Klamath Falls in Oakridge violating the new federal standard. But this new benchmark will give it more crispness, because we'll be able to see each city, how many times they're over the -- over unhealthy levels.

LYNN HAMPTON: Thank you. Go ahead, Karen.

KAREN WHISSLER: So I wanted to mention another result of our work with the Oregon Progress Board to try to better characterize the quality of Oregon's air and its impact on health, and that is that we're also proposing to add another benchmark, benchmark number 76. So if you do look at the list of --

UNIDENTIFIED SPEAKER: Benchmark number what?

KAREN WHISSLER: 76. If you do look at the third handout, which lists the proposed key performance measures, you'll see that we have a new benchmark to track toxic air pollutant reductions. These are pollutants of concern in Oregon and are greatly influenced by individual actions. So together these two measures will better characterize the quality of Oregon's air and its impact on health. We actually are proposing a third air quality measure, more specifically related to diesel particulate emissions, and this will be a key performance measure. And diesel particulate emissions are associated with respiratory diseases such as asthma, heart disease and cancer.

LYNN HAMPTON: That's number 11 on the other side?

KAREN WHISSLER: Right.
LYNN HAMPTON: Okay.
KAREN WHISSLER: So I wanted to -- I'm not sure how much time I still have.
LYNN HAMPTON: You're fine. You have 17 minutes.
KAREN WHISSLER: Okay, if I can take a minute I'd like to highlight our customer service results, which are also in the 2005 report on Page 33. Just -- it's -- we are continuing to be very successful in achieving good to excellent customer service in the eyes of several of our key stakeholder groups, which include our air quality and water quality permits, as well as onsite septic system owners. We've been conducting biennial surveys of these customers for the last -- well, since 2002, and we met our target -- actually, it's a 2006 target because it's a biennial measure, but we met it in 2006 with 85% of our customers rating our customer service as good to excellent. We do have plans to also include in this measure vehicle inspection customers and hazardous waste technical assistance customers. So I just wanted to highlight that for you. And if you're ready I would like to go through our proposed changes for the 2007/2009 biennium, but I

would like to offer the opportunity to answer any questions you have about the 2005 annual performance progress report, if you have them at this time.

LYNN HAMPTON: Questions? All right, I think we asked them. Go ahead.

KAREN WHISSLER: All righty. So, yes, as Stephanie has said we are continuously trying t improve on our performance measurement system to ensure that we are providing public accountability and that our measures are really giving us the data that we need to make appropriate management decisions. So with that in mind, we're actually proposing to delete six of our key performance measures, and those are on the back page of that there handout. We are proposing to add seven key performance measures, many of which are existing Oregon benchmarks, and we're modifying two of our key performance measures. What's gonna happen is this is part of our presentation to ways and means where we link all of our policy option packages to our performance measures, and at that time we will be requesting these modifications to the list of key performance measures. I didn't have any further speaking points, but I'd be happy to answer any questions.

BILL BLOSSER: One clarification

question, on the Umatilla one it shows that as of -- we've only -- it was -- I know this is 2005 where you have data, but it was like 1% or 2% have been eliminated, and today we got a report that we're 50% of the items. Does that translate, roughly, to 50% of the total (inaudible) gotten ride of, because the performance measure doesn't show us getting the 50% for quite a while? I can't remember which one it is.

KAREN WHISSLER: For the destruction of chemical weapons at the Umatilla Depot?

BILL BLOSSER: Yeah, which one is it? (inaudible) -

(End of Tape 4 Side 6A)

BILL BLOSSER: -- I don't know. I'm just confused. It seemed like we should be about 50% now. Maybe the number of items is different than the percent of total pounds.

STEPHANIE HALLOCK: That's true. That is true.

BILL BLOSSER: So even -- so at the end of 2006 we will have destroyed -- even though we (inaudible) 50% of the items, that's only 20% of the quantity that's there, huh?

UNIDENTIFIED SPEAKER: I think

that's because they've been destroying the hard to destroy, small bombs with small amounts of materials. And they got all those ton containers of mustard gas.

STEPHANIE HALLOCK: Right, it's quantity of agent.

BILL BLOSSER: Okay. So -- I just thought there would be closer together, but now they're getting the big barrels of stuff and --

JEFF MURRAY: Right.

LYNN HAMPTON: Maybe at the end they'll do the mustard, which is the (inaudible).

UNIDENTIFIED SPEAKER: (inaudible).

KAREN WHISSLER: I'm not sure where the 50 came from, but I was working on the ways and means presentation and the data that I had was that at the end of 2006 we had destroyed 26% of the stockpile, which is a big jump and actually exceeds our target. And that, you know, the reason that we didn't meet the target in 2005 was because of a fire and a lot of investigation related to that.

BILL BLOSSER: Well, 50% is in our report from today.

KAREN WHISSLER: Well, you're more informed than I am.

BILL BLOSSER: Well, 50% of the

total items, so it's different.

KAREN WHISSLER: Items, yes, it's different.

LYNN HAMPTON: The total agent.

STEPHANIE HALLOCK: If I could just make a process comment that occurs to me during this conversation. As I said, this is iterative and I think that -- Karen can help me. I can't even remember now how involved you all got to be in this -- the kind of development of the measures initially and in this iteration. But obviously we have a lot of interface with the legislature on it, so probably like -- of course if they go to annual sessions, god only knows when we'll do this. But theoretically in the summer -- whenever we start the conversation about what is this gonna look like for the next cycle we should be starting that with you, so like some of these things that you're reacting to now we can somehow figure out how to bring you into the process earlier, because in a way we and LFO were sort of driving you right now. And I think we want to, ideally, turn that around. And the -- by the way, the benchmark people -- I mean, everybody and his brother gets a dog in this fight sooner or later about what we should be measuring. But you are our

commission and you know you're the big dog, as far as I'm concerned.

KEN WILLIAMSON: So what does the legislature say about this?

STEPHANIE HALLOCK: I'm glad you asked this question. The other reason that this is iterate -- first of all, I think it's very important, and I certainly intend to do this, to be absolutely non- defensive about these measures. It is a learning process. It is iterative. It isn't always to -- your earlier point, commissioner Blosser, say that we're doing a great job. The idea is really to be looking at what matters and measuring what matters and making sure we're doing the right work. And so we have not always, as an agency, nor has the legislature, always really been focused on this. The current legislature notably driven by Senator Kurt Trader, who's one of the co-chairs of ways and means, and also representing Mary Nolan, who historically is very interested in this, is putting in enormous emphasis on performance measures in the entire budget process, to the point where we have to, in our presentation, show how all of the policy option packages in all of our bills relate to our performance measures in some way. And then there

are, you know, things that kick out -- we'll have to explain why there's not a relationship. I mean, they're taking this increasingly seriously. And I don't expect to see that change, nor do I think it should change. I mean, I think it's a good thing but we will have to grow all together to be sure we're really getting it -- measuring the right things and be open to change and suggestion and criticism and whatever.

KEN WILLIAMSON: so the one that I would suggest that you should look at, ultimately when we get down the road here, is how many miles of streams that were impaired are now not impaired. That's the number that we need, not how many TMDLs you've written or whatever. That's ultimately the impact number and those numbers will start accumulating here sometime down the road right as these TMDLs kick in.

STEPHANIE HALLOCK: That is our hope and we actually have some evidence and Greg can certainly speak to this that that is happening. The other key variable in there, however, is this measure relates -- is only from data collected at monitoring sites, and so statewide we have 144 monitoring sites. That is by no means a full monitoring network for the

entire state. So these are the trends where we monitor, but obviously we are not able to speak to the trends where we don't monitor. Does -- do you want to add anything? Those water people are conferring there and making sure I get it right.

GREG PETTIT: Chair Hampton, members of the commissions, I am Greg Pettit, the interim administrator of the laboratory division in DEQ. At one time we had a performance measure that was basically the miles of streams on the 303D list and whether that was going down or not. We found that that was misleading -- in terms of the environmental outcomes, because the 303D list is not an accurate representation of water quality across the state. It's only a list of streams where we have data. As we do more monitoring effort or as we change standards the 303D list can change dramatically. So that's why we went to the water quality index, which we thought was a much more objective measure of water quality. It didn't change as a result of changes in standards, and it was based upon a set network of sites across the state. Ideally what we'd like to have, and it's in our monitoring strategy that we've developed, is a probabilistic network of sampling sites across the state that would give statistically

accurate data that would represent all the stream miles within the state. If we had that then we could give a very accurate accounting of whether or not the water quality across the state was improving or declining. Right now the best substitute we have for that is our ambient river monitoring network.

STEPHANIE HALLOCK: Are you done?

LYNN HAMPTON: So at this point -- this is an informational item, all right. So -- all right, thank you very much.

KAREN WHISSLER: Is this the kind of thing you were hoping to have, in terms of reports and discussions on this issue, cuz we want to be responsive to what you hoped to do as a commission on our performance measures?

JUDY UHERBELAU: It's helpful.

LYNN HAMPTON: Yes. I'm interested in hearing what changes you propose and why, so I enjoyed that. Thank you. All right --

STEPHANIE HALLOCK: it is the director's dialogue?

LYNN HAMPTON: -- Agenda Item K.

STEPHANIE HALLOCK: Yes.

LYNN HAMPTON: Director's dialogue, Stephanie, do you want to come over here closer to us

or do you want to speak from there?

STEPHANIE HALLOCK: Well, I could come over there. That would be a nice change of pace for everybody.

LYNN HAMPTON: Because there -- we're usually a closer quarters. We're in rather grand chambers today.

STEPHANIE HALLOCK: Thank you very much. The first item is just an update on our efforts to build stronger relationships with the tribes. As you may recall, I sent out letters offering to come and visit with all the tribes. We've made one visit with the Siletz that went very, very well. I had planned another visit to the Qaquille [phonetic] in March, but I've sat down and looked at the ways and means preparation calendar, and then you have an upcoming meeting in April in Bend, so I've just decided to postpone all my tribal visits until after that April commission meeting, we'll be through ways and means and I can focus more attention on it. But I think it's gonna be great. We were very well received at the first one. The second item in my dialogue has to do with the several petitions for reconsideration of the Willamette Basin TMDL, which we did deny within the timeframes, but we made it very

explicit both, in our conversations with the petitioners and in our letter, that we want to work with them through the implementation process on these TMDLs to address their issues of concern. We've even talked with them about the TMDL in itself is an order, writing clarifying orders for implementation that will help address their issues. So we are hopeful that there won't by any lawsuits as a result of this, but we aren't sure yet whether or not. Several of these were municipalities and then there was also pulp and paper as well. But that process is still moving along and I wanted to make you aware of that. The third item is our Bend office. Actually this reflects -- they were in the process of getting relocated. They have successfully relocated to what are temporary quarters, although we -- I think are 99.9% sure they won't be going back to where they had been, whether they stay in these temporary quarters, which are on Reed Market Road, which is sort of the south end of Bend, if you're familiar with Bend. How long they'll be there, we're not sure, but they are relocated and open for business now, as I understand. Yes.

BILL BLOSSER: I wanted to ask you something about that TMDL thing.

STEPHANIE HALLOCK: Sure.

BILL BLOSSER: You're asking people to look at these innovative strategies, keep recovery, trading, so forth -- these seem like they could end up being pretty darn expensive for some of these people, is that true?

STEPHANIE HALLOCK: It's possible. You know, we're obviously trying to help people find solutions that are doable, and that means costs as well. TMDLs are -- we use the term, "Adaptive management," for water quality standards. We use that in the TMDL business as well. I mean, we want to try and find ways to do things that are reality-based, and in part, we're learning as we go along as well. When it's not -- means that we may change some of our directives, as well, as we work through this with folks. The Willamette -- our rational on the Willamette TMDL is that it was the first, maybe in the nation, basin wide TMDL that was ever done. It was extremely complex. We had all of these issues that, ultimately, were petitioned. Many, if not all, were debated during the process, we made decisions, we made technical choices, we made policy choices. We submitted the TMDL to EPA and they approved it. The petition wanted us to do all that

again and we said, "No." We said, "We want to work out these issues through the implementation process." And that's still our intent, whether it means we have to change some things or we ask other people to change some things that will play out in the implementation. But we did not see any overall gain by starting over, sort of along the fish consumption lines, on the TMDL.

BILL BLOSSER: Do we project when the Willamette will ever get down to what is -- or it meets the TMDL targets?

STEPHANIE HALLOCK: Oh boy. I don't --

BILL BLOSSER: Is it 100 years?

STEPHANIE HALLOCK: -- unless there's somebody in water who knows -- I don't know the answer to that.

BILL BLOSSER: I mean, is it a long, long time? 100 years or 1,500 years?

LAURIE AUNEN: Chair Hampton, Commissioner Blosser, for the record, Laurie Aunen, water quality division administrator. I don't have the exact numbers in my head, but if you look at the mercury -- I believe it was on (inaudible) 50 years for temperature. It was, if not that, more. These

are long terms issues and the reason being, a lot of them are driven by very complex and non-point source issues. So they are long timelines. Some of the things in the TMDL aren't on those long timelines, but it is a very --

BILL BLOSSER: Do we have enough of a handle -- a regulatory handle in any agencies to take care of the non-point source stuff?

LAURIE AUNEN: The structure for non-point source stuff right now is that we deal with the local governments that address storm water control, and then the Department of Forestry regulates under the forest practices act and Department of Agriculture has its water quality management plans. That is the current legal structure in Oregon. There aren't -- if we wanted different regulatory handles that structure would have to change.

BILL BLOSSER: But I'm just wondering whether you're -- I guess what you're saying to me is with the existing implementation of those three sets of regulatory hammers temperature, for example, is 50 or more years away.

LAURIE AUNEN: That's correct, commissioner Blosser. The one thing I would say is the way the TMDL is designed and the way we want to

see it implemented is we believe that there are -- in the Willamette partnership, which you may have heard is one area, but looking at water quality trading for temperature where you can actually make local actions that do benefit temperature on a shorter time frame where you've got the worst problems. Now that -- so you're looking at both local actions to make improvements in the short term, but if you're talking about the entire system and the 11,000 miles that we're talking about, that is -- that is the time -- it's got a much longer timeframe.

BILL BLOSSER: Are there interim benchmarks, like measuring every five years of remaking it, and then some kind of promise that if we're not staying on the trajectory that we will do something? Or are we just gonna measure it at 50 years and say, "Oops, missed it by 50%"?

LAURIE AUNEN: Chair Hampton, commissioner Blosser, the intent of TMDLs is that we're supposed to be checking back and seeing how we're doing. Resource wise, most of our resources today are going into meeting the consent decree of developing the TMDLs. We certainly have conversations in the water quality program about how you -- and this gets back to Greg Pettit's comment about the

monitoring strategy. This has been identified as something we want to do more and better on. Ideally, if we're successful this session getting additional resources for the program we're not gonna stop there, but continue to build and ask for more to do the things that we really think we need to be doing for the state. So we are now where we want to be in terms of being able to measure as frequently as we want, but it's a goal.

STEPHANIE HALLOCK: And just -- we are doing some. I mean, the very first TMDL that we've done was in the Tualatin and we have seen improvements in water quality. We've also identified some other problems that have surfaced that we can address. So we are checking -- not just doing them and going away forever, and we're learning from them. And we can -- we've already - - and Greg probably can provide you more of a summary, it's not just in the Tualatin. I mean, we're really starting to see that where you do a TMDL it makes a difference.

LYNN HAMPTON: Am I misremembering or did somebody today say that the agency's request for additional monitoring funds was not in the governor's proposed budget?

STEPHANIE HALLOCK: No, it's a term

of art, with regards to monitoring. What is in the governor's budget is water quality toxics monitoring. The ambient monitoring is -- there is no additional request for ambient monitoring.

LYNN HAMPTON: All right, thank you for clarifying that for me.

STEPHANIE HALLOCK: Moving on quickly. Just a heads up that as you know the septic program we can delegate to counties, if they choose to take it on. Douglas County has actually gone back and forth, historically. They have now stepped in and they want to administer the onsite program themselves. And this is just a summary of how that transition will occur. We -- just as a side note, this is potentially a program that somehow can get impacted by this county payment problem, and we're not exactly sure yet how that is going to play out, if it does. This program is required to use -- the counties are required, regulatory, to use the fees that they get for this program just to pay for this program. So whether or not they come to us and to you, because it would be a rule action to ask for some loosening of that remains to be seen, depending on what happens with county payments. The next is a good news update on a federal grant. A combination

of a federal grant and business energy tax credits that are gonna help tied water and shaver to upgrade three diesel tug boats, and reduce air pollution from tub boats going up the -- up river, up the Columbia. The next is there is actually a letter attached to my report for you having to do with fish recovery planning. The governor asked the effected agencies that you see listed there to make sure that we are fully engaged in this fish recovery planning effort. I'm sure you've heard of the conservation plan for the coastal Coho. There are a number of other conservation plans that are being worked on. They specifically ask that we make our boards and commissions aware that this is an important effort for the governor. It started under the Oregon Plan for Salmon and Watershed. And that's really what I'm doing for you is advising you that we continue to be invested in this effort. The Fish and Wildlife Department is in the lead. Their commission will take the action on adopting these conservation plans. Every now and then they may come and ask for some statement of support from other boards and commissions and they just wanted you to have a heads up. The next item is also, as was anticipated nationwide, there is starting to be some litigation around the

low vehicle emissions standards. There has been litigation in Massachusetts and California. The short version is we're not changing anything at this point, we're proceeding ahead with our -- nothing has happened on the litigation front that will change what we've done in Oregon. What we've called out here is that the one potential area is if you remember in Pavli Coulev, the Pavli portion was for these very efficient autos and like electric cars and that sort of thing. That is the part that apparently may ultimately be at risk. These are the CO2 regulation, but so far we're moving ahead. The next item, if you saw the Oregonian -- I think we have a -- in your packet also from the Oregonian the story on the environmental lawsuit that has been filed against EPA for failing to regulate the cement kilns. And as you know, we have Ash Grove. We are in the process of getting data to provide some kind of a recommendation and/or information for you to have a discussion about whether or not you as a commission want to move forward, or direct us to move forward with regulations.

LYNN HAMPTON: Question, commissioner Uherbelau?

JUDY UHERBELAU: Two questions.

First of all, it says in the first paragraph that DEQ and Department of Justice, I imagine Larry, are evaluating whether to join this suit. When do you anticipate making the decision?

STEPHANIE HALLOCK: Do you know, Larry? I don't know. I'll find out when the timeframe is, unless you know, Andy. Do you know?

JUDY UHERBELAU: Okay, and the second question is that it looks like the company is doing its own sampling. Would it not be better to have an independent evaluation?

STEPHANIE HALLOCK: So, Andy, do you want to comment on how that works and who we make sure that we're getting good data?

ANDY GINSBERG: Okay, Andy Ginsberg, air quality administrator. The company has filed a source test plan with us, which we've reviewed and approved and are hiring an independent contractor to do that work, and then our source test coordinator will review the results. So we'll be monitoring more carefully what happens there.

JUDY UHERBELAU: You have confidence?

ANDY GINSBERG: Okay.

STEPHANIE HALLOCK: So that's all I

intended to say on that, but I do want Andy to stay here cuz you may have questions on the next one. This has to do with the mercury rule that you recently adopted on an -- in an unintended consequence of that rule that Andy is going to (inaudible) to you, because I am not 100% sure I can fully do it articulately.

ANDY GINSBERG: The rule limits -- the total -- since we're not going to be participating in interstate trading starting in 2018, Oregon has 60 pounds of credits, mercury credits, starting in 2018. 35 of those will be used by the Boardman -- the existing coal fire power plan in Boardman. That leaves 25 credits for possible new sources. The federal law set up a process where those remaining pounds would be divided among all new sources that might come into a state. That scheme only makes sense if you allow trading. If you think of it this way. Let's say we had a new source that came in and used 15 of the 25 pounds, leaving 10 left. And another new source comes in and need 15 more. They would divide up what was left and the original plant that got built would lose some of the credits that it had and wouldn't be able to buy any from another state and be forced out of business. So

we created, unintentionally, we created an uncertain situation where no -- really no new power plant could be built in Oregon. No coal fired power plant, even a super clean coal gas vacation plant, because they can't rely on the fact, once we give them the mercury credits, that they'd be able to keep them. We have a potential new coal classification plan evaluating the Port West fort site and they let us know that their bank will not even give them a loan to investigate the situation further if they can't even be assured that -- once they were permitted that they would be allowed to continue to operate. So what we're considering doing is proposing revisions to the rule that would give those credits out on a first come, first serve basis. So it wouldn't increase the amount of mercury used in Oregon, but it would say the first company that comes in for the remaining 25 could get them and be assured they could keep them.

BILL BLOSSER: I remember this came up in the hearing. We had a bunch of letters and stuff about this, and I had this vague recollection that one of the reasons we didn't try to fix it then was that we thought the legislature was gonna do something?

ANDY GINSBERG: I think the issue

was raised after the close of the comment period, so we couldn't really address it.

BILL BLOSSER: Oh, maybe that's what it was. Okay.

ANDY GINSBERG: So our plan is to -- since it's a really small technical correction, we'll just roll it in with the next rule making that comes up. We have a rule making we're looking at streamlining industrial permitting, so it kind of fits within that and we'll bring that before you as soon as we can.

STEPHANIE HALLOCK: The next item is just a heads up on the smoke management planning. When you go to bend in April I think we're trying to have a field trip where you can actually see some smoke management type of activities. Commissioner Williamson has been helpful as a link with the board of Forestry. We have had some challenges on coming to agreement with the Department of Forestry and where we ought to be in smoke management. So far we continue to move forward on that and I will keep you apprised, as will commissioner Williamson, on whether or not we need any further assistance from our commission perhaps in any kind of joint conversation with the board of forestry.

LYNN HAMPTON: Did I hear some reference today, is it proposed legislation to take control of the air quality smoke issues to this agency and would it cover this? Did I misunderstand?

(Inaudible comment)

LYNN HAMPTON: Just field burning?

STEPHANIE HALLOCK: Yeah, this is not covered by that. The legislation that was referred to -- there's a field burning bill that representative Holvy has probably dropped, and then there is a bill, a joint bill, that ODA, Department of Ag, and DEQ has that would bring some agricultural practices into regulation under the clean air act.

LYNN HAMPTON: But not this issue?

STEPHANIE HALLOCK: Not this issue.

LYNN HAMPTON: Sorry, if I'm confusing things.

STEPHANIE HALLOCK: No problem. It's understandable. The lower Columbia meetings. This is just an FYI and Commissioner Hampton has been involved in this as a follow on to your Astoria meeting. We have continued to have town hall informational meetings with that community. It's been very good to do that and this is just a summary of those meetings. There continues to be a lot of

interest in that community, and we certainly appreciate Commissioner Hampton making the long journey down there. I think that the folks really appreciated it as well. And we're still -- this is just gonna be ongoing, as long as there is all that activity along the Columbia.

LYNN HAMPTON: Now, Stephanie, when those answers to the questions that the community raised there are developed, are you gonna distribute those to all the commissioners?

STEPHANIE HALLOCK: we certainly will. Absolutely. And I think that's Dick Peterson who's probably on point for that. The last item in my report -- there is also -- you will see a memo in here that came from Chip Terhune, who's the chief of staff. The governor's office has requested from each agency the information outlined in those three points that we're working on right now, and that they want to have by the end of March, the first draft. And obviously we will be providing that to you as well. I wanted to tell you how we are framing what we are going to provide. The first is they want us to go over the major accomplishments for '05 and '07. At the end of every year I sort of do a summary email to all staff and I think I CC you on that. I think

we're gonna use that to glean the accomplishments from -- and probably our performance measures as well. And then the second thing, the strategic plan for '07/'09, we're gonna use our strategic direction. We've developed our strategic plan with you. Probably the most challenging one is they want the longer termed strategic challenges and recommendations. We have, in part, begun that discussion with you at the end of last year when we talked about emerging issues and things that are of concern. So we will frame those -- what we think we want to say here, and I'll probably have to communicate to you by email on what we're intending to send in. It sounds from Chip's memo like it's gonna be fairly iterative. They want a first draft by the end of March, but then there will be opportunities to make some changes, but I definitely wanted you to be aware that they have requested that from all the state agencies. And that concludes my director's dialogue.

BILL BLOSSER: So are we going to spend some time on that in the April meeting?

STEPHANIE HALLOCK: I think we should. You know this is -- their timeframe is somewhat of a dilemma, and it's also a dilemma because it's right in the middle of getting ready for

ways and means. But their -- his memo -- he says, "Draft due March 30th to the Governor's office. Drafts will be reviewed and returned with comments by May 15th." I think what I would like to do is get it out to you electronically as soon as we get it done, even if it's before the end of March, and incorporate any input you have electronically before the end of March. And also have it as a discussion item for the April meeting, so I can always -- I'm sure they will accept any addenda that we want to give so it includes your input. Helen is writing that all down, right?

JUDY UHERBELAU: In your dialogue you talk about the possibility of a summer retreat (inaudible), I mean, is that something you're developing, thinking about, whatever, or is just kind of out there?

STEPHANIE HALLOCK: I absolutely think that we should have a retreat with you after the legislative session. And I'm not sure, Helen -- and maybe Helen can speak to this if we are thinking of using one of our already scheduled EQC meetings for this, or if this would be in addition, or if you want some input. You need a microphone.

HELEN LOTTRIDGE: Our meetings are

not decided yet. It would be helpful to have some input. The June meeting is in Portland and so that might be a good opportunity.

STEPHANIE HALLOCK: It might be. It might be a little early if the legislature isn't finished, because part of our goal was to take a picture of what we received and what we didn't receive and factor that in. So would you be amenable -- somewhere of course is difficult because people have vacations. We may just have to figure it out logistically. Are you amenable to an overnight somewhere at Silver Falls or someplace like that? Okay.

JUDY UHERBELAU: Where is our August meeting? Is that set?

STEPHANIE HALLOCK: Helen, do you know where the August meeting is?

HELEN LOTTRIDGE: That isn't set yet. We don't know the exact location yet.

STEPHANIE HALLOCK: That might be a good one. If you've already penciled out the August dates, so you know you're committed to them, that might be a good one to use, timing wise, for this. That's it from me, unless you have other questions.

LYNN HAMPTON: Other questions.

Thank you, Stephanie.

STEPHANIE HALLOCK: You're most welcome.

LYNN HAMPTON: Okay, that has brought us to the end of our agenda for today. We are ten minutes early. Thank you, Stephanie. I'm looking at tomorrow. I don't have a -- oh, maybe it's in my folder -- the informational item on budget and legislative update. Will we be getting something in writing on that today or is that gonna come to us tomorrow?

STEPHANIE HALLOCK: There should be Agenda Item L in your -- you don't have an Agenda Item L in your binder?

LYNN HAMPTON: It is not in my binder and if it came to me separately I no doubt --

(Inaudible discussion)

LYNN HAMPTON: Well, there was also a memo from Greg as Agenda Item L that had a DEQ legislative update, so we'll be sure --

(Inaudible discussion)

LYNN HAMPTON: We have the green and white sheet, but I don't see another memo.

UNIDENTIFIED SPEAKER: And nothing

under Tab L in your binder, so it didn't get in there? Okay, we'll be sure and bring copies and he'll be talking through those as well.

LYNN HAMPTON: Great.

STEPHANIE HALLOCK: And also I think Tanesha had provided some -- those of you who are staying the night, some restaurants that are near the hotel.

(Inaudible discussion)

STEPHANIE HALLOCK: Yes, and we start at -- the plan tomorrow, by the way just so you know, is we are hoping that Representative Jackie Dingfelder and perhaps Senator Brad Hovakian can stop by and just -- and the reason we have invited both of them is they are the chairs of the substantive committees on each side who are looking at our legislations. And we thought they would be good people for you to ask questions or hear from. And then we would combine that, depending on if and when they arrive, with our -- Greg's and my legislative update to you. And we do not have executive session tomorrow and we are not staying for lunch. When we're done with the plastics --

JUDY UHERBELAU: (inaudible) we're out.

STEPHANIE HALLOCK: Right.
LYNN HAMPTON: No, it's executive session, but that's not going to prove necessary?
STEPHANIE HALLOCK: That's correct.
LYNN HAMPTON: Okay, we are done for the day.
(End of Tape 3 Side 7A)
LYNN HAMPTON: Having waited patiently for me to arrive, which I appreciate. Thank you very much everyone. I think that we'll -- if Representative Dingfelder can join us later that's great and --
STEPHANIE HALLOCK: He'll be here at about 8:45 so whenever she comes in we'll --
LYNN HAMPTON: Okay, we'll just suspend operations and take her. So here we are at Agenda Item L. Mr. Greg Aldridge.
GREG ALDRIDGE: Good morning, Madam Chair, members of the commission. I'm Greg Aldridge, government relations manager and I'm here today to provide an update about legislative issues before us at the session. We'll start with -- overall the session seems to be off on a very fast pace compared to other sessions. There is a very positive, upbeat attitude and so far most activity has been very

favorable to DEQ. Now I'd like to get into some details on the major activities that affect DEQ. You have two handouts in your package. One is the status update report that looks like this, and the second is the green and white sheet, which is a -- it combines both our legislative proposals and our governor's recommended policy packages into one two pager. And where applicable I will note for each bill the corresponding budget policy package number, since we talked about those so many times in the past year. This reference sheet also provides more detail on funding and staffing for each policy package and it lists all the agency bills, including our budget bills.

STEPHANIE HALLOCK: Excuse me, for just a minute, Greg. Helen, do you have another copy of L that we could bring for (inaudible)? Thank you. Sorry to interrupt you. Go ahead.

GREG ALDRIDGE: Okay. First I'd like to start with the bills related to the air quality program, and first is Title 5, which is Senate Bill 107 and relates to policy package 112. This increases fees for major industrial permittees to equal the cost of the permitting program as required by federal law. About two weeks before the first

hearing on February 8th, industries "no" position on the proposed 24% fee increase changed to opposition. Industry was interested in concessions on regulations that exceed federal requirements. And to give you some examples of recent activities that exceed federal requirements would be the mercury decision and green house gas decision." Negotiations between stakeholders and DEQ continued up until the hearing, but no consensus was reached. The bill passed out of the senate environment and natural resource committee on a 3/2 vote along party lines. DEQ is meeting with members of the senate in anticipation of the floor vote, and at this point in time a vote has not been scheduled. The larger issue for us to consider is not so much on the senate side, it's really gonna be on the house side where there's a 31/29 margin. And we know a number of members just (inaudible) like to vote for fee increases. Moving on to clean diesel, which is house bill 2172, package 119, provides grants, loans, and tax credits to retrofit, rebuild or replace older diesel engines and to reduce diesel idling. This bill still has broad support and no known opposition. The first hearing is scheduled for next Monday in the house energy and environment committee. The governor's recommended budget funds this

work at $3 million in general fund, and $1.5 million dollars in federal funds. And of course this is a governor's priority bill. Moving on, Heath Smart for Clean Air, this is Senate Bill 338. This was originally drafted for DEQ but is now under the (inaudible) of the Senate, Environment and Natural Resources Committee, partly because the package itself, the policy package, was not funded in the governor's recommended budget. It provides funding to help home owners replace old, uncertified wood stoves with cleaner options and includes the requirement for removal of uncertified wood stoves upon sale of the home. The bill would also fund the grant program by redirecting asbestos and open burning penalties from the general fund to the grant fund. While the cost of the grant program is not included in the governor's recommended budget, the governor's staff supports the bill and hope it can be added back if there is more money available through the next revenue forecast. After an initial hearing DEQ is working on some clarifying amendments with the Hearth Products Association and the Realtors Association. AOI had expressed strong opposition to the funding mechanism, which is the diversion of the penalty dollars from the general fund to a specific grant fund, however we

were able to work out a solution with them that preserves the funding and basically that agreement places a cap on how much money can go into the penalty fund. A work session will be scheduled once the amended bill is available for ledge counsel. And there's a little history here. There's a big backlog in ledge counsel and bills coming out, so there has been some delays in bills moving forward because we're waiting for amendments. So you'll hear that again later on. Low emission vehicle registration. This is House bill 2272, not 2172, as noted, and relates to policy package 118. And this would require proof of compliance with California emission standards when a new vehicle is registered in Oregon. The bill passed the house transportation committee. Sorry that it said, "Energy Environment." It was actually in transportation, because it was a DMV bill. And it passed unanimously and it passed on the floor vote with 48/8 as the vote. The bill has no fiscal impacts, so it will move directly to the senate for consideration. We don't have any schedule yet for future hearings. Next is agriculture air quality. Senate bill 235, which was introduce jointly with the Oregon Department of Agriculture to allow regulation of agriculture to the extent necessary to comply with

the federal clean air act. If you remember, there's a petition before EPA that could actually take away our authority to run the air quality program in the state and this bill would address that and settle the issue with EPA. Environmental groups are not satisfied with the bill and plan to push for amendments that go beyond the clean air requirements. The agricultural industry is equally determined to maintain the requirements of the bill as proposed. And at this point in time we expect a hearing sometime in early March.

LYNN HAMPTON: Question, Commissioner Uherbelau?

JUDY UHERBELAU: Can you give us an idea of what these amendments that are being pushed that are over and above the clean air act by the environmental groups?

GREG ALDRIDGE: There's nothing specific in -- Chair -- sorry. Chair Hampton and commissioner Uherbelau, there's nothing specific in writing yet. We understand that ammonia emissions is a major concern and if you think of in the gorge are the three mile canyon with the large dairy herd there, ammonia emissions is something they're very interested in. Right now we don't have authority to

regulate ammonia in the state as something's been regulated in other states. There's also just opposition to large dairy farms, such as the three mile canyon. So there's some groups that are interested in trying to limit that, but I don't know if you'd see that in legislation. Moving on to field burning. Burning is used to dispose of leftover straw and stubble on fields after grass seed harvesting. Already Oregon statute limits the number of acres that may be burned in the Willamette Valley and the Department of Agriculture actually operates this program. However, consistently many residences in the -- particularly the southern part of the Willamette Valley have concerns about smoke impacts. Representative Holvy from the Eugene area is introducing a bill that would eliminate field burning statewide. We as an agency have no position on the bill, but we, with the Department of Agriculture and the Department of Human Services, the public health division, have been providing technical support on issues related to burning. Also there's likely to be an impact on the Department of Forestry because we understand that the issue isn't just field burning, it's also smoke coming in from forestry burning. No hearing has been set for this state and we just found

out that the governor is very interested in this bill, because I believe he was in the south valley for a long time and was also inundated with a lot of concerns about field burning. Now moving on to the land quality program; the four land quality fee bills passed out of the Senate Environment and Natural Resource Committee on February 8th, three of these bills actually had a 5/0 vote, which is very positive. First the Senate Bill 108, which relates to policy package 131 and helps maintain adequate funding for hazardous waste work by increasing hazardous waste generation fees. Senate Bill 104 relates to policy package 130, maintains adequate funding for our underground storage tank program. This is the one that did not have a 5/0 vote. It was a 3/2 vote, and the reason two people voted against it was, one, there's already a provision for a sunset date in the statute and Senator Atkinson did not want to see that eliminated. And the other was from Senator Byers. He had a concern that their penalty dollars are going directly to DEQ instead of to the general fund, and of course that brings up the concept of bounty hunting. For Senate Bill 105, Policy Package 134, maintains adequate funding for our work related to marine spill prevention and response

and also addresses the new liquefied natural gas impacts. And then finally, Senate Bill 106, Policy Package 132, which provides funding to pay for auditing, heating, oil tank decommission, and cleanup work. The next consideration of these bills will be by the full senate on the floor. We do not have a day yet for when that will occur. We expect probably in the next couple weeks.

LYNN HAMPTON: Commissioner Uherbelau?

JUDY UHERBELAU: Thank you. Going back to Senate Bill 104, did I hear correctly that you were talking about the 3/2 vote and that Senator Atkinson voted against it because it already had a clause -- the existing law has a clause in it wherein it will no longer be in existence, that law, is that what you're talking?

GREG ALDRIDGE: Chair Hampton and commission Uherbelau, that's correct. There's already a sunset day in the current statute and that sunset date is for, I believe, January of 2008. I think what he would prefer is maintain a sunset date, but obviously extending out farther than January 1st of 2008. But I think he likes having the fact that there's some closure or check in date in the future.

JUDY UHERBELAU: So when you were proposing this new bill, you didn't take that into consideration and also ask for them to extend the sunset date?

GREG ALDRIDGE: The proposal we had, commissioner Uherbelau, was to actually remove the sunset date.

JUDY UHERBELAU: You did. Okay. That's what I wanted to know.

GREG ALDRIDGE: Oh sorry. Yeah. The next two topics, obtronic [phonetic] waste and bottle bill changes. There are no DEQ bills, but obviously both of them are likely to affect us. So starting with electronic waste, there are there comprehensive electronic waste management bills that have been introduced. The house committee on energy and the environment held an initial information session on electronic waste on February 7th. Committee Chair Dingfelder formed a work group of interested parties, which includes DEQ, to reach a consensus on bill language. And she appointed vice chair Cannon as chair of that group, and hopefully the goal is to come up with a consensus by the end of February. The three bills focus on the recycling of personal computer, monitors, laptops, and televisions through a

system managed or financed by product manufacturers. And then bottle bill changes --

LYNN HAMPTON: Greg?

GREG ALDRIDGE: Yes.

LYNN HAMPTON: Excuse me for interrupting you, but can you give us just a short summary of what the primary issues are that are gonna have to be worked out?

GREG ALDRIDGE: If I could ask Bob Danko to come up who's actually working on it. Thank you, Bob.

BOB DANKO: Madam Chair, commission members, I'm Bob Danko, land quality division and point person for electronic waste. There are several different issues that need to be worked out. I call them details at this point. There seems to be pretty good consensus among the manufacturers, the retailers, the environmental community, local governments and others on this manufacturer responsibility bill. It's just the details. For instance, if we start with a list of devices that are covered, like Greg said, do we build in a process in the future that, say, the commission, you or some other body maybe add to that list as technology changes? So we're really working on the details, but the general shell I think is a

pretty good consensus on.

LYNN HAMPTON: Great. Other questions? Thank you.

GREG ALDRIDGE: Next is bottle bill changes. There are at least three bills addressing Oregon's bottle bill statute. Senator Verger has introduced a bill that expands the bottle bill to include all beverage containers other than milk, raises the deposit to 13 cents with a refund of 10 cents back to the purchaser, captures the unredeemed deposits and establish redemption centers as an alternative to returning containers to stores. There will be a second bill focusing on sort of the same issues, and then a third, less comprehensive bill, that will just focus on adding water bottles to the existing statute. The senate environment and natural resource committee had two hearings this week and we understand the outcome of that will be a working committee, again, DEQ is likely to be part of that working committee, trying to reach consensus on one bill that will go forward.

LYNN HAMPTON: Who from your department would be likely then to participate?

GREG ALDRIDGE: Again, be Bob --

STEPHANIE HALLOCK: Greg, could I

just add one thing?

GREG ALDRIDGE: Sure.

STEPHANIE HALLOCK: On the hearing this last week it was interesting, they had legislative leadership come and testify when Senator Verger presented her bill and Senator Courtney was Representative Mercury, the speaker of the house. So there is a lot of interest in this and I think a lot of folks really would like to see the bill expanded. So I have not been in the hearing to see all that so it was kind of interesting.

LYNN HAMPTON: I just have one more brief question. What's the situation nationwide with expansion of the other bottle bills that we're aware of in the country as -- have any of the other ones been similarly expanded.

STEPHANIE HALLOCK: I suspect Bob is gonna have to come back and talk to us about that, if you known the answer to that.

LYNN HAMPTON: I really only need the ten second version, so I don't want to hold us up.

STEPHANIE HALLOCK: Okay, Peter Scandalo is our staff person in solid waste who supports (inaudible) the technical side.

PETER SCANDALO: Chair and members of the commission, there -- at this point, nothing has moved forward, as far as expanding existing bills. We did have Hawaii add a new deposit legislation that went into effect in 2005, so there are now 11 state with bottle bills. There are very active campaigns in New York and Massachusetts and a couple other states to expand, but they haven't actually done that yet.

LYNN HAMPTON: all right, thank you.

GREG ALDRIDGE: Next, moving on to the water quality program. This first bill relates to mixing zone, buoy or signage bill, and it's Senate Bill 317. This would apply to water quality permit holders who discharge persistent bio-cumulative toxins into Oregon's waters and concentrations that cause waters to fail to meet water quality standards. It's important to link that all together, because in one way you look at that, if they're in conformance with their permit no one would be exceeding those standards, other people interpret it different, so the way it's written is a part of the discussion that's out there. The bill would require these permitees to pay DEQ to install and maintain a mixing zone marker system that could include buoy, signs, or other

markers. The bill was drafted by the senate interim committee on natural resources and alternative energy during the interim between the two sessions, and it is an outgrove of the mixing zone debate that occurred in 2005. It seems like one of the issues that we're wrestling with is public access to information, and with that, DEQ is trying to consider alternatives that may provide better access to the information to the public so they can make informed choices. We're not sure that just marking buoys or putting signs along the river actually will benefit very many people. So we're thinking of other options that could include outreach to users, such as when people get their fishing license provide them more information, or at boat ramps, information on the internet and like that. DEQ still thinks that our water quality toxics monitoring proposal, which is Policy Package 121, is the best way to proceed, the best way to truly understand toxics in our waters. And we understand now that some of the municipal waste water treatment facilities or operators are looking at toxics reduction options that could become part of a future bill, and these would be looking at programs that would keep toxins or toxic compounds out of the way stream so they don't end up in the water.

So there is some discussion going on in (inaudible) about that.

STEPHANIE HALLOCK: So, Greg, just if I could add, we heard yesterday and I don't know if we see anything that perhaps Monday there might be a bill dropped that would ban mixing zones for persistent bio-cumulative toxins. So I think there will be a lot of discussion about this. And I also wanted to alert you that Representative Dingfelder has arrived and so when Greg finishes up -- he's just got another item. Perhaps we could invite her up.

GREG ALDRIDGE: And the last one for water is the underground injection control, and that is House Bill 2118 and relates to Policy Package 160. And of course this is a result of a joint stakeholder and DEQ efforts to secure statutory authority to keep this program at DEQ. If you remember, we were in the process of giving the program back. Stakeholders came and asked you to reverse that decision; you instructed us and the stakeholders to go to the legislature to seek funding. We had the first public hearing on the bill February 16th in the House Energy and the Environment Committee. We had a lot of good supporters there, including a number of cities, counties, Homebuilders

Association, AOY, environmental organizations and EPA. So far we're not aware of unknown opposition. And if we are able to get an amended bill out from legislative counsel the next work session would be on March 2nd. And should I take a pause and then come back to ways and means later?

STEPHANIE HALLOCK: Sure, let's do that. All right. And Madam Chair, members of the commission, as I mentioned yesterday, in terms of all of these things that Greg has been discussion, on the house side Representative Dingfelder is the Chair of the House Energy and Environment Committee that will hear most of the issues related to DEQ, and she's graciously agree to take some time to be here today. On the Senate side, it's Senator Brad Havokian, and he was unable to be here today. But we thought you might appreciate the opportunity to talk to Representative Dingfelder and hear from her directly on some of these issues.

LYNN HAMPTON: Great. I'll invite her to come forward. Good morning and thank you for joining us.

REPRESENTATIVE DINGFELDER: Good morning. Thanks for inviting me here today. And for the record, I'm State Representative Jackie Dingfelder,

House District 45. And I just wanted to come and give a little update about what's going on, and you heard already from Greg about some of the bills that are in my committee. Most of the water related bills are going through the Energy and Environment Committee, so many of DEQ's bills have been heard or will be heard in this committee, along with, as you've heard, the Senate Environment committee. First of all, I wanted to thank you for all that you do and your hard work and especially your leadership on the clean car program. I know that was quite controversial last session, and I'm very pleased to see that that's moved forward. So I wanted to thank you for your leadership on that. I also wanted to just provide a brief update on some of the bills related to DEQ that are in my committee and then talk about some of the issues that are still yet to be heard in the legislature, and I think you might be interested in those. As you heard, the UIC bill, we had a hearing on that and we had a lot of testimony. We're just waiting for the amendments, so we're hoping -- right now everything is sort of jammed up in legislative counsel, because Monday is the last day to introduce bills so we have hundreds of bills waiting to come out. And we've sort of held off on pushing

the amendments until legislative counsel has some of these bills through, and unfortunately we are way understaffed and there's too much work load. Unfortunately I just heard that three people quite because of that, so it may take even longer than we expected. It's really unfortunate, because we had a huge turn over of staff session, so we have a lot of bill drafters, and it's a tough job. And we're not making it easier for them by giving them hundreds of new bills to write. So that's the challenge right now is getting the amendments out for our existing bills where we've had public hearings. So we're waiting to get the amendments on the UIC bill. And then also you probably heard we had an information meeting on computer recycling and electronic waste that went quite well, and then we formed a workgroup and that's an issue I've been working on for five years. In three sessions there's been three different bills. We had a workgroup bill, I think, in the 2003 session and then last session we had a bill that did not pass. And this session I feel pretty confident that we will have a bill. We have very strong support from the manufacturers and I have to say that I really want to thank the manufacturers for stepping up to the plate and showing leadership. So far the

workgroup is going very well and Representative Ben Cannon, who's my Vice Chair is heading that up. And we really appreciate DEQ's support because your staff people have been valuable members of that workgroup and I've worked with them over the past five years in getting data, and especially the solid waste folks, so they've been really very helpful. On Monday we are scheduled to have a hearing no the clean diesel program. I've been working very closely with Andy Ginsberg to make sure that we have adequate information for that hearing and make sure that all of my members are briefed. I think it's really important because -- especially the issues that DEQ works on tend to be very technical in nature, as you know, and I encourage the staff to spend time, ahead of time, with my committee members because it's a lot of new information for folks that aren't familiar with the program. So we're looking forward to that hearing on Monday. And also I do serve, in addition to chairing the energy and environment committee, I also serve as vice chair for the ways and means natural resources sub-committee, so the few bills that go through my policy committee then move on to the ways and means sub-committee in natural resources. So I remind folks I get two bites out of the apple,

but basically I think it's actually good policy to have that connection between both the policy and the budgeting committee. And certainly helpful for those of us that get to hear the policy behind these bills before making a decision on setting the budget. I know you're budget will be up in a couple of weeks or --

STEPHANIE HALLOCK: April 9th.

REPRESENTATIVE DINGFELDER: -- so in a month and a half. So we hope to have these few bills out of the substantive committees and then we'll be working on those in ways and means. Regarding energy, I know this is not necessarily directly your purview, but my committee is also obviously the energy committee, so we've spent a bit of time of bio-fuels. It does have an affect, because we're also one of the positive side effects that we're hoping for is to reduce air admissions. So the bio fuels bill passed out of my committee a few weeks ago, it passed out of revenue last week, and it will be on the house floor next week. And I will be occurring that with the chair of the revenue committee. And we're really positive about that. That's been an issue that I've been working on for a couple years. My committee will also be looking at renewable energy and climate

change. We'll have a whole series of hearings. We're gonna try to do it jointly with the Senate Committee, and we have several climate change bills that, of course, have great effect on air quality. Just a quick update on the e waste workgroup; we are in the process right now of ironing out some details. We have general agreement that the manufacturer responsibility approach is the approach we're gonna take here in Oregon, and basically that says that if you're a manufacturer of a computer, computer equipment, electronic equipment that's covered in the bill, then you're responsible for either setting up a program to recycle your equipment or paying into a state funded program. We've been pretty clear that, one; we don't intend the state to get into the recycling business. So the intent of the bill is to augment existing private and non-profit recycling programs in the state and also the public sector provides quite a bit of that. Many of the counties are providing that without compensation right now. But the intent of the bill is to offset the costs for these non-profits, public entities. And then the other is that we want to make sure that your costs are covered, so there will be a registration fee that will offset the costs of any -- to DEQ for any

staffing or rule making that may be coming down the pike. So we want to make sure that has a zero impact on your budget. I've already talked to the co-chairs about that, and they said, "As long as the fees cover it they're fine." So I will be working very closely with the ways and means folks to make sure that that can move forward. We hope to have a re-write of the bill in a few weeks, and then we'll have a public hearing on that as well. I again, want to say that we really appreciate the fact that DEQ staff has been instrumental in helping us get information and working with the stakeholders. Finally, I just want to -- I know today you're gonna be hearing some really important information about plastic recycling, although that's not something that my committee is dealing with right now. You've probably heard that the Senate has been holding hearings on bottle bill. I am a chief co-sponsor on the bill. That will be coming through my committee. I will be a member of the workgroup. And I just want to say that I've been really impressed with the manufacturers that have stepped up to the plate for computer recycling and I do hope that we can see that same type of responsibility with the plastics manufacturers stepping up to the plate with the bottle bill. And I do think that this is a

wake up call. When I saw the information about the plastics recycling rate dropping below the 25% I'm hoping that everybody will be willing to work together to respond to that in the way the computer manufacturers will. I really believe that there's a reasonable fix to this issue. I think the bottle bill is one approach that can be looked at to deal with this situation. And I think that the legislature is very engaged. There's is a lot of talk about recycling this session that I haven't seen in the previous three sessions I've been there. The E waste recycling legislation is bipartisan. I'm co-sponsoring the bill with Representative Brune and Senator Frank Morse and there's support in both side of the aisles, urban, rural. I think it's really exciting and I'm hopeful that we can get that same type of support for the bottle bill. So that's sort of an update. I really appreciate you inviting me here today and want to thank you again for all the heard work you do. And I'd be happy to answer any questions.

LYNN HAMPTON: Thank you very much. We really appreciate your time and I'm sure we've got questions. Commissioner Blosser?

BILL BLOSSER: Just picking up on

this what I call P waste, the plastic waste, since you talked about e waste. You're sending this hopeful note that the manufacturers will come to the table. I know you've been working for several sessions on the e waste side and the manufacturers have been at the table all the time. So when you get to this session you kind of have a history or working together and trying to find a solution. Is that same thing true of the plastic waste side. I mean, have the manufacturers and others been engaged in trying to develop a solution over several sessions so that now it's down to the details? Or are you just kind of hoping that maybe they will come to the table for the first time?

REPRESENTATIVE DINGFELDER: Madam Chair and Mr. Vice Chair, I have not been working directly with the plastic bottle manufacturers, although I'm very familiar with the issue having followed it for over a decade. I will say that with the legislature engaged the way it is with the bottle bill, I think that they will be more engaged, because that is a big part of what we're looking at with the bottle bill, which is potentially expanding to include plastic water bottles. And since that's a big part of the plastic waste stream -- I mean, it's a component

of it. It's not gonna cover all of the containers, obviously, but I think that that coordination is a real possibility. I haven't been working directly with the plastic manufacturers. Certainly I'm very involved with the plastic element on the e waste recycling, but I do think that there's a real opportunity with the bottle bill in front of us to address this issue. And I know that there's several other ways that have been laid out to address the plastic recycling issue, and the bottle bill is one of those, and I think it's a real possibility this session.

LYNN HAMPTON: Other questions? Comments? Judy?

JUDY UHERBELAU: Madam Chair, if I could just follow up on that last -- I mean, I think that there are staff in the department who have been talking more with the plastics manufacturers about the rate over time and would probably be happy to come forward and share some of that with you, if you'd like. And that will probably come out in the couple hours that are coming up as well.

REPRESENTATIVE DINGFELDER: And if I could just clarify in that, there hasn't really been a venue for interaction with the manufacturers because

there hasn't been a nexus there on an issue that the legislatures been working in a way that there has been with the e waste. But this obviously is a time now where I think there is an opportunity to have discussion, both in the legislative arena and obviously here through this decision making body. And for the first time I think there's an opportunity through -- with the legislature seriously looking at a re-write or possibly expansion or redevelopment of the bottle bill, I think there's a real opportunity for us to work together on that.

LYNN HAMPTON: Good. Other questions, comments.

KEN WILLIAMSON: I think the interesting point here is that for so long on the plastic side you have this potpourri of different containers, and it was just hard to get arms around it because that stream had five different kinds of plastic and a number of different manufacturers. But the situation we're dealing with now, we know what it is that's driving this situation and it's this thing. I mean, that's it. So we know where to go, we know where to focus, so I think there's hope this time, much more than we've had in the past of actually getting some cooperation with this particular industry.

And plus, I mean, this whole industry is driven by an environmental ethic, right? So it seems like to me that we can tap into that, so to speak.

REPRESENTATIVE DINGFELDER: well, thank you and I look forward to working with you.

LYNN HAMPTON: Thank you very much.

STEPHANIE HALLOCK: If I could just say that sort of over the years, regardless of politics, Representative Dingfelder has been an unfailing champion for DEQ within the session and we really appreciate her support.

LYNN HAMPTON: And we appreciate your time today. You sound busy.

REPRESENTATIVE DINGFELDER: Well, I'm actually gonna stay for a little bit and listen to the testimony.

LYNN HAMPTON: Great.

REPRESENTATIVE DINGFELDER: You know, one quick note on the air quality, because I know that's a big part of your budget. And I've been meeting with your staff and I think there's some real opportunity there, so I'm looking forward to working with you on that. And I didn't focus on that because we haven't actually started the hearings yet on the clean diesel, but I think that there's a lot

of concern about air quality issues. I was very pleased about the decision with the benzene. You probably heard that my committee and Senator Hovakian's committee sent a joint letter to EPA. Senator Wyden was in this past week in the legislature and I personally thanked him for his leadership on that issue. But I want to say that that was an example of where everybody really worked together to make a difference here in the Northwest and I'm really pleased -- I mean, many of us were very distraught about what was being proposed. And so once again I want to thank -- cuz your staff really did a great job at helping respond in an expedient matter, work together with Wyden's staff, with my staff, with Senator Hovakian's staff to provide the information that we needed. So I really appreciate that.

LYNN HAMPTON: Thank you very much. And Greg, are you returning to us?

GREG ALDRIDGE: Madam Chair and members of commission, I'd like to close talking a little bit about the ways and means process and where we are in that and some of the legislative visits. So I'll be very brief. As Stephanie noted a few minutes ago, for DEQ we're scheduled to start our

committee work on April 9th in the Natural Resources sub-committee. As you've heard, Representative Jackie Dingfelder is one of the co-chairs and then Senator Richard Devalon is the other co-chair. Right now we understand six days are planned for DEQ, which is a pretty long period of time compared to the last couple of sessions. Most of it will be for DEQ presentations, as well as question and answers. There will also be a day or part of day set aside for stakeholder testimony, hopefully testimony in support of our budget. Then there will be a community work session with the discussion and vote and a recommendation to the full ways and means based on what they want. The other thing that's related to ways and means is there's a stakeholder effort that's been coming together in support of the DEQ budget. This coalition has really been assembled by Tom Galliger and the intent is to secure funding for DEQ's budget, including both funding for the governor's recommended budget, because even though it's the recommended budget it's not guaranteed we'll get what's even in that - - and a desire for some of the add backs, and add backs were some of the things that were in our original budget request, but didn't make into the governor's. He's put together a coalition

that includes some business groups and lobbyists. Tom, obviously himself, Oregon Trucking Association, Oregon Business Association, some others have been there, a number of environmental groups such as Oregon and Environmental Counsel, Osberg, Oregon League Conservation Voters, Sierra Club, American Lung Association, several tribes have been in the meetings, including representative from the Umatilla and Warm Springs. And the purpose is really to influence the co-chairs draft ways and means budget, which we understand is due out next Friday, March 2nd. And the goal of this coalition right now is to have a letter signed by the stakeholders, not by us but the stakeholders, to present to the co-chairs next Tuesday at a meeting. The co-chairs of the full ways and means are Senator Kurt Schrader and Representative Mary Nolan. So meeting would be with them. And then the other thing that's been going on for the last month or so, Stephanie and I have been doing a lot of legislative visits. We've been hitting everyone on the various environmental committees and their members, as well as on the ways and means, both a sub committee that will hear natural resources, as well as the full committee, as well as other members who have great interest or support for DEQ. So obviously

we're not getting to everyone of the 90, but we're trying to hit most of them. So it's keeping us occupied and we've actually gotten a lot of good feedback about DEQ and DEQ's responsiveness. And how even if sometimes we don't always agree with a decision they feel like we've put a lot of thought into the decision and we act very professional in what we do. So with that, are there any questions and I thank you?

LYNN HAMPTON: Questions? Commissioner Blosser?

BILL BLOSSER: Yeah, just looking through our green cheat sheet I was checking off as you went through all these items, and about two thirds of them I have no check by. Does that mean that they are just in a -- they're all in some type of funding package someplace or will these -- and so they're all just a ways and means issue or will there be bills eventually that come up on those too?

REPRESENTATIVE DINGFELDER: Chair Hampton and Vice Chair Blosser, actually for the policy packages, probably you're right. Two-thirds of them do not have their own bills. They're incorporated in our agency budget bills. So if you go up to the legislative proposals you'll see at the bottom, "HB 22

-- 50-22," that's actually our budget and that would include those policy packages.

BILL BLOSSER: Okay. That's what I kind of figured but I just wanted to make sure. So the ones that hit it up in bills are because there needed to be some substantive legislative change? It wasn't just a fiscal thing and that's why they ended up in a bill?

REPRESENTATIVE DINGFELDER: Chair Hampton --

BILL BLOSSER: Was that too simple?

REPRESENTATIVE DINGFELDER: -- no. No. A good example are Title 5 and the 4 land quality fees. They're all in statutes so to change the rate of the fees you need a statutory change. A lot of our other fees are not in statute and you don't need to go through statutory change. You need to go through the process, which is the last bill, HB 50-22, which is if you approve a fee increase, say today, then the next session needs to approve that fee increase or else roll it back.

BILL BLOSSER: Okay.

LYNN HAMPTON: Commissioner Uherbelau?

JUDY UHERBELAU: I have a question

on 126. It says, "Continue" -- it's the coastal beach bacteria monitoring, "Continue Federal funds." Why is it in this packet, because this looks like it's federal funds and not state funds?

REPRESENTATIVE DINGFELDER: Madam Chair and commissioner Uherbelau, everything here is our full package so whether it's state funds, other funds, which are fee funds, or federal funds are all part of our policy packages. So in the case of that one for coastal beach monitoring, it's actually federal money that we're receiving and we need limitation to receive that money and then to spend that money.

JUDY UHERBELAU: Right, but you don't need state involvement to approve, allowing you to receive the federal money?

STEPHANIE HALLOCK: Absolutely.

REPRESENTATIVE DINGFELDER: Definitely.

JUDY UHERBELAU: Okay.

STEPHANIE HALLOCK: We also need state approval to ask for it.

LYNN HAMPTON: I'm sensing that state approval is needed at every stage of the process.

STEPHANIE HALLOCK: That would be correct, Madam Chair.

LYNN HAMPTON: Other questions or comments for Greg? Thank you, Mr. Aldridge. I appreciate it very much.

STEPHANIE HALLOCK: Madam Chair, on timing, perhaps the next agenda item is for you to do some commissioner reports, if you have them. And then also ensure that people sign up if they want to speak on the next item and then perhaps take a short break before you get into the next item since it will be rather lengthy and to make sure that everyone is here who is gonna want to speak on it.

LYNN HAMPTON: That sounds like a good idea. Having finished Agenda Item L we'll move on, only five minutes early, to Agenda Item M, which are commissioner reports. And does anybody have anything of interest to report since our last meeting.

KEN WILLIAMSON: I have a couple items. As you know I serve on the OAB Board, representing the EQC. The OAB is proposing a little different thing that they're gonna do this year, and part of that is driving by that lottery is doing just fine. And so OAB will actually have more funds to spend this next year then they had in the last, and

so they're looking at trying to take on a couple of significant basin-wide efforts. So in the past they've had pretty isolated projects by which they would do some stream reach. And now they're looking at a couple of substantial proposals focusing on maybe one, maybe two basins. And I think it's gonna be important for the DEQ to become involved in that process, because whatever basins they choose the DEQ obviously will have something to gather to that. To give you the magnitude of this, they're looking at spending somewhere from $5 to $10 million dollars on each basin. So this is not gonna be a trivial effort. And the idea is to show these as an example of what can be done. So that, I think, is pretty exciting and I think those are gonna be a couple of really neat projects.

STEPHANIE HALLOCK: Are they talking about specific targets at this point?

KEN WILLIAMSON: No. We're just -- the board will meet this summer. We're gonna have a retreat. Much of that discussion is going to be around what two basins we would choose. I also serve on the Federal Forestry Advisory Committee and I want to say at this time that we have staff support on that committee. And Mary Anne Fitzgerald represents

the staff from DEQ and I have to say she's done a great job of representing the DEQ and providing us with the information. This was a committee that was put together by the Board of Forestry. What they're trying to do is get better buy in from their federal partners, BLM and the forest service, into their move towards sustainable forestry. And that -- so they're looking at a number of issues. Part of it is cut rates in federal forests. If you look at the federal forests they're growing about 10 --

(End of Tape 4 Side 1B)

KEN WILLIAMSON: -- and we're cutting about one billion. So the other one is the amount of forest fuel that exists in these federal forest, and many of them are (inaudible) state forest, which they see that as a risk to them. So there's a variety of different issues that they're trying to look at. So I'm trying to represent the interest of the DEQ. Most of that is focused on water quality. Some of it is around climate change. There's lots of talk about climate change in forests and a lot of confusing issues there. Those were the two items I had.

LYNN HAMPTON: Thank you. Thank you. Commissioner Blosser?

BILL BLOSSER: Just one little comment. One project I work on is the recovery plan for salmon and steelhead in the Willamette basin. And we heard yesterday about the Willamette TMDL and I asked a few questions to Laurie about that. And the background to that is that from the work that we've done so far on the recovery plan it appears that the big arrow of problem is pointing at the Corp of Engineers. And the 15 dams or so that they operate in the Willamette Water Shed, and part from the blockage -- you know, some of them block salmon passage, so that's a significant issue in itself. But the other one is temperature, that they have a huge temperature impact. And for them to solve the temperature problem is going to probably cost hundreds of millions of dollars. So it's gonna mean, for Oregon to accomplish it's TMDL, we're gonna have to get congress to fix the temperature problems coming out of those dams. It may also require that some of the dams be emptied. At least one of them may have -- need to return to run of the river status with no dam behind it, or no pool behind it during a significant part of the year. It could still be used for flood control. Detroit would probably not be one that would be chosen for that, even though it's

probably one of the ones that needs to. But -- so these temperature things are -- this whole fish thing is gonna come around to temperature and it's gonna come around to stuff that we care about. So I just wanted to tell you that there is some kind of a train wreck out there with the Corp. And the Corp is not adverse to this. They certainly -- they acknowledge the problem and they just say, "Well, you're gonna have to get congress to give us the money." So we're probably gonna be talking to -- Representative Dingfelder will be talking to senators and trying to get them to face the federal obligation.

LYNN HAMPTON: Okay. Commissioner Uherbelau.

JUDY UHERBELAU: Nothing.

LYNN HAMPTON: Okay, and nothing from me. So we will take a break now and we will take up again at 9:45. It's now precisely -- well, I have two precise figures, 9:30, 9:28. 9:45 by that clock we'll be back in business. Thank you.

(Break for recess)

LYNN HAMPTON: We're back in session, the Environmental Quality Commission. It's Friday, February 23rd. We're about to take up Agenda

Item N, which is an action item on a petition for rule making. I just wanted to say a couple of words about how we're going to proceed. And first of all, our counsel, Larry Knudsen, will be talking with us for a few minutes about this process, which is a little bit unusual, so that we have a clear understanding of it. That will be followed by the staff report and I have here that it will be Alan Kuphut and Loretta Pickerell. After that we're going to allow the petitioners some time to talk to us, and I have a name of a Mr. Paul Cosgrove. After that we'll have public testimony. And several people have signed up to give us a comment. Would -- we're allowed to do that at this point, because we've held the public comment period open and Larry will probably address that in his remarks. I want to read the names of the people for whom I have requests to speak. If you want to speak at that time and you don't hear your name then contact Helen, or is Tanesha in here? Get a slip and make sure that we get it up here so that we know you want to talk to us. Here are the persons who have requested to speak: a Mr. Jim Craven, Miss Julie Brandis, and pardon me if I mispronounce your name. I'll get it right when you get up here. Denise Graisy, Jeff

Murray, Jeremiah Bowman, Alex Kuhler and Rob Gutridge. If there's anyone else, please make sure you give us a slip. Larry?

LARRY KNUDSEN: Thank you, Chair Hampton. As you noted, these petitions for rule makings are not really a routine item that you get so we thought it might be a good idea to cover some of the procedures and standards. They were also -- it's a little more complicated because the statute was amended in 2003 to add some things that we didn't previously deal with. There are some procedural issues, there are some factors that you need to consider, and then there are some time requirements. I thought I'd really briefly go over all three of those. As you noted in your introduction, there is a need now, under the new statute, to allow the public to have an opportunity to comment on the proposal for rule making. That was accomplished in two ways. As you'll know from your staff report, the department solicited written comments and then we also invited public comments at this meeting. And so you'll need to allow some time for those. I don't believe the notice that went out set any specific timeframe for that, and I think it's in your discretion, in terms of how much time you want to allow for the public

comment. In terms of the factors, the statute establishes six things that need to be considered and I gave you a copy of that up there and highlighted that. The relevant factors, I think, certainly have been addressed in the petition, they're addressed in the staff report and we'll probably hear more about them also from the commenters. But just to keep the record clean, when you're ready to move, I will ask that we put on the record that those factors were considered, at least the relevant ones amongst them. And maybe for the benefit of the public I -- shall I really briefly run through those?

LYNN HAMPTON: Please do.

LARRY KNUDSEN: One is the need for the rule, the second is public comments and complaints concerning the rule, third is the complexity of the rule, fourth is the extent to which the rule overlaps, duplicates, or otherwise conflicts with other state rules, federal regulations, or local ordinances. The fifth is a degree to which technology, economics or other factors have changed things relevant to the rule. And the last is the legal basis for the rule. The third item that I wanted to mention is timing. There is a statutory timeframe by which you must make a decision. And

because of the limited nature of your meetings that means we really do need you to make a decision today, and I will ask that you authorize us to enter a written order for the director to sign, so again, that can be final in the near term. And that's really all I had to say. Commissioner Blosser?

BILL BLOSSER: This same statute says that the attorney general shall prescribe by rule the form for such petitions and the procedure for their submission, consideration of this position. I'm just reading off what you gave us.

LARRY KNUDSEN: Right, and there is --

BILL BLOSSER: I just wanted to -- just checking, did this petition get submitted in accordance with attorney generals and there's no procedural flaw?

LARRY KNUDSEN: -- Procedurally, as far as I'm aware, everything is fine. I didn't include the rule because it lists the factors, more or less, in the same language. So I went right to the source. But yes, there is a model -- a uniform rule that all agencies have to follow and that was done by the petitioners in this case.

BILL BLOSSER: Okay, I just wanted

to make sure we didn't -- had to stop right at the very beginning.

LYNN HAMPTON: All right then. If there are no other questions or comments by commissioners, and if you're through, Mr. Knudsen, I'll invite the staff to come forward for the staff presentation regarding the petition. Good morning.

ALAN KIPHUT: Chair Hampton, members of the commission, for the record, my name is Alan Kiphut. I'm the land quality administrator for DEQ. I'm just gonna make some brief opening remarks and then Loretta Pickerell, the solid waste manager, will provide you with the some additional information. As you're aware, in January you -- the department released its recycling rate determination. You received a petition for various product manufacturers who use plastic containers, and the petition requests the commission to initiate rule making to amend portions of the existing rigid plastic container rules. You received our staff report last week. And our staff report summarized the law, describes the specific rule changes requested by product manufacturers. After careful evaluation, the department is recommending that you deny the petition for rule making. The basis for the recommendation is also

summarized in the staff report. And with me here today is my solid waste manager, Loretta Pickerell, who will briefly describe the rigid plastic container law and recycling systems work in Oregon, the changes the petition would make, and why the department believes the petition should be denied. We also have Peter Spindelo, our senior policy analyst, to answer technical questions. And Laurie Ittleman, our Assistant Attorney General, who advises on solid waste matters, is also here to address any legal questions you may have in relation to the rigid plastic -- excuse me, container law. So after the presentation by staff --

JUDY UHERBELAU: Before we begin, I want to clarify something. In a footnote of the staff report, it appears that the petitioners have withdrawn Number 2, is that correct?

ALAN KIPHUT: Chair Hampton, Commissioner Uherbelau, not exactly. There's -- and I'll have Loretta explain it. I'm sure Mr. Cosgrove will also clarify that as well. There was just a word distinction there between product and container manufacturers that I think got clarified. So the whole item number 2 was not being withdrawn.

JUDY UHERBELAU: Okay, and then

another issue before we start to clarify, the way I'm looking at this and I'm asking as you address this, is that it's not what people put out to be recycled. You know, like we have our recycle bins out in front of our condos, they come and pick them all up, but it's what happens after that that has decreased it to minus 25%. The community may be sending over 25% to be recycled, but they're not actually being recycled once they leave their hands.

LORETTA PICKEREL: I will get to that. I'm Loretta Pickerell, for the record. Commissioner Uherbelau, I will get to that in my presentation and describe --

JUDY UHERBELAU: Yeah, cuz I think that needs to be made very clear, cuz that will bring up way -- I look at this petition.

LYNN HAMPTON: Great. Well, hopefully there will be a good explanation of that and how that determination plays a role in the recycle rate. So we'll look forward to hearing that part.

ALAN KIPHUT: So with that, I'll turn it over to Loretta to do her presentation. Thank you.

LORETTA PICKERELL: Thank you. And

I might -- because I won't get to this, I might clarify up front that the petitioners have withdrawn their request for corporate averages for container manufacturers, for people that make the containers. They are continuing to request that we amend the rules to allow corporate averaging for the product manufacturers, the people that use and package products. So you'll see in the petition that the rule OAR 3-40 Division 90, Rule 3-60, they are still asking for the amendments in Section 1.

LYNN HAMPTON: You're on Page -- Stamped Page 004, is that correct?

LORETTA PICKERELL: Pardon?

LYNN HAMPTON: 4 of 7 of your report?

LORETTA PICKERELL: Yes, Page 4 of 7, the Item Number 2, the second request. You'll see the petitioners are still requesting that the EQC initiate rule making to amend Section 1 of that rule, of Rule 360. They are not requesting that we amend Section 2, as outlined in the petition.

LYNN HAMPTON: Okay, thank you.

LORETTA PICKERELL: Yes. As Al mentioned, I wanted to focus today on providing more context so that you can hopefully understand the law

a little bit better and how we are applying and how it's working in Oregon. The Oregon Rigid Plastic Container Law was passed as part of the comprehensive Oregon Recycling Act in 1991. And it established recycling and reuse requirements for rigid plastic containers. Now, rigid plastic container -- rigid plastic container includes beverage bottles, tubs, pails, trays, clam shells in similar containers that are from 8 ounces to 5 gallons in size. It does exempt from compliance with the requirements of the law containers of food, drugs, and medical devices. And Peter has an array here of some of the kinds of (inaudible) we're talking about. Basically personally care items, household and industrial chemicals, motor oil, automotive products, a lot of small electronic products. Those types of plastic containers are covered by this act. Any container that meets the requirements of the act --

LYNN HAMPTON: Excuse me.

LORETTA PICKERELL: Oh, yes.

LYNN HAMPTON: What's a clam shell is our question here?

LORETTA PICKERELL: Clam shells, yes, they are covered.

LYNN HAMPTON: You know, when you

go and get fast food and they give it to you --

LORETTA PICKERELL: Now, containers of food, they are rigid plastic containers, they're exempt from compliance from the law. So the clam shells -- McDonalds does not have to comply with the law.

LYNN HAMPTON: Right.

LORETTA PICKERELL: And I would invite questions as we go along, if you have any I welcome that. Now, any container meets the requirement of the law of the aggregate recycling rate for all of these rigid plastic containers in Oregon is at least 25%. If the rate falls below 25% then the containers must met one of the other compliance options provided in the law, and there are a number of those. They must be a type of container that's recycled at a rate of 25% or more. And by type, we mean, a type of resin or shape or design, or it must be a product associated packaged recycled to at least 25% or more. And that would be a Brand X detergent bottle or all Brand X products. Or it must contain a minimum of 25% recycled content or it must be reused or refilled at least five times.

LYNN HAMPTON: Now, can you give me an example of what the difference would be between

a type of container, resin type of shape design, or a product association package, that's being recycled at -- I'm not sure I understand what you're talking about there in those two distinct categories.

LORETTA PICKERELL: Okay. Peter, do you want to -- Peter is our expert and he gives much more colorful explanations than I do.

PETER SCANDALO: You have -- you could have, for instance, a container type, for instance, a detergent bottle that maybe you could put different types of detergent in it. And then you have -- actually, maybe could you repeat the question, so --

LYNN HAMPTON: Well, I'm looking here at the ways -- I'm looking at your staff report on Page 2 of 7, and you have bullet points under "Background." And they're talking about -- if the recycling rate falls below 25% these other criteria that then come into play and need to be met. And under bullet one you have an either/or and I'm not sure I understand the distinction. And I'm sorry, I don't mean to make this too laborious. It says, "Be either a type of container, EG resin type or shape design, or a product associated package, e.g. Brand X detergent or all Brand X products that is being

recycled at a rate of 25% or more." So let's say I'm using my Tide at home and I empty out the bottle.

PETER SCANDALO: That would be -- if you're talking specifically about Tide bottles, for instance, that would be the product associated packaging, because it deals with --

LYNN HAMPTON: Right. So we keep track of how many Tide bottles are recycled?

PETER SCANDALO: There are options for compliance. Certainly the Department of Environmental Quality doesn't do that, but it allows the product manufacturer to keep track of that. Now, whether that's practical is another story. But that is an option.

LYNN HAMPTON: is it also at the same time a resin type of shape design?

PETER SCANDALO: Resin type would be one of the -- for instance, a milk jug is made out of a type of resin called high density poly ethalyn [phonetic], and I can tell you right now that milk jugs, regardless or whether this is a -- you know, the brand was Safeway or whatever, milk jugs are recycled at probably about 46% in the state of Oregon. So that's a -- you know, a --

LYNN HAMPTON: Resin type?

PETER SCANDALO: -- resin type -- high density poly ethalyn is -- it's actually very close to 25%. It's right on the bubble. PET is recycled (inaudible) over 40% in the state, regardless of whether it would be something that's -- very high recycled rate like the soft ink bottles or --

LYNN HAMPTON: Okay, so I thought I understand the resin type, but I'm not understanding the distinction between a shape design and -- maybe this will become clear. Let's just go ahead.

JUDY UHERBELAU: On this same issue is now -- it's been determined that we fall below 25%. Who made that determination, DEQ?

UNIDENTIFIED SPEAKER: Yes.

JUDY UHERBELAU: Once that determination was made that we fall below 25% then did DEQ do any -- either any of the bullet point types of looking at it.

LORETTA PICKERELL: Commissioner Uherbelau, we -- what the law provides is that -- we determine the aggregate rate and that can be an easy way for everyone to comply. If we don't' meet that rate then the product manufacturers need to choose another way to comply. And as I'll explain later,

they don't have to do anything this year. But if the rate remains below, they will beginning next year. And they then choose which one of these options they want to pursue. We, the department, don't have anything to do with their choice. They choose. So they can say, "I know my Tide bottle is recycled at this rate, so I'm going to document that and I'll be in compliance." Or they may know that all of my milk jugs of this size and shape, no matter what product brand is on them, I know those are. So they choose which option they want. The department does not specify.

LYNN HAMPTON: Or they can use 25% recycled material. Thank you. That's what I needed.

BILL BLOSSER: Does that help, commissioner Uherbelau?

JUDY UHERBELAU: Yes, but it just makes our whole law much more complicated than I think it needs to be, but that's beside the point.

LORETTA PICKERELL: Yeah, what we're trying to do -- to help understand it -- it is complicated, I agree, but it is a law. In December of each year DEQ determines what the aggregate recycling rate for the following year will be. So that's what I wanted to say about the law, and now I

wanted to talk a little bit about the recycling rates. The rigid plastic container law in Oregon has worked. It jump started recycling at a time when many of curb side and depot programs collected newspaper, glass and tin, but they did not take plastics. And if you look on Attachment 1 of the handout --oh, okay, thank you, Helen -- Attachment 1 of the handouts you'll see a table and a chart. I think the chart is easier to look at. Those describe what's happened with recycling rates for rigid plastic containers since DEQ first began calculating the rate in 1993. And before we begin I should note that the recycling rate is simply the tons of containers recycled divided by the tons recycled plus the tons disposed. So the rate is that fraction of all containers generated in Oregon that are recycled. And you'll see from 1993 to 1995 that the rate was steadily increasing. Curbside collection and depot programs were beginning to take these containers, education campaigns were kicking in and the public was responding. The increases during this time, in recycling, out paced increases in disposal by 10% to about 2.3%. From 1996 to the year 2000 you can see the rates remained fairly stable. Recycling continued to increase, but not quite as fast as disposal. The curbside collection programs

continued, but a few of the existing programs disappeared. For example, Thriftway used to take plastics on Saturdays and most of those stores no longer do that. And then between the period of 2001 and 2005 the rate actually began to decline. The tons disposed continued to climb as the tons recycled leveled off. You'll see that a blip in the year 2001 -- that is an error in the data reported to DEQ. It explains that anomaly. In December of 2006, as you know, DEQ did determine that the recycling for compliance purposes, that the rate for 2007 would be below 25%. In making this determination we considered the actual rates for 2005 and 2004, both of which were just under 25%. And we also considered other factors that were likely to affect rates for 2007. For example, trends and sales of containers, the price of recycled plastic. And this is the first time that DEQ has determined that the recycling rate for the following year would be below 25%. What this rate determination means is that by law no action is required in the year 2007. The first year after DEQ determines the rate will be below 25% for the following year we're not, by law, we're not to enforce any alternative compliance methods. In December of this year we will again determine the

aggregate recycling rate for the following year, for 2008. And again, in determining that rate we'll consider actual recycling rate for 2006/2007. We'll also look at programs that are being initiated in 2007 or will be initiated in 2008 in time to affect the rate for 2008. And with that information we'll again make our determination. However, unless we determine the aggregate rate for 2008 is above 25% beginning in January of 2008, product manufacturers will have to meet one of the other compliance options specified in the law. There are two major factors are pushing the rates down. The first is the rising sale of beverages and containers with low recycling rate. Those are the non-bottle able beverage containers, a couple with the declining sales of beverages with high recycling rates, those are the bottle able beverages. For example, water and juice sale containers are dramatically rising and those are recycled at roughly a 30% rate. At the same time the sales of soft drinks are declining. Those containers are recycled at the 70 to 85% rate. So you can see that these two factors working together are lowering the recycling rate. And the second major factor is the increase of sales of non-bottled plastic containers, the tubs, the pails, the clam shell containers. Most

curbside programs do not currently accept these so their increased sales is again lowering the recycling rate. A number of proposals are being considered that could significantly increase our -- the aggregate recycling rate for rigid plastic containers. The first of those is changing the Oregon bottle bill to include water, juices, or other beverages. In 2005 alone Oregonians disposed of almost 7,000 tons of water, juice, tea and other beverage containers. So you can see that capturing even a fraction of those would bring our rate above 25%. Adding tubs, pails, and other non-bottled plastics to more curbside programs would also help. A few curbside programs collect these; Beaverton, Eugene, most don't right now.

LYNN HAMPTON: Excuse me. I have a question about that.

LORETTA PICKERELL: Yes.

LYNN HAMPTON: Who's in charge of the regulation of what they have to pick up at the curb?

LORETTA PICKERELL: Commissioner Hampton, local governments are. We have some statewide requirements for certain elements -- we have requirements that allow government some flexibility in

choosing what kinds of recyclables they want to pick up and what they don't. And so as long as they pick enough elements from our menu of options they comply. In the metro regional government is the local government responsible for metro recycling, and they have similar regional kind of oversight that a local governments within the metro jurisdiction are the ones that also determine what they will pick up curbside.

LYNN HAMPTON: Thank you.

LORETTA PICKERELL: We disposed of over 21,000 tons of these non-bottle plastic containers last year. And typically these containers do have a lower recycling rate than beverages, but nevertheless, if we capture even a fraction of those we would get the rate above 25%. The third proposal is to increase the recovery of the 5 gallon plastic buckets and other containers that aren't collected curbside. And finally improving the sorting at material recovery facilities are murfs. To reduce the loss and disposal of materials collected for recycling would help us get the rate up. I wanted to say a little more about the loss of recyclables. I know you've heard quite a bit about it in the news. By the year 2000 most Oregon residential recycling programs had changed to collecting recyclables together

or co-mingles, instead of being sorted into separate bins. Those recyclables are taken to a murf where the different materials are sorted out and sent to the appropriate end markets for recycling. The recyclables -- you'll in see in Attachment 3 we have photos of a MIRF operation or a few MIRF operations. And you'll see how materials are brought in and they have different lines they're put on and there's hand sorting and mechanical sorting both going on in these facilities. Now, this shift to co-mingled collection in curbside significantly increased the volumes of containers collected. Unfortunately sorting at some of these MIRFs has not kept pace with that increase in volume. Co-mingling has made it difficult for MIRFs to pull out certain materials, particularly plastics from newspapers. And you can see from this flat milk jug that Peter had how that might get buried in this line of newspapers and not get pulled out. And that's what's happened -- as a result last year -- about 18% of the plastic containers that were collected co-mingled were not properly sorted out from the newspapers at murfs. They were mixed in with the paper bills, sent to the paper mills and destroyed in the pulping process and ultimately had to be disposed of. The loss -- that loss is what accounted for the

1,700 tons of lost containers that you've heard about in the news. So improving this sorting efficiency at these murfs will help capture lost recyclables. I think it's important to note though that co-mingling isn't causing the rate to decline. This lack -- our inability to sort has kept us from getting the rate up as much as we might have with co-mingling, so better sorting will help. But I don't think we can point the finger at co-mingling as the cause of the problem. And I should also note that if the bottle bill kept these containers -- if these containers -- plastic containers were in the bottle bill, covered by the bottle bill, they wouldn't be mixed in with the newspaper for the most part anyway. So keeping them out of the co-mingled collection curbside would eliminate the need to sort them from newspapers at the murfs and would also help increase that recycling rate. So clearly container and product manufacturers, consumers, collection programs, murfs, recyclers, as well as DEQ all share responsibly in making sure these and other measures to increase recycling happen. All of us need to be working hard and smartly together to expand the bottle bill, improve collection and sorting systems, to educate the public, and to make sure we're designing containers to be readily

recyclable. If we do work together DEQ thinks that we should be able to get the rate above 25% for 2008 and beyond, and certainly that's our goal.

LYNN HAMPTON: Commissioner Uherbelau?

JUDY UHERBELAU: Thank you. You talked about educating the public, but I also think there's a real need to educate -- this falls back on the municipality or local government as far as how they pick it up and sort it and so forth. If you did some education on that level -- for example, it's very simple and I've seen it done, is you can have a container for newspaper only, then a container for glass bottles that aren't returnable, and then a container for plastics and that makes your sorting issue much easier. But is anybody doing any of that on -- DEQ on the municipal/local government level?

LORETTA PICKERELL: Commissioner, I think Peter wants to address that.

PETER: Chair Hampton, commissioner Uherbelau, the -- up until about 1998 or so that was the way recyclable was collected. Everything was supposed to be source segregated it. At least the public put it out, you know, the separate container for the cans, the glass, and the plastics, and the

newspaper and the other papers. It was put out that way. It wasn't necessarily collected that way in the trucks, because it was very time consuming for the collectors to have to carry each of these containers around to a different part of their truck and load it in a different place. So what we found - - what happened was -- people found that if they allowed the public to co-mingle the containers into a larger bin that they would actually get more recyclables, that the amount of recycling would go up, because some people just didn't want to deal with the sorting it out separately. So there's this tension between the wanting to keep it nice and pure and clean and wanting to get as much material. We have seen a significant increase in the amount of material collected due to going to co-mingling, and particularly for plastic bottles. The amount of plastic bottles being collected now is significantly higher than we had under the old system, even taking into account that loss of the extra 1700 tons. Just counting what we're actually measuring going off the plastic plants has significantly increases, roughly doubled, over what it was before co-mingling. And some of that is due to increased amount of production of these materials, but a lot of it is due to people

actually doing a better job putting them out then they did under the separated systems.

JUDY UHERBELAU: You say it's almost double and yet if you look at your statistics what was recycled was higher back in higher years than it is now. We've just gone down hill since 2001.

PETER: The big loss has been in bottle bill material where it's not that people are recycling less, but we've seen a move from people buying soft drinks to buying water.

JUDY UHERBELAU: Right.

PETER: And these are recycled in the state at a rate of roughly 75% or so, the overall recycling rate for beverage containers is 78, plastics a little bit lower. These are recycled at 32%. Juice bottles are at about 28%. And so people have moved from a high recycled rate material to a low recycled rate material. We see in the bottle bill tonnage steady, steady and actually starting to drop. There has been an increase in the recycling of the non-bottle bill materials due to co-mingling. But at the same time there's been that increase, there's been much greater sales of items like these that are not collected in recycling programs that are not particularly wanted. If this happened to be a poly

vinyl chloride, for instance, that's a really difficult plastic to recycle. And so there's been greater increase in production of these things that are not collected in most recycling programs, and most wouldn't know what to do with them. And as this massive increase in these other plastic packaging that has driven the rate down, even though we're getting more material being collected in the curbside programs.

LYNN HAMPTON: Thank you.

LORETTA PICKERELL: Returning now to the petition. The petition submitted by the product manufactures anticipated the state aggregate rate would be below 25%, and it seeks the commission to change the definition of recycle to include everything intended to be recycled, whether it is recycled or not. And that would likely increase the aggregate rate about 25%. It also would allow product manufacturers to use the average recycled content of all the containers to meet the minimum content requirement. And this would make it easier for some manufacturers to comply using the recycled content option. We did receive public comment, considered that public comment. We received about 66 comments during that two-week period that we took written comment. I think you'll

hear from folks today. We did consider, in making our recommendations, and as you know we have recommended that the petition be denied. The reasons are set out in the staff report. Basically we are noting that the commission's legal authority to make the changes were (inaudible) as highly questionable, and the issues to be -- subject rule making are currently being discussed in the legislature now. DEQ did present information no rigid plastic containers to the senate Environment and Natural Resource Committees this last Tuesday. We are intricately involved in discussions on the bottle bill and we may see more bills related to rigid plastic containers with the bottle bill before -- in the next month or so. And we will stay involved in those discussion at the legislature. It seems premature now to initiate rule making on these same issues. We will look at what comes out of the legislature and will report back to the commission with any recommended changes after session certainly. Our focus now needs to be getting the rate, working on the bottle bill, our collection programs, and these other programs that we've mentioned. So with that, I'll conclude my remarks and willing to answer any questions. Thank you.

LYNN HAMPTON: Thank you. Does

anybody have any questions for Al or Loretta or Peter? We did receive your staff report last week and I know we both had a chance to read it and I read it with interest. (inaudible)? Okay. Thank you. Okay, great. Okay. At this time I'm going to invite petitioners to come forward and I'm going to ask that, if possible, that Al and Loretta and Peter remain available, so that if we need a counterpoint or further explanation on any point we'll have you available. Mr. Cosgrove?

PAUL S. COSGROVE: Thank you, Chair Hampton, and members of the commission, my name is Paul Cosgrove. And although I'm here as a representative of the Soap and Detergent Association, which was the first name petitioner. I appreciate the opportunity to sort of step back and discuss why the whole group of people who have petitioned for this change, the concerns they have, the consequences they see, the difficulties they see, and the issues they see in the current system. And just to highlight, there are 11 local and national trade associations who have joined in this petition, in addition to the Soap and Detergent Association, it's the Adhesive -- and these are alphabetical -- Adhesive and Sealant Counsel, American Chemistry counsel,

Associated Oregon Industries, Consumer Specialty Products Association, Cosmetic, Toiletry and Fragrancy Association, Grocery Manufacturers Association, Fruit Products Association, Northwest Food Processors Association, Oregonians for Food and Shelter, the Plastic Shipping Container Institute, and the Rigid Plastic Packaging Group. And I read that list to show you the breadth of people that are concerned that are also folks who are not petitioners who you will hear from today who also have concerns. And to reflect that this is a very big problem for a very large number of companies, both located here in Oregon and across the country, and in fact, even internationally. The -- the staff just mentioned -- and Miss Pickerell mentioned also in the testimony she gave before the Senate -- Environment of Natural Resource Committee that the recycling system works or doesn't work because of a whole lot of players working together, and those are consumers, the people we are asking to put these products into bins, bags, roll carts or whatever. They are haulers who are picking those up, the collection folks, they are the processors, they are the end use manufacturers who are taking that recycled resin and putting it back into their products, and then they are us who are sometimes

buying that in-use resin and producing new packages. And the goals of course of this system are to, as we all know, the higher archy is to reduce, reuse and recycle. But it's -- we believe -- and you've already heard about some of the complexity of this law, which is of course one of the legal requirements that you're charged to consider, that the system as it works and as it has changed since it was initially adopted, which is another factor that I think you need to consider, no longer reaches those hierarchical goals very well. And let me try to explain. If our goal is to reduce packaging you would think our law would give credit for source reduce packages, and in fact, essentially it doesn't. There was a one time, one five year source reduction credit. So a manufacturer who has in fact made their bottles -- and I think of a detergent bottle, as has already been mentioned, the Tide bottle, used to be bigger, used to be thicker, used to have fewer doses in it. In other words, the product has now been concentrated. That no longer is a compliance methodology in Oregon. Reuse; the second priority one. I think you can realize that when products now move into an individual consumers home both reuse of those products, or frankly figuring out how many of those particular

branded products or type of products are actually recycled is a bit beyond the realm of possibility for most manufacturers. It's very, very difficult to, one, try to go back and collect all the Tide bottles in someone's home in Oregon, or two, to even know how many of those are being recycled. We don't have access to that data. And in fact the data that the department gets on what is recycled is itself rather limited. And every time I'm quoting about data in here, I'm -- we're quoting from the department's report issued in January, unless I mention otherwise. That report mention that the data is hard to verify on what is actually recycled in the state, because it's based on surveys, not sampling. What's disposed in the state is based on sampling done by the department. But what is recycled is based on surveys and all kinds of containers are reported in those surveys together. All of the kinds of products you saw here are reported as one sum. So then we're down to the third priority, recycle. And obviously this is where the whole system and all the parts of the system need to work together in order for it to be successful. And I think what you've heard is since we've moved to co-mingling, the system, from the perspective of this particular kind of product, has

not been working as well as it should. And our position is it's not working as well as it was back when we had source separated materials. I have also worked for the paper industry for years and I remember first being taught about paper recycling. Keep it separate, it's very valuable. Mix it together and at some point it becomes garbage. And that is, I think, where we have moved as a department, this department, and your local government colleagues have moved to a system that is supposedly simpler for consumers. You don't have to keep it separated, but has these problems of contamination, co-mingling and loss of materials. And that's a policy decision that's happened since this bill was passed, since these rules were written, and since we committed to the 25% recycling rate. In the data -- is really important with respect to this issue, because obviously the consequences of small movements in the data are very important to a whole number of companies and a whole number of Oregon consumers --

(End of Tape 5 Side 2B)

PAUL S. COSGROVE: -- And I'd like to spend just a second on the data. This is all again from your report. 1993 to 1995, the first years after passage of this act back in 1991, rigid

plastic container collection increased about 10% per year. Everyone got on the band wagon. Lots of consumers, lots of cities added rigid plastic containers, at least bottles and jars to their programs. Lots of publicity, high rates of increase. 1995 to 1999 the report your staff has made back in January calls the ihcreases fairly stable, 4.7% per year on average for those years. In the year 2000 another big jump, 8.8%. And your staff attributes that to the publicity that came with the change from individually sorted recycling bags that we were all used to the new co-mingled system. And initially all that publicity about it's easier to recycle, you can put it all together, had another jump in the increase of rigid plastic container recycling. But from 2001 to 2005, as co-mingling has been implemented in nearly every municipality across the state, certainly every significant one, the rate of increase has dropped to be very small, 2% or less per year. That is the kind of change that's concerned us. Your staff believes that 1700 tons of what's put at the curb by us, as homeowners, is lost in this system, roughly 20% of everything that's put in the curb of rigid plastic containers is lost. And if you look at the charts in your staff report you'll see that during

that same period of time that now we're losing 1700 tons the amount of increase that they've talked about is only 1200 tons. We're losing more than we're gaining. Let me back up, that's not quite the correct way to say the statistics. We're gaining 1200 tons by moving to co-mingling, we're losing 1700 tons. Those -- that data is from your staff report. I'm not making that up from any other source. The other thing I would like to point out and it's not quite so evident in your staff report, but it's very important. There's another 1700 ton issue here, besides the loss. It's mentioned in the report in January that actually the original estimate of tonnage collected of rigid plastic containers in 2005 was over 15,000 tons, actually 15,495. And the department has always done a reduction in that number, based on its estimate of what it calls contamination. And contamination is several things. It's leftover product in the bottom of a bottle, it's lids and caps, which are being recycled, but they're not defined as rigid plastic containers so they're taken out of the calculation. Its bottles that are too small or too big to be defined as a rigid plastic container, even though they're being recycled. They used to use a 5% reduction. They now think, based on

preliminary data that is not yet complete, and I stress that and that's the term that's used in the report, and that they think they'll have better estimates later this year, that that should be increased to 11% of contamination. Now, whether it's 5 or 11, I think, is an interesting question, but that makes a difference of swing of another 1,692 tons, essentially another 1,700 tons difference in the rates. And with respect to those swings, it makes a huge difference to us, as manufacturers. Unfortunately, we don't have much influence realistically on the recycling system in Oregon. Our responsibility is to make our packages recyclable, to encourage our consumers to put them out for recycling, to make them easy to recycle. Most packages of consumer products now are made with PET, the number one in the chasing arrow on the bottom, or HDBE, the number 2 chasing arrow. A few other resins for particular reasons, but most are in those categories. But we can't control how easy it is or how well the system operates. One other thing I'd like to point out, in terms of all of us working together -- you're in a state owned, or actually I think leased facility. You don't see any place for anybody to put their recycled containers --

LYNN HAMPTON: (inaudible) containers, they're paper.

PAUL S. COSGROVE: -- for the public. I would suggest to you, if you go into state and municipal facilities you will see very, very few of them make it possible for us to recycle. There's one exception that I think we've probably all become aware of, Portland and its airport. Lots of different recycling slots for bottles and papers and so on. Frankly, Metro in the Portland Center for Performing Arts does an excellent job. State facilities are amongst the worst in my viewpoint. The legislature has, in its back rooms, recycling for its staff. In its public facilities, it does not, or at least it has minimal recycling for containers for the public. Do we have recycling facilities at our roadside rest areas like in Europe? No. do we have them at our state parks? I believe the answer, almost uniformly, is no. If we're all going to work together to help the public recycle we have to make those kinds of changes as well, and those are changes that I think show that the responsibility for the state to have some, as well as our local government partners, to work with this system. Let me talk very briefly about consequences. There will be others who

will talk about consequences particular to their industries, but there are literally thousands and thousands of products that will be affected if no December 31st this agency says it's still below 25%. You saw a number of them. Think of all the products at your local Frys store, your high tech stores that are in those kinds of plastic clam shells. Think of -- you don't have an exemption for food in this state. We have an exemption for solid food. Milk jugs aren't exempted from the requirements of this -- unless they have some other way to comply, neither are juice bottles, and I'm talking about the Tropicana orange juice. All of those products are affected. Ironically, the one that will not be affected at all, or at least one of them, is water bottles. It's absolutely clear that water bottles made from PET will be recycled at a rate above 25%. All PET will be above 25%. That -- sale of that product will not be affected. What will be affected is some of these other products you're seeing. And that's why we're so very concerned that we address this issue now. Changing packaging, even changing labels on packing, let alone changing the type of packing. Moving from a type of packaging that's in the stream of commerce and getting it off shelves back out of the stream off

commerce is not a simple process and it takes time. We couldn't possibly comply, if on December 31st a rate changes was announced, "It's still below 25," and enforcement began January 1. We'd have to start complying long before that. In other words, we'd have to be taking steps long before that. And that's why our view, waiting for the legislature, isn't satisfactory in this case. It really falls upon you to take a look at this system and see what you can do to make sure it's fairly assessing and giving credit for what is happening and putting blame, or responsibility, where it ought to lay. The Bonneville expansion has been mentioned. I just quickly checked. There are several bills, of course, that deal with water and/or other containers. None of them would take effect until 2008, some of them wouldn't take effect until longer. That's not a solution. I can assure you that it's not by any means a clear shot that Bonneville expansion will pass in that legislative body. It never has. There have been times that there have been also great efforts to do so. There was an initiative before the public to expand the bottle bill that was rather roundly defeated. I'm not saying that's what's going to happen this time, but in other words, us manufacturers

of the soap and detergent bottles, can't wait to see how that kind of political argument plays out. Now, specifically to what we've requested. There are only two states in this country that have this kind of legislation, Oregon and California. There are dramatic differences between how you can comply in Oregon and California. The reason we've asked for what's called averaging is that is a compliance method in California. We know how to do that. The rate has been below 25% in California. We use averaging as a method of compliance. And what that means is if I'm a manufacturer of five different sizes of a product and the little bottle can't take very much recycled content, but the big bottle which is thicker can, you can average the tonnage of recycled content amongst all those bottles, and as long as it's on average over 25%, it complies. All those bottles comply. It's been stated that we don't allow averaging in Oregon and the statute might not. I would suggest to you the rules already do, in one respect. We can average bottles in January to bottles in December. That's already part of EQC's rules. It has been since the beginning. We just can't average in January little bottles to big bottles. And to me, if we can average over a year and that was a sensible

choice back in 1994 when the rules were written. It seems logical to us we ought to be average within a month, or time period based on size. So that's one major difference. The other differences are probably not within your purview. There are exemptions in California for good reason. For all kinds of other products that do not have to comply with averaging plastic container law, liquid food, meaning milk and juice, are exempted in California. They're not in Oregon. Containers for pesticides and hazardous materials, which are regulated and the packaging is regulated by either EPA or US Department of Transportation. You've heard about conflicts with other laws, as one of the factors. Those are exempted in California for good reason. They're not here in Oregon. Cosmetics and I need to step back. Cosmetics is a term of art under the FDA. It really means shampoo, toothpaste, and yes, the things that we commonly call cosmetics, but it's a whole lot more than that. They're regulated by FDA for safety reasons, packaging is regulated. They're exempted in California. They're not exempted in Oregon. Without averaging and without the ability to give credit to the consumers and our homeowners how are actually putting those bottles and cans -- excuse me, those

bottles into the containers, we're not gonna be able to comply in Oregon even though these same companies, both Oregon companies and outside of Oregon companies, know how to comply in California. And that's a major concern to us. We're obviously a very small part of the worldwide market. It's very difficult, sometimes expensive, sometimes impossible to have a special Oregon only package, especially when the goals of this legislation are being met in California under a regimen that we understand and can comply with, but that that regimen, which includes averaging as a major component of it, is not available to us here. There will be thousands of products affected toward the end of this year, if changes are not made. Those -- the effect of non-compliance of the system not working is going to fall on the product manufacturers and the people who buy those products, the Oregon consumers. Those other elements of the system who could help, frankly, you could define rigid plastic containers as a principle, recyclable material under your rules and require cities to include those in curbside programs. You have not done so. Cities could do it voluntarily, with the exception of bottles and jars and a few municipalities, Eugene being one of them. They have not done so. The city of Portland has not

done so, for example. So there are a number of things that could be done -- the state could start putting out recycling bins in its parks and waysides and public buildings and we could get some of those water bottles back in the system as recycled materials. But if none of those things happen and only some of those can we control and, frankly, only some of those can you control, we're gonna be in a real pickle come later this year. So that's the rational for seeking your consideration of the allowance of us to do averaging, so that not only can we average from January to December on an 8 ounce bottle, we can average from an 8 ounce bottle to a one gallon bottle. And we think that's not a particularly difficult change to make or an unusual or radical change to make. And we also believe that especially given the data points being adjusted and changed and moved with small percentage -- or small poundage differences making big percentage differences, we think it's appropriate to count the 1700 tons estimated that are put out on the curb by Oregon consumers as part of the recycling rate. One last thing on that issue; that is not normally how we think of as professionals of recycling is putting it out on the curb, but as your assistant attorney general pointed out in his

legal opinion and I'll quote, "One must acknowledge, however, that a common understand," probably the understanding of Oregonians, "of the term recycle is to source separate and make available for collection. And that the statute sometimes loosely refers to the term recycle in this context." I think that's what the public thinks they're doing and believes they're doing when they're doing what they're doing, putting those out on the curb. So with that I will close. I appreciate your opportunity to sort of set the stage. I'd be happy to answer any questions. There are also folks behind me who have specific pieces of information and how it affects their industries. Thank you, madam chair.

LYNN HAMPTON: Commissioner Uherbelau?

JUDY UHERBELAU: Thank you, Mr. Cosgrove. Thank you. I mean, I think you've made some excellent points from things that I haven't thought about before. Just the idea of do we have in our facilities proper places to dispose of things. This is a very, simple, easy thing to do and yet we don't. But my concern is I'm assuming that the original purpose of the recycling bill was to keep these things out of our land fills and where they do

harm and that type of thing. And when I read your -- when -- I'm not reading it word from word, but basically defining recycling as all those containers -- collected and intended for recycling. If we make that change that's really not a furtherance of our goal. Now I realize we're not meeting our goal and I think there are other ways to meet that goal. And I think we should be pursing those, and I would certainly encourage DEQ to do that. But that portion of your log concerns me because I think that's getting completely away from the goal of the original statute.

PAUL S. COSGROVE: Madam Chair, Commissioner Uherbelau, I understand the point. Recall that this goal was set in a comprehensive recycling statute passed unanimously by the legislature in 1991. We've talked about it now in terms of rigid plastic containers and how manufacturers must comply. It also set all sorts of recovery goals, interesting note the term, "recovery goals" for local governments, not recycling goals. That's a significant difference. We judge different people under the statute in different ways. For local governments, it set requirements for newsprint minimum content, it set requirements for glass, it set up a whole system. If

the system isn't working well, as a whole, unfortunately what this particular piece of that system does is it puts the burden of that non-functioning system on only one segment, and it's a segment that I think you'll have to agree realistically won't solve the problem, or at least can't solve the problem alone. And that's our concern. If those of us who are working with our consumers, and our consumers more importantly are working to put things out at the curb, we'd like them to get credit for the part of the system that they have. To the extent the rest of the system isn't working so well, I think we need to attack that and place responsibility and make changes there.

JUDY UHERBELAU: Now, I can agree from where you're coming from, theoretically, but I also have to say that once you put something in the law you're stuck with it, at least until it gets changed. And so we're only -- we're addressing the wrong thing. We're not addressing the program itself, which is not doing what it should do. And the other -- and I don't know if you've had a chance to read it, but we received a memorandum from the Department of Justice arguing that they don't think we have the legal authority to make that change or what your

response to that might be.

PAUL S. COSGROVE: Madam Chair, Commissioner Uherbelau, I have read it. It was part of the packet with the staff report, and I'll just make two comments. And I'm just turning as I speak. And I've known Mr. Eddleman for a number of years and have high regard and respect for his analysis.

LYNN HAMPTON: (inaudible), Mr. Cosgrove.

PAUL S. COSGROVE: Pardon?

LYNN HAMPTON: I'm sorry, I was just noting it was Attachment C.

PAUL S. COSGROVE: Thank you. I was shuffling. I appreciate you pointing that out. I read one comment from his report that I think is important -- his acknowledgement that a common understanding and the term and what we're dealing with here is trying to construe what the statute means. And that's the role of lawyers, and unfortunately I'm one of those too. And so we might differ on our view of what the statutes mean. But I think he correctly points out is you look at the language, what it means, and you sometimes look at the common understanding. And he points out that a common understanding of that term fits the kind of request

we are making. It's not the only one. He comes to the conclusion that unlikely a court would find you have authority, but unlikely doesn't mean it's not necessarily completely true, and I think there's a good argument made on the other side. I don't want to get into a legal discussion with him, but I don't think his is an absolute opinion. With respect to the averaging, I think what the opinion misses -- or at least the staff analysis misses, is we allow averaging in Oregon. We just don't allow this kind of averaging. If we don't allow that kind of averaging and literally every single bottle made every single day at every single place that's then put in a product and shipped to Oregon has to have 25%. I would suggest to you everybody is out of compliance already. In other words, we have said that the language is sufficient to allow sensible measurement -- averaging and measurement on an average in the aggregate. We're just asking for different kind of aggregation.

LYNN HAMPTON: Question? Commissioner Blosser?

BILL BLOSSER: You sited and the staff gave us statistics on the recycling rate, and you sited and the staff did that beginning in 2001

the rate has been plummeting from 30% now down to below 25%. Why have you guys waited so long? I mean, you could see -- the trajectory is plummeting and in fact the last two years it's been below 25%. Why did you wait until the 11th and 59th minute to bring this to us?

PAUL S. COSGROVE: Madam Chair, Commissioner Blosser, there are two answers to that. One is, the actual rates for 2004/2005 were not available to anyone until the department did a 2005 waste composition study and 2004's rate is an interpolation, based on data from 2002, adjusted to 2005. And the actual rate for 2005 was announced in the fall of 2006, just last fall. So that's one issue. The second issue is, and I will find the exact quotation, and I'm reading from, by the way, DEQ's report in January when it announced the rate was below 25%, and I'm not sure you have that in front of you (inaudible). All of those rates were adjusted downward. I mentioned the 1,692 tons based on contamination. That new contamination adjustment of -- 1,700 tons for rounding tons, which is about 2%, 3% points. All that adjustment was made for the first time in this document issued on January 2nd, 2007. We had rates that were announced by this department,

considerably higher than this, until January of this year. And we did not have rates for 2004/2005 until the fall of last year. So I recognize, should we have come earlier? That's a decision for you to make. But I think there are good reasons why we didn't come earlier, that in fact this problem has only become completely evident to any of us relatively recently.

LYNN HAMPTON: Commissioner Blosser, do you have any questions or comments?

BILL BLOSSER: The recycling rate of 25% is, at least in my mind, pretty abominably low in the first place. It's a pretty low hurdle to get over. It should be a low hurdle for us to get over, and clearly the system is not working very well when we've basically, barely stayed above 25% for 15 years almost, 12 years. One would have hoped that the trajectory would have been going up and we would never even be having this discussion. But clearly that has not happened. And the staff talked about a lot of the reasons for that. What I'm curious about is is your association and your group -- have they been heavily lobbying over time for, for example, expanded curbside recycling of plastics to get more of the plastic into the stream, so that it's not centered down a couple of types of containers and a lot of

it's escaping it. Have you been appearing before the state sustainability board and the governor's office pounding on the table saying, "Why aren't you recycling plastics?" I mean, what you're saying -- you know, what can you as manufacturers do, but certainly since you're the ones, as you said, who end up paying the price, in a certain sense, you'd think that you guys would have been all over in previous sessions of legislature encouraging adding other containers to the bottle bill or whatever -- some kind of a way of inducing consumers to recycle, heavily lobbying metro to include other containers in the Portland/Metropolitan area, whatever. I mean, I'd think you guys would be in the forefront of pushing that. Have you been and what has been -- if you have, why do you feel like you had no result?

PAUL S. COSGROVE: Madam Chair, Commissioner Blosser, pounding the table, I think, would be a dramatic overstatement of what we've done. However, I have personally been involved in both legislative and regulatory efforts to try to change the standard by which a local government must decide when to add things as principal and recyclable materials. And the current standard is an unrealistic one. And it specifically said in your rules for

plastics as an unrealistic one in my judgment. It requires not that the local government determine that the incremental cost of adding some of these other materials is offset by the recovery by selling of the resin. And by the way, as your staff points out, resin points have been reasonably high recently so that's not a problem. It requires some look at the whole cost, as if that's the only thing they're going to the curb to get and makes that economic calculation very difficult to get into and get these to be defined as principle, recyclable materials. That's one issue and we have tried to get that changed. I personally have been involved in that and have not been successful.

LYNN HAMPTON: On that point, is that a statutory definition or is that a rules definition?

PAUL S. COSGROVE: It's a rules definition that local governments have fought with. It's never been brought before you as a commission. It has been discussed in workgroups.

LYNN HAMPTON: Thank you. Sorry for the interruption.

PAUL S. COSGROVE: No problem. And it has also been discussed at other times that

we've gone to the legislature and talked about the kinds of exemptions to conform to California, which we did in '95. That was the first time that any food was exempt in Oregon. And I think there was a bill in '93. So pounding on the table, that's not accurate, but there have been efforts, I think, to do that. I think one of the reasons local governments have not been pounding on the door to add these products to their systems is pretty understandable. Many of them are facing tonnage recovery requirements, either self set like the city of Portland or Metro, or set by the legislature by law. And these are not big tonnage issues. If you've got 100% of the recycled plastics in Oregon -- pretend for a moment you could do that, you wouldn't make much difference in the overall recycling rate. And the city of Portland, for example, is moving to greatly expand and even looking at doing yard debris weekly and garbage every other week, because its' looking for tonnage. And I can assure you that sticks and stones and leaves and branches will help them reach those tonnage targets a whole lot faster than a few more milk bottles or water bottles. And that's just the nature of what we've set up is a numbers driven system, even though I think you could make a solid argument that

recycling leaves, which are biodegradable, compostable, may not be the best -- aren't as high -- recovery of resource as recycling plastic or glass or metal. But that's not the way we set up the system. So there's some disadvantages in trying to get this material put into municipal systems.

BILL BLOSSER: Just a follow up question on that. Is the group -- you know, you said you represent one of them, but there's a larger groups and you listed all the names, are they supporting the expansion of the bottle bill?

PAUL S. COSGROVE: Madam Chari, Commissioner Blosser, the Soap and Detergent Association doesn't have a petition on the bottle bill. It has bottles but they're not the kinds that are ever connected in the bottle bill. I expect there are other folks in the back who have -- as a matter of fact, I know there are other folks in the back who oppose an expansion of the bottle bill. And there may be others in the back, a part of a coalition who are either neutral or support it. The one thing I have heard from some opponents of the bottle bill who may not be adversely affected in this very same realm if the bottle bill isn't expanded is, you know, it is the most expensive way of recycling

we've ever devised. It may be very effective but it's a very expensive way and there are lots of efforts to try to make the curbside system better, because it is a far more efficient way to collect all kinds of materials if we can make it more efficient. So I think that concern exists with respect to expanded bottle bill.

BILL BLOSSER: Again, going to the staff report. You read a few things out of the DOJ's thing, but the bottom line thing that I keep going back to is, I read the DOJ saying, "You do not have authority," or "You have authority -- you may have authority, but it's unlikely the courts would support you in this changing of the definition." And my experience on commissions has been tough for commission to just thumb our nose at the DOJ. Do you have some other really good argument that we could put before us that would completely counter what the DOJ is saying? Obviously the way he weighs the stuff and came down the side that, "I don't think you can do this."

PAUL S. COSGROVE: Madam Chair, Commissioner Blosser, as you know, sometimes the answers you get from attorneys based on questions you ask -- and so I'd just start with that. The process

for (inaudible) interpretation, I think as Mr. Eddleman set forth, is to determine the intent of the legislature. And in Oregon that means we look at the plain language and common understanding correctly. Some of his colleagues representing -- advising other agencies, totally separate from this and totally unrelated to this, have pulled out Webster's dictionaries for me periodically when they've been talking about what they think statutory construction should be, and that's not inconsistent with what our supreme court has told attorneys to do in statutory construction. I think there's a -- within Mr. Eddleman's opinion of (inaudible) on the definitional issue, there's the roadmap there. A common understanding of this, a common, not the only understanding, but a common understanding is it means getting it separated -- ironically, separated, and collected, even if it's later gonna be co- mingled and lost and that that is recycling. So I think that gives you the roadmap. With respect to averaging, I'd just repeat that the rules don't now require each and every container to have exactly 25%. You already allow averaging, just of a different type. I think if you can allow -- and it's never been challenged -- the advertising -- the averaging from January to

December -- I can't imagine why anyone would have a good challenge for the 8 ounce to the gallon averaging.

BILL BLOSSER: One last questions.

LYNN HAMPTON: Okay, go ahead.

BILL BLOSSER: Again, in the staff report it says that the law requires that legislature conducts a hearing when it drops below 25%, and as far as I know they haven't done that yet. And so the staff concludes it would be premature to do it until the legislature has done what they're supposed to do, statutorily.

STEPHANIE HALLOCK: Commissioner Blosser, that hearing was held this week. That was the hearing that was referred to. Senator Havokian held it this week.

BILL BLOSSER: So this staff comment here is no longer --

STEPHANIE HALLOCK: I'm sorry, we didn't clarify that. That hearing, originally, we thought was going to be later and he moved it up after this staff report had been written

PAUL S. COSGROVE: It was after the report was written, yeah.

JUDY UHERBELAU: So it's been had

-- what happened?

STEPHANIE HALLOCK: Well, our staff testified and a number of other people testified, and Loretta can come and talk to you in more detail about the testimony that we gave and some of the other comments, and Mr. Cosgrove can comment as well. He was there. But the legislature -- I was not there myself. I don't think any action was taken. They just heard the testimony.

LYNN HAMPTON: Commissioner Uherbelau?

JUDY UHERBELAU: This is a follow up to Commissioner Blosser's question and your response. You were talking about the common understanding of plain language. You can also look at legislative history and in fact that's what the court does a lot of times when they can't quite figure out what's going on. Have you -- has anyone of your people looked at the legislative history to see if there's any answers there?

PAUL S. COSGROVE: Madam Chair, Commissioner Uherbelau, I would never suggest that memory after 16 years is a reliable indicator for --

JUDY UHERBELAU: That's why I didn't ask you about memory.

PAUL S. COSGROVE: -- Many of us in this room were there 16 years ago. The process for putting together Senate Bill 66 was -- as many of you are familiar of when you amended and engross a bill it becomes a engrossed, and then maybe if it's done twice it's b engrossed. We were at D engrossed and my -- I remember an amendment I did. It was Amendment Number 77. We were D- 77. There were multitudes of workgroups, four or five or six, going on in the building, none of which is reported, many of which we were all there. There was a plastics one, a newsprint one, a municipal one. When it finally came down to it I don't recall that any of these issues, in particular, I may be wrong, were discussed on the public record. And it was rolled out as here's a whole set of compromises in a very, very big bill that's been amended many times. That's my recollection.

JUDY UHERBELAU: So they weren't anticipated, that's why they weren't discussed.

PAUL S. COSGROVE: Well, we collected these things source separated then. You know, it's interesting and I apologize, maybe this doesn't answer your question, but when I go around my neighborhood -- I'm in the city of Portland, but I'm

right by Washington County, so I see two different sets of people with two different colors of bins. I still see -- frankly, I set them out this way too, there's a sack of the glass, there's a sack of the plastic, and I know mix my plastic and tin cans together, but I never keep it mixed up with my paper nor with my newspriht, which comes from a different place. And that's true. Lots of people still do that, but the system unfortunately has moved to almost completely taking even the source separated and co-mingling it.

LYNN HAMPTON: Ken, comments, questions? Okay, I have a question. One question and I think that I missed a portion of the sentence that you said. You said that, and I believe you were referring to the report that came out this January, there was an assumption that had changed, was it about the contamination rate from 5% to 11%?

PAUL S. COSGROVE: Yes, and I will --

LYNN HAMPTON: What was the affect of that on the 25% recycle level?

PAUL S. COSGROVE: It reduced -- and ironically it's the same figure, but it's a different calculation. It reduced the tonnage

recycled by 1,700 tons, which is a couple of percentage points. Now it would have been reduced about half of that had -- about 5% of the old contamination, it moved to 11%, which the report talks about is about -- well, you do the math and it's 1,692 tons. That is the change in assumptions and that was then retroactively applied to all the rates back to '93, that same kind of change.

LYNN HAMPTON: Did that change in assumption have the effect of bringing it below 25% and triggering this inquiry that we're here about today or would it have been below 25% anyway?

PAUL S. COSGROVE: No, actually that assumption in and of itself would have made the difference. Any of these changes would have made the difference. It's that close.

LYNN HAMPTON: All right.

UNIDENTIFIED SPEAKER: (inaudible) 400 tons. So we're looking at 60/80 dump trucks. I mean, this is like (inaudible) deal.

PAUL S. COSGROVE: And just in summary, it is a big impact for a relatively small amount of tons. And that's the importance that we want to bring to you is I wish it were so easy as just figuring out water bottles. It affects all these

products. It's a complex system. Data changes have made it difficult to predict for everybody, the department included, but there is just a very big impact potentially looming very soon.

LYNN HAMPTON: Mr. Cosgrove, thank you.

PAUL S. COSGROVE: Thank you very much.

LYNN HAMPTON: Okay. Just to proceed (inaudible) but do we need a break?

UNIDENTIFIED SPEAKER: I have to leave at 11:30.

LYNN HAMPTON: All right, we're going to proceed now to the public comment period. And we will begin with Mr. Jim Craven. Is that the correct pronunciation of your name, sir?

JIM CRAVEN: Chair Hampton, members of the commission, Jim Craven, representing the American Electronics Associations. Nice to see some old friends here on the commission.

LYNN HAMPTON: And I'm sorry, are you saying Craver?

JIM CRAVEN: Craven.

LYNN HAMPTON: Okay, thank you.

JIM CRAVEN: I am not an expert on

rigid plastic recycling, in fact I spent a good part of my 20 years career in Salem being thankful for that fact and watching the work that Mr. Cosgrove and others have had to do on this mentally complex issue. Just recently I was alerted by many of my national members, and I represent the high technology industry, and some of our members are involved in consumer products, to the issue of clam shells. And I had to step out so I didn't all of Mr. Cosgrove's testimony, but if you can imagine going to a Fry's electronic or a Best Buy there's a lot of stuff in electronic field that uses this form of packaging. We also use blister packs, which I understand are exempt from this law. That's the cardboard back with the little bubble on the front. This is a clam shell, which I learned just recently all about clam shells. I also understand that many of these products are composed of PVC, Poly vinyl chloride, as the main resin in the product. I think you've heard today that this is one of those issues that has, to me, sort of an Alice and Wonderland component to it. We thought people were doing the right things, we're meeting these goals. I think the idea of an overall 25% -- if we're sort of meeting the overall societal goal this need to go then micromanage bottle by bottle, Tide by All,

shampoo by cream rinse approach wasn't necessary. And that is apparently what we're facing. I've been told on the PVC packaging on the clam shells, which are part of this law in Oregon, that they're not -- people don't take them. They are excluded from you big, blue rollaway. So we have this dilemma were we have a product that the co-mingled recycling programs do not accept. And with a looming mandate for producers of such products in Oregon only in the united states, as I understand, to produce such packages with 25% post consumer waste content. If you're not collecting it from consumers where do you get the post consumer waste to produce post consumer waste products? So this is sort of the looking glass, sort of essence to this debate that I have recently just entered into. I think the fact that there's a couple things that you've heard this morning. One is, we'll get a rate in December telling us whether all of our packaging has to be changed on the shelves by January 1st. That seems to me sort of odd.

LYNN HAMPTON: Not January 1st of that year. January 1st of the following year.

JIM CRAVEN: Yeah, the immediately following year.

LYNN HAMPTON: No, the year after.
JIM CRAVEN: Okay, like I say, I'm trying to come up to speed on some of this.
LYNN HAMPTON: And Mr. Craven, I am listening with interest, but we have eight people and a commissioner who's (inaudible) time.
JIM CRAVEN: Right.
LYNN HAMPTON: Okay, thank you.
JIM CRAVEN: So my only point is it would be great to find solutions, whether it's on the processing side, whether it's some consideration of a rule change to get us through what may just be a rough patch, I would just urge us all here or over at the state capitol, that we find a way to resolve this so we don't have huge markets disruptions. Thank you for you time.
LYNN HAMPTON: Thank you very much. We have eight commenters and I would love for Commissioner to participate in the deliberation on this and he has to leave at 11:30. So I'm gonna invite people to come up. Julie Brandis, if you can restrict your comments to three or four minutes that would be appreciated. And remember that we are recording the proceeding. Good morning.
JULIE BRANDIS: Madam Chair, members

of the commission, for your record, I am Julie Brandis with Associated Oregon Industries and its retail counsel. AOI represents both manufacturers and retailers. Within our membership we have about 300 retailers. We are here today to ask you to support the petition that asks for, one, the corporate averaging and, two, to account for the 1,700 tons of plastics that consumers are recycling especially because the curbside system has been working. Consumers are participating in that. It just seems to be somewhere else in the system that we're not quite having the best of luck with. Your timely decision and favorable decision is most important because of the breadth and the depth of the product, which may be covered. My 5th grader helped me this morning to put this display together. It's very important to her and she cleaned out her bathroom so I was pleased. But in reality we are talking about everything from baby wipes to hair straightener back there. We are talking about the largest manufacturers and the smallest specialty manufacturers. For example, I buy all my skin care product from a young lady who basically manufactures something in her garage in Portland. And we are talking about the largest retailers to the smallest one chair beauty

salon in any of your hometowns. Two months has passed since the DEQ has made its announcement that we have failed to make the rate, and we still don't know resin types, products, but most importantly how to comply. Despite the sophisticated retailers and manufacturers -- despite how sophisticated retailers and manufacturers are in the 21st century we still need time to decide how to manage our inventory, especially when the constraints of this law will impact Oregon and no other state. Keep in mind, we have to comply by January 2008, following the retailers busiest season and highest inventories. Our decisions about every clam shelled Barbie occurs six months ahead of time. We need to know how to comply and we need to know your intentions for enforcement. The only state with a similar law is California and they do allow for corporate averaging. And therefore, that proposal obviously eases our compliance. Especially we can't imagine all product packaging to be changed simply for Oregon. By accounting for the 1,700 tons you recognize that consumers did the right things. Keep in mind that w need to be working to supply chain and informing consumers about the products which will be removed or changed. And really we do need a great deal of time to start that

communication of the supply chain to the end of our supply chain.

(End of Tape 6 Side 3B)

JULIE BRANDIS: We also -- I'm very concerned about the DEQ staff suggesting that we wait to see what the legislature does. I've been in the legislative process for 20 years. I have made a lot of predictions at the beginning of a legislature and I have never been right on any one prediction. So it is very risky business to do that. They are considering something like the bottle bill expansion and, again, I think estimating what comes out at the end of that is, again, hard to decide. This starting a workgroup --it will be a broad-based workgroup with many of the -- those constituencies involved around the table and I can't predict what they'll come up with at the end. So we urge you to consider the petition and thank you for your time.

LYNN HAMPTON: Thank you. Thank you very much.

BILL BLOSSER: I just have a quick question.

LYNN HAMPTON: Yes.

BILL BLOSSER: Well, I would be supporting a revision to the bottle bill and trying

to expand the amount of things that are subject to required recycling one way or another?

JULIE BRANDIS: Madam Chair and members of the commission, first, the last few years we haven't really taken a look at the bottle bill, in terms of our board position or executive committee position. We have been looking at things like electronic product stewardship recycling and that's been most of my efforts, in terms of recycling. In terms of the bottle bill, keep in mind that we do represent a great deal of retailers and this impacts their store space greatly. And we heard phenomenal testimony yesterday about the amount of space that retailers would have to comply with the take in additional bottles. They made a compelling argument. Most of the retailers I represent aren't grocers, but those grocers did make a compelling argument about the amount of space and where they're to find it within their stores. They have parking lot restrictions as it is, so they can't just expand their stores. So I think what our board and executive committee has always said is we've got to take a look at the final product, in the work groupers meeting we'll take a look at that when the workgroup produced their final document for the legislature. The other thing we're

looking at is recycle bank. That's a project that's been proposed -- it's actually in place in the east, like in cities like Philadelphia, where they pay consumers for the recycling. It's a system that is set up and we are looking at trying to expand that in Oregon in a pile up program. And the retailers participate in that. For example, I don't think Target has signed on yet, but they're close to and I think Starbucks is signed on. So you get a gift card once you reach a certain amount of recycling -- recycled product at your curbside. It weighs -- it uses a measuring system.

LYNN HAMPTON: Other questions, comments? Thank you. Thank you, Miss Brandis. Dennis Graising, Greasing? Welcome. What's the correct pronunciation?

DENNIS GRAESING: Thank you. I appreciate you holding this (inaudible) this allows me a chance to meet with an old friend (inaudible) representative for a number of years. My name is Dennis Graising. I'm the Vice President of Government Affairs for the Soap and Detergent Association. We a 110 member association, which includes the manufacturers of the finished packaging that our members use. We represent the soap, detergent and

general clearing products industry. And our membership ranges from international global companies like Proctor and Gamble (inaudible), to small local companies. That would include people like Seventh Generation, a well known brand. We -- I can't emphasize enough the proposed regulatory (inaudible) are essential for compliance for both large and small companies. I've seen comments to the contrary. Small companies will require this more than large companies. (inaudible) members largely initiated the design and introduction of environmentally responsible packing in the late 1980's. We have concentrated our product, we have reduced our packaging as a result, and we've still maintained a 25% of recycled content and above. And as Mr. Cosgrove ably pointed out, we don't even get credit for the reduction of waste through our source reduction efforts. We do environmentally responsible packaging as a core value in our member's sustainability pledges. And we have maintained our commitment to this for over 20 years. If I may, Vice Chair Blosser's comment about what have you done? Since the court issue here in Oregon seems to be the shift from source -- curb source separation to co-mingling I don't think there's anything much we could have done. These were local decision made in a

good faith attempt to expand the amount of materials brought in. What we have with this 1,700 tons of misdirected material is an unintended consequence of that. However, that consequence falls on us. The law, as it's written, reflects California's in that each sector is essentially assigned a role. It's implicit. It's not explicit. It's implicit. We have always viewed our role as two fold. One, to produce the materials that -- the packaging that can use the recycled content and, two, to support thereby the recycled markets. I believe that we are still the largest consumers, this is a (inaudible), of recycled HDPE and PET used in non-beverage applications in the country. That is our role. My members tend, when the market allow, to use more than 25%. There are upward limits beyond which you can employ recycled content, but you can go above 25 and we do that when the material is available. It's also critically important for you to understand that the current state of the resins market is supply constraint. It's imbalanced, but barely. We would like there to be more supply. That would reduce the price, it would make it more available to us, more reasonable for us to use in greater applications. That's not the case. While the exemption issue that

Mr. Cosgrove raised is not within your purview and recognize this, you have to understand the following. We are currently operating under essentially a California regiment where we have exempted categories for products. If the Oregon law is triggered, those product categories will come under the law. It -- this will induce an even greater demand on the recycled resins market. The fact of the matter is that there may not be the supply there. This is why corporate averaging is so important. I also want to point out that corporate averaging will not in any way diminish our required commitment to the purchase and use of recycled resins. It simply grants us flexibility in the marketplace. Excuse me, while I try to be concise here. Based on conversation with member companies we would estimate that if the Oregon law is triggered, as it's currently drawn in statute and regulation, the initial cost to a large company will be $10 million with $2 million in recurring expenses on an annual basis, and that will be because of the anticipated premium price, increased premium price that recycled resins will demand in the marketplace. Ironically or (inaudible), one of the outcomes of the situation, if it's not address in Oregon, could be a significant reduction in the use

of recycled resins. Because you'll create a new demand for these product categories which are currently exempted, there will be less supply available, companies will be forced, perhaps, to reduce their current levels of purchasing because of market demands. In summary, because your law is different than California's, a failure to confront these issue by this commission will result in market chaos. We cannot wait much longer. The decision that are -- that will lead to compliance on January 1st, 2008, are probably already being undertaken by companies. They need to see that there will be some change, that there will be some hope that (inaudible) alternative compliance options. This is the length -- you've heard six months. It's probably longer. We need -- it's essential that we have a decision. We are going to the legislature as well, but I would urge the commission to initiate approval of these petitions and proceed with a regulatory process. With that, I know we're stressed for time, Madam Chair. I'd be happy to answer questions that --

LYNN HAMPTON: Well, it's apparent to me we're not gonna be able to reach deliberation by the time that Mr. Williamson needs to leave. So I don't want you to truncate your remarks overly. We

(inaudible) anything major. Commissioner Uherbelau?

JUDY UHERBELAU: Yes, I want to make sure that I understood you. You were saying that there would be a $2 million cost to the industry if the -- because we've recycled less than 25% and the result is triggered?

DENNIS GRAESING: No, what I'm saying is -- as I understand the comments from my members, because you will -- triggering of the Oregon law will bring new categories of products under that law, cosmetics, hazardous materials, five gallon buckets, which are not currently -- they are available for counting in California at the option of the manufacturer. If those products are brought into the -- under the prevue of the law, that's what will change things.

JUDY UHERBELAU: What's till not being made clear to is we're talking about the changes that Mr. Cosgrove has discussed and are you saying that if those changes aren't made they'll be a $2 million cost to your things, or if they are made -- you're just not being clear.

DENNIS GRAESING: What I'm saying is, when you have companies which have products which are not currently brought under either of the laws.

JUDY UHERBELAU: Right.

DENNIS GRAESING: They have to go to that and triggering the Oregon law will then bring them under a law and requirements. That the initial increase for a large company has been estimated to me to be about $10 million, then there will be -- that's packaging redesign. Now, if -- and approvals, if you can get them. I mean, the process for FDA for cosmetics is very simple. They don't approve anything. They say, "We don't object." You have to apply to them, because the package is considered part of the product. You apply to the FDA and at some point in time they issue what's called a letter of non-objection, but the liability continues to rest with the manufacturer, but they do not approve. So with these new products coming on and a supply constrained market you're gonna see a price increase, and it's that $2 million increase anticipated because of resin costs, because of the new product lines being brought into play that we anticipate.

JUDY UHERBELAU: Thank you.

LYNN HAMPTON: All right.

STEPHANIE HALLOCK: Madam Chair, I'd just like to make a clarification for the audience's benefit, in terms of -- if Commissioner Williamson has

to leave the commission will still be able to take an action on this today. There will still be three remaining commissioners and have a corium and they will be able to make a decision today.

LYNN HAMPTON: And I -- given that we're not gonna be able to reach deliberation, I would like to take a five minute break right now. And then everybody who signed up will have an opportunity to continue to speak to us and we will be here until we're done. Don't worry. So we'll take a five to seven minute break right now.

DENNIS GRAESING: Thank you, Madam Chair and members of the commission.

(Break for recess)

LYNN HAMPTON: Presume our session.

(Inaudible discussion)

LYNN HAMPTON: Having heard from Mr. Graising, which I think is the correct pronunciation, we're going to move along and hear from Mr. Jeff Murray and a person named Kristin Mitchell has asked to come up at the same time. Is that acceptable to you both?

UNIDENTIFIED SPEAKER: Yes.

LYNN HAMPTON: Is there any problem with that, in so far as the way the hearing is

conducted? Okay, all right. If you'll identified yourselves for the record and your affiliation, if any, and we'd be glad to listen to you.

KRISTIN MITCHELL: Good morning, Chair and members of the commission. My name is Kristin Mitchell.

LYNN HAMPTON: Okay, I'm gonna apologize and I should have noted that at 11:30 Commissioner Williamson had an unbreakable other commitment and he had to leave. And so right now we -- I'm, I guess, ascertaining that we continue that we have a forum, so we're going to continue. And Miss Mitchell, would you repeat what you said for us please.

KRISTIN MITCHELL: Of course. Thank you. My name is Kristin Mitchell. I'm the Executive Director of the Oregon Reffuse and recycling Association. Our members are the ones that are collecting garbage and recycling curbside and commercial operations all across the state of Oregon. We operate the material recovery facilities, where those materials if they are co-mingled go, and the transfer stations and most of the land fills in the state as well. So we are the group that I think you've been hearing some about this morning, and I

thought it might be helpful for you to have me up here for questions, if nothing else. In fact, originally I just submitted some written testimony and was preparing to testify, but I felt like it was important at this time. Jeff Murray with Far West Fibers is a member of our association, as well. And I wanted to just start with a few things. First of all, I think you may have gotten the information from some previous testimony that the system in Oregon, the collection and recycling system in Oregon isn't working very well. And if you understand the way Oregon's system works -- the state of Oregon set a goal for the recovery of 50% of the waste stream by the year 2009, originally it was 2000 and it was moved to 2009 in order to give us a little more time to get there. One of the ways to do that is for cities and counties to implement programs in communities of over 4,000 people that are curbside collection programs. And we work with the cities and counties. We basically privatize what would otherwise be a public service by taking care of those programs for the cities and counties. And so we're one of the ones that they rely on to help them reach the goals. In the most recent year, for which we have numbers with the DEQ in 2005, our recovery goal in Oregon --

or our recovery rate in Oregon, I should say, is 49.1%. So we are less than 1% currently of reaching the 50% recovery goal that's in the year 2009. So instead of taking the position that the programs aren't doing the work that they need to do, I think the exact opposite is true. It's through the investments of truly the citizens of Oregon. These are rate payer systems. If, in your communities where you live, if you have garbage collection, I believe your companies are members of our association. The rates that they charge you are established by the communities. The service standards are established by those communities and we go out and do the work to get it done. And in almost every -- every community in this state that's over 4,000 is already meeting the requirement that the curbside program is in place. There's 100% goal on that, whether it's through a curbside program or through an alternative program. And there are a number of smaller communities, as well, that we've been able to expand into to provide curbside collection of recyclables as well. There has been a shift in the system to more co- mingled recycling collection. And one of the major reasons for that is not that local jurisdictions make decisions on programs based on weight, because the

more weight they get out, the more material they collect. But local jurisdictions base their programs on what rate payers want. And rate payers in Oregon have wanted rigid plastic container recycling or plastic container, at least in some form. And as more programs moved to more plastics recycling we started running out of room on trucks. It used to be that you'd stop curbside and somebody would pick up the plastic and it would go in a certain bin of a truck, and glass would go here, and the other -- the paper would be there, and the cardboard here, and the used newsprint down there. Well, you can imagine how many bins are on each truck, and if there are more people putting out paper then they are other things, you're gonna run out of room on the route before you can complete it, go back, come back and forth. So one of the ways they dealt with adding recycled plastic, which took up more room, at least volume wise and Jeff can refer -- correct me if I'm wrong here, as they started looking at ways to co-mingle those materials. And then determined that if they co-mingled even more materials, made it easier for people to do it we might pick up more recycling in general and come closer to meeting our goal. And you have in your documents this report from the Oregon -- the DEQ

testimony before the Senate Natural Resource Committee. Do you guys -- am I wrong or do you have this chart at least? The Oregon rigid plastic recycling chart?

LYNN HAMPTON: Yes. Is the first page -- does it say "Rigid Plastic Law Background"?

KRISTIN MITCHELL: No, but we may have the same chart.

STEPHANIE HALLOCK: It says -- attachment 1 says, "Oregon Rigid Plastic Recycling Rate," and it's this table -- Helen handed it to you before Loretta spoke this morning.

LYNN HAMPTON: The one with the pictures on the back?

KRISTIN MITCHELL: Here's what it looks like on the front.

LYNN HAMPTON: Okay.

KRISTIN MITCHELL: If you look at this chart, once you have it let me know -- okay, so it shows on the top number, the middle column, "Tons recovered." And what it's showing you is the Oregon rigid plastic recycling rate from 1993, which is when they started tracking the number, because the programs went in place in 1991, but with the legislature that's when they passed the law and we were starting to do the programs. So we started tracking numbers

then and the most recent number tracked are for 2005. And if you look at those numbers as a whole it shows tons recovered in 1993 rigid plastic, a little over 8,000. And tons in 2005, 13,008. About where we are. But yesterday -- we've been doing some other work with the legislature, talking about bottle bills and what the rigid plastic container rate was, and Jeff Murray asked Pierce Findelow, who you heard from earlier, "can you split that number for us? Can you tell us, in that rigid plastic container number, which of those containers come through the bottle bill system," which is a redemption system, which isn't something that our members participate in. We're curbside only or commercial only, but we're not part of the redemption system. "Which of those are bottle bill and which of those are non-bottle bill?" And so Peter did the split, and like I said, I wasn't intending to testify but I did give one copy to --

LYNN HAMPTON: We've got it here.

And since there are only three of us we can see it.

KRISTIN MITCHELL: I made a bigger version for me. But the bottle bill numbers for '93 to 2005 are hovering at 4,100 -- well, in '93 it was 4,184. In 2005 it was 4,171. So actually we've had a little decrease in the bottle bill redemption bottles.

In the non-bottle bill rigid plastic container rtes, the part that our members are responsible for, in '93 we had 3,831 tons. In 2005 we had 9,633 tons. Now you've heard -- there are a lot of numbers out here, and I'm not pro at numbers. I was admitting I was a foreign language major in college, but even I can do the math. It is a little bit of a foreign language to me when we talk numbers. But even I can do the math to figure out that 9,633 tons is over 250% increase in the tonnage that was being collected in 1993 when we started these numbers. So if you consider the numbers that you're hearing, some from the DEQ in their report that they worked with Metro to get a tonnage number of 1,700 tons being lost in the system, you've heard a lot about those tons being lost in the system and companies like Jeff's are the reason they're missing them. You need to consider in that that we've had a 250% increase. And if you're trying to maintain a recycling rate at 25%, I think that the programs that we've put in place have at least kept them in the range. I mean, these are programs that we've invested in, that the rate payers have invested in, that local cities and counties have been willing to raise rates to take care of that have been bought off by this entire system. We didn't

expect the co-mingling recycling system to bring in so many plastic containers. The expectations were that we would have about 2% in the mix in the cart on the curb, and it's been closer to 5%. So just the sheer numbers for us, the volume for us has been an issue as we try and sort those materials and get them into the appropriate containers so that we can take them to market. In fact, Jeff's companies -- he'll tell you about it, I'm sure, has recently invested a million dollars, you may have seen the front page Oregonian a couple weeks ago. It had Jeff in front of a bail of papers, kind of a running man. You couldn't really see -- they say it was Jeff. I think it might be true. But that's one company -- one of their plants in the Portland area has already invested a million dollars. They're going to investing close to another million dollars in their other plant. We have two other members in the Portland area -- between the four of them they take -- 85% of the recovery that happens in the state goes through those plants. And they're all investing in the range of a million dollars to try to take care of this new, increased number that was not expected and we're trying to find ways to deal with it. That's the piece on this. There are other issues as well. When

you talk about clam shells, and I know there's a lot of packaging out there -- we can't affect the packaging. We can only collect the materials that really -- that are markets that are avail be for them. In the last couple years clam shells have started to have some markets. But one things cities and counties don't want to do is they don't want to start a program for a material that doesn't have a market that won't be there in the long run. You can't come back to your customers and say, "Well, you could have put your clam shells out last week, but this week it's not gonna work." Commodity markets, as you know, are very up and down. And currently, from what I understand, there is at least a steady market for those types of materials, but it's a cost to put the programs in place and to have those kind of materials come into the system. And we're always looking for ways to add additional materials, because that's our role with the cities and counties that we serve. But I think you have to remember that if there isn't a market for something it's going to hard for us to recycle it and do something positive with it. I guess those are most of my comments. If you have questions for me I'd be happy to answer them.

LYNN HAMPTON: Does your association

have a position on this request by this organization regarding the petition?

KRISTIN MITCHELL: In my written comments I mostly wanted to clarify that I felt there were some issues with the rate and how the rate was reviewed. I think the best and most productive thing that can be done is to get better information about what's actually being recycled out there and what's actually being disposed. I know the DEQ has worked with Metro to come up with an estimated 1,700 ton number. I think that we have members that are somewhat skeptical of the number and would prefer to be a part of the discussion on it and how to review what the numbers are. I think that Jeff Murray's company is looking at doing its own internal review to see what the numbers are currently. As far as their petition today, I think the point for us is we're doing the best we can to maintain what's available out there for collecting and these programs and we think we've done a pretty good job. But if you look at the increase in the generation numbers, which is what I think is pretty important -- if you look at the DEQ's report talking about water and juice sales or recycled at a 33% rate, and carbonated beverage sales -- or soft drinks and things like that

are recycled at a 75% to 85% rate. Unless we find a way to encourage people to bring those containers home and put them in their system, put them in their curbside system, or bring them home and redeem if they happen to go to a bottle bill, that disposal bill will continue to rise. And regardless what we do on the recycling end, we will never be able to maintain a 25% rate. I'd like to see -- I think we've stepped up to the table, both in the programs we've done and in the individual investments that we've made and I guess I'd like to see the same commitment on the part of the manufacturers.

LYNN HAMPTON: All right. Commissioner Uherbelau?

JUDY UHERBELAU: Yeah, do you have a comment or -- you know, one of the other speakers talked about the fact that because of the co-mingling and the plastic gets mixed up with the newspaper and then it doesn't get sorted correctly and it gets lost and goes to the landfills, can you comment on that as to what you think, since you work with the recyclers? Is that a large percent and why it's happening and what can be done to terminate it from happening?

KRISTIN MITCHELL: Chair Hampton, commissioner Uherbelau, are you asking me -- let me

see if I can figure out how to answer that. A lot of the programs have moved to a co-mingled system for the reasons I've described. And there definitely has been some increase in the contamination as a result, because generators put maybe things into -- they think, in good faith, that they can recycle these things and maybe they can't, or maybe they are lost through the system. But I think you have to calculate the nets to figure out the value. If our numbers -- just on the rigid plastic containers have increased 250%, over 250% in the time these programs have been in place, and a significant amount of that is due to the co-mingled system. A 20% -- even if it is a 20% number on these particular bottles, we're still at 230% of an increase. To me, I think we can always do a better job of more sorting and more education. We work pretty hard with the customers to try and make sure they understand what goes in the mix and what shouldn't. But I think the system in place is the way for us to meet these goals and I think the numbers show that.

BILL BLOSSER: I think maybe the same question. Are the million dollars you've invested and are gonna invest again, will that increase your ability to sort?

LYNN HAMPTON: Identify yourself for the record.

JEFF MURRAY: Sorry.

LYNN HAMPTON: That's okay. Just for the record.

JEFF MURRAY: Madam Chair and commissioners, I'm Jeff Murray and I'm with Far West Fibers. And the answer is yes. Last April we invested nearly a million dollars in additional equipment. Literally tonight and over the weekend we're spending another $50,000 on speeding up our belts to work better with this new equipment that we put in. We've already improved on getting cont -- more containers out and we're going to continue to work on that. But even -- well, actually would it be all right if I went ahead and --

LYNN HAMPTON: I think this is an --

(Inaudible discussion)

JEFF MURRAY: Okay, once again, Madam Chair and commissioner. My name is Jeff Murray and I am Vice President of Far West Fibers. I have been in the (inaudible) recycling industry for 30 years and actually more than that, because I grew up next to a garbage man. Far West is a privately

owned Oregon business that has process recycled materials in Oregon for over 25 years. Far West operates 4 recycling facilities throughout the Portland/Metro region and we currently process an excess of 40% of the curbside throughout the state of Oregon. Oregon -- Oregon's curbside recycling programs are looked on as some of the best in the nation, as you probably are aware. During the early 1990s plastic bottles were added to the Oregon curbside programs. Collection vehicles were retrofitted with small compactors to handle this bulky, light material. By 1993 non-bottle bill plastic containers grew to a volume of 3,831 tons. Because of the continued growth of the plastics the curbside collectors, processors began to experiment mixing plastic containers with paper in 1995. In 1996 several of the haulers that we provide services to moved to co-mingling in all paper, plastic and metal containers together. This change allowed the haulers to move to compaction of curbside recyclables, which was much more efficient on the collection end. It also allowed them to collect more plastics. It is also -- sorry, it also caused us to begin to -- an ongoing investment in sort lines and various sorting equipment. To day, Far West Fibers, in equipment

that's still currently being uses, has invested over $7 million in sort equipment. In 1996 plastic bottles were less than 1/2 -- 1 1/2 % the curbside mix. In 2001 plastic containers grew to over 2%. This is about the time we ordered -- what I'll call our biggest round of equipment. We spent $4 million plus at our two facilities for equipment on this 2% number. We figured it might go up a little bit. Currently plastic materials are now over 5% of the curbside mix. They may not sound like a big number to you, but when you think about plastics and its weight, it's an incredible change.

LYNN HAMPTON: Well, do you mean 2% by weight?

JEFF MURRAY: -- yeah. It's by weight, not by volume. Thank you for the question. The good news, in 2005, the most recent year reported by DEQ, 9,633 tons of non-bottle bill plastic containers were recycled in Oregon, an increase, as Kristin mentioned, of over 250% when compared to 1993. Wrong way. The bad news, our sort systems were not designed to handle this volume of plastic containers. This is an industry wide challenge, not just one for Far West Fibers. It has been reported by DEQ that from samples taken by Metro staff, 20% of plastic

bottles curb are winding up at Northwest News Mills. Though we question the number, we do not disagree that the number of containers going to these news mills is unacceptable. What is being done to solve the problem? In April of last year Far West invested nearly a million dollars in upgrades to the sort system at our Hillsboro facility, as I mentioned earlier. The primary upgrade was the addition of a container screen at a cost of over $800,000. Starting this evening, as I already mentioned, we're doing some more modifications to our system. We'll know during the next few weeks if these investments will lead to considerably less plastic containers going to the paper mills. If not, we will continue to invest. If we are successful we will also make the same investment at our second facility. So it's not just a matter of a million dollars for our company. Anything we have to do we have to do twice, so it's $2 million. I've also been made aware that another major processing facility, a competitor of ours, owned by SP Newsprint, has ordered new state of the art equipment that should be installed this year. The primary purpose is to get containers out of the paper. Another processor, KB Recycling, and also a member of (inaudible), has been out to look at our

upgrades and is weighing out options to get the rest of the containers out as well. These actions should help make a significant impact in a relatively short period of time. I apologize. Oh, I'm sorry. In addition to these actions we've already taken, in 2005 Far West Fibers expanded the types of plastic containers that we would accept for recycling at our depot programs. We don't like to add new plastics to curbside programs without first finding out, do we have long term markets for them? So the first place we expand the collections is at depots. One, to see if the public wants to utilize that service and, two, to see if we have long term markets.

LYNN HAMPTON: Do you mind if I break in and ask a question?

JEFF MURRAY: Absolutely.

LYNN HAMPTON: Isn't this kind of a chicken and an egg problem? How can you have a market for something unless you're collecting it, and if you don't collect it unless you have a market, isn't this kind of an actors/equity card situation?

JEFF MURRAY: it can be.

LYNN HAMPTON: All right, I just wanted to make sure that I'm understanding that it is.

JEFF MURRAY: No, that's correct. And part of what happens is we are approached by various people, "Would you be willing to collect this material and that material?" And we say, "Are you wiling to take it from us?"

LYNN HAMPTON: So you see the faint dawnings of a market and you can act on it.

JEFF MURRAY: Right. And then we go back and fort and over time it either develops or falls apart. But we do not want to add a material to the curb until we're very confident that we can continue the market.

LYNN HAMPTON: And Mr. Mitchell, I don't want to be too unfair, as we change the tempo of our hearing I sort of ruthlessly terminated -- I'm sorry, Mr. Murrah, I ruthlessly foreshortened our earlier commenters, so if you would wind up.

JEFF MURRAY: The end result of this, which I was getting to, is these additional materials in 1996, the full year that we collected and accounted for over 400 tons of various types of containers that would be qualified as a part of the rigid container program. In near summary, curbside recycling programs have excellent participation rates. Programs that utilize roll carts have been able to

add additional plastics. With all that I've said, this problem of 25% will not be solved at the curb. The vast majority of the newer beverage containers are not a part of the bottle bill and they are not consumed at home. These bottles are being found in garbage containers at parks, on the sides of roads, and at the beaches. Our industry will continue to adjust its increase in plastic collection, however this will not solve the problem long term. We, the residents and businesses of Oregon, need to find an answer for recovering the containers that are away from the house. If we don't, we will be back here in another two to four years trying to find ways to get the number -- get the number above 25%. I ask that we work together to solve this problem. Thank you.

LYNN HAMPTON: And I just have one final question. I'm assuming that as the recycling groups like yours are increasing able to recover the plastic from the paper or the other types of recycling material that that material is recycled?

JEFF MURRAY: Absolutely.

LYNN HAMPTON: But what happens to that -- you spoke to the newspaper associations trying to increase their efforts to get plastic out of the

paper, is that then recycled or disposed?

JEFF MURRAY: At this time it's disposed, however they may have found -- we've been working on some markets for the material, but we do not look at that as the solution.

LYNN HAMPTON: Okay. Thank you.

JEFF MURRAY: Thank you.

LYNN HAMPTON: I'm sorry. I'm premature here. Commissioner Blosser?

BILL BLOSSER: Commissioner Williamson pointed out before he left is our problem is a 400 ton problem right now. The magic 25% number we're falling 400 tons short. Do you see a way to pick up that 400 tons somehow that the manufacturers could rely on that it would actually happen? I mean, what if Paul sent an extra sorter to each of your plants or he hired five extra sorters to show up at your plants?

LYNN HAMPTON: Sends his children.

BILL BLOSSER: And would -- and there were five extra people standing in your line, could they get 400 tons between you -- I don't just mean you alone, but other places? What if Paul went door to door and said, "Please put your plastic in the bag? Please or you won't have any shampoo.

We'll take your shampoo away from you unless you put those bottles in there." I mean, do you see ways of either increasing the curbside where more would end up in the recycling containers rather than in the garbage part, as well as sorting it out of the stream after you get it.

JEFF MURRAY: Madam Chair and commissioner Blosser, my answer is yes for short term. I believe the actions our company is taking, other companies are taking, is going to get the majority of those bottles that are currently headed to the mills back out within the year. With that said also, there's more and more programs throughout Oregon moving the roll carts. One of the challenges to adding more plastics that could go at the curb -- a lot of places are still using the bin system and if you've noticed the bins are overflowing, beginning -- the materials being put in paper bags that fall apart at the curb and so on. So as these new programs come online with roll carts then other materials are able to be added, other plastics in particular, which city of Portland tends to do. I have a meeting I'm supposed to be at right now in Clackamas County where we're adding plastics to the curbside as they move into roll carts. That will have an impact. But in the

long run we -- bigger picture -- it would be a short term fix I believe can happen. We need to look at what's gonna happen as more and more and more plastics are being produced.

LYNN HAMPTON: Commissioner Uherbelau?

JUDY UHERBELAU: But given that, it seems to me that what you said, unless I misunderstood it, is that a lot of plastics being used are not used at home. They're used outside of the home, and so wouldn't it be profitable, so to speak, if we had containers, especially in places where people tend to be, like in athletic fields, at schools, at parks, at you know, stores --they go in and they buy something and drink it and toss it in the garbage? Wouldn't that increase --

JEFF MURRAY: Madam Chair and commissioner, I agree with you. I believe there are some colleges that experiment with this, you know, trying to collect beverage containers at big events and all that. As a representative of Far West Fibers I can sit in front of you and say we do support a thorough out expansion of the bottle bill, I think. It's a bigger picture issue and if you -- we've learned over time if you have a bounty on the bottle

it will come back.

LYNN HAMPTON: Thank you very much.

KRISTIN MITCHELL: Thank you for you time.

LYNN HAMPTON: You bet. And it's Mr. Murray and Miss Mitchell, and I apologize, Mr. Murray. All right. We're going to move along to Mr. Jeremiah Bowman.

JEREMIAH BOWMAN: Good morning. I guess afternoon now, technically.

LYNN HAMPTON: Afternoon, yes.

JEREMIAH BOWMAN: Madam Chair and members of the commission, my name is Jeremiah Bowman. I'm an environmental advocate with the Oregon State Public Interest Research Group, or OSPIR. I guess I'm the first witness today who neither sells anything in a product in a plastic container, nor recycles plastic containers. However, as you may be aware OSPIR has a long history with plastics recycling. Not only were we the sponsors of the ballot measure already referred to today as having been defeated soundly at the ballot by millions of dollars of spending by a whole coalition of industries concerned about recycling laws. But it was another OSPIR ballot measure in 1990 that lead to the current rigid

plastics recycling law that many of the industry associations before you today supported in the legislature. Let me summarize what I'm going to say by saying I'm disappointed, honestly, that this petition has come in front of you today. And I'm somewhat disappointed today by some of the comments and direction of what I've heard today, because I believe that Oregon can do better. I think Commissioner Blosser hit the nail on the head early on when he said, "falling below is certainly a warning light, but there's an evening bigger problem in that that rate has never been above 30%." And this stands in stark contrast to our highly successful recycling programs for many other materials, including (inaudible) containers. I guess the disappointment comes in that the many (inaudible) associations petitioning for this rule change are using resources for this rule change, rather than on any number of other solutions to the problem that we actually have, which is a low recycling rate for plastics --

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JEREMIAH BOWMAN: -- while we hear concern that there's not enough time to switch to recycled plastics for these containers or change to plastics that are easier to recycle, we're here today

debating what the definition of recycle is, rather than working on those solutions. Many of these solutions you've already heard so I wont' spend a lot of time on them, but are very common sense and would be very workable. Extending the bottle bill would not only be highly effective for increasing recycling rates, but is widely popular among Oregonians who (inaudible) renewing, recycling behaviors simply by the very excitement and visibility, which I think is evident from a lot of the media coverage and political support for doing so. But as you've heard today many of the associations aren't supporting extending the bottle bill and (inaudible) are opposing that measure. We could also add more containers to curbside recycling and I believe I heard Mr. Cosgrove say that this commission could be doing so by rule, but unfortunately that's not what the petition pertains to. This response to our low recycling rate, I'd like to point out, is in stark contrast to how other segments of our business community, both in Oregon and around the country, are responding to similar problems. Representative Dingfelder earlier this morning talked about the electronic waste program being debated at the legislature. They're electronic manufacturers from around the country are stepping up

to the responsibility that rests uniquely with manufacturer to deal with the (inaudible) consequences of their products. As a consumer myself, having struggled to open many a clam shell container, I can tell you there are a lot of consumers demanding that they're products come in clam shell containers that are hard to recycle. I do think the manufacturer are in a unique position to decide what kinds of containers their products go into. And that's why we support producer responsibility for dealing with solid waste problems. With electronic waste, electronic manufacturers are literally supporting and proposing and lobbying for a bill that would require them to fund the collection and recycling of their products at the end of their useful life. That's an incredibly useful approach. I think we've laughed a little bit today at the idea that perhaps some of these trade associations should pay for collection of these containers at athletic fields or at the state capital, but that perhaps would be the exact, correct solution. To not only increase the collection of these products, but to put that financial responsibility with the companies that are in the best position to change the products themselves to a more recycling friendly system. Let me now turn to the substance of the

petition. First and overall comment on a petition, I think it's being characterized as a problem hat manufacturers would now have to certify that their products are either recyclable at 25% -- manufactured at the 25% recycled content or manufactured for reuse. But that endpoint, that behavior change by manufacturers is exactly the goal of this law, in the way I read the law. In fact, it occurs in exactly that order in the statute. The law first duplets those requirements, that any container sold in Oregon meet one of these three requirements. It only then suspends those requirements so long as the statewide recycling rate stays above 25%. And that makes sense. It is a problem that clam shell from PVC is very hard to recycle. PVC also has all sorts of environmental problems involved with its manufacturer and disposal. It's the exact intent of this law that if we can't plastics recycled at 25%, manufacturers look at the question whether we should be switching away from PVC and towards a more environmentally friendly product. On the particular details of the two requests in here, I'm only going to comment very briefly. I agree very strongly with the Department of Justice recommendation that it would be a stretch, to say the least, for this commission to find that

the word, "recycled," could somehow be defined to include products that are not recycled. I agree that a lot of Oregonians, when they use the word, "I recycle a bottle," mean they put it into a plastic bin on the curbside. But I think they also use that meaning only because they assume that plastic bottle is actually being recycled, not because they actually mean that putting in the bin is the definition of recycled. On the subject of using aggregate or averaged recycling rates for calculating recycled content, I'll simply point out that while it is true DEQ currently allows averaging, in the context of recycling rates, that is DEQ allows bottles recycled over the course of the year to be averaged together to determine an aggregate recycling rate. The subject of this petition is not that recycling rate. The subject of this petition is the content of the manufactured products, the 25% manufactured content requirement. The law is quite clear on that regard. The plain language of the law says, "Any container sold in the state must contain 25% recycled plastic." And I believe that the department of Justice has it correct in saying that "Any container does not leave a whole lot of room for averaging large detergent bottles and with small hand soap bottles." With

that, I'll end my comments and be happy to consider any questions.

LYNN HAMPTON: Thank you. Commissioner Blosser? Commissioner Uherbelau? Thank you. I think your comments were very clear. We'll move along now to Alex Kylar? Is that the correct pronunciation?

ALEX KYLAR: Madam Chair, members of the commission, I'm Alex Kylar. I'm a legislative analyst with the city of Eugene. But immediately to prior to becoming a legislative analyst I was a solid waste and recycling analyst for the city of Eugene for the past 10 years. And prior to that I ran Green Recycling in Eugene for six years. So I've been involved with this industry for a long time. I'm also the immediate (inaudible) of the Association of Oregon Recyclers. Suffice it to say, I've seen a lot of recycling in this state and the region. Eugene began recycling curbside in 1984 when the original opportunity to recycle act was actually passed by the state legislature that started to talk about providing Oregonians with the opportunity to recycle, and that could be done through recycling at transfer stations or by a curbside. But curbside was very much in its infancy in 1984. We didn't have a whole lot of

regulation about it through our city code. Haulers were not really even licensed or franchised. There was no methodology for dealing with them, but that all came as a result of the laws that were subsequent to the 1984 act. Today in Eugene customers have an incredible range of choice, in terms of container size and frequency that they can have their garbage and recycling collected. They have a 90 gallon roll cart that gets collected every other week that has co-mingled recycling in it. They have a 14 gallon bin that gets collected every other week that has glass, which we require to be kept separate for curbside recycling. And they also have a 65 gallon roll cart for the collection of yard debris, which gets collected every other week. For this range of services, depending on the size of the containers and the frequency of their collection choice they pay between $5 per month up to $40 per month. This is -- the rates are regulated by the city of Eugene and we take a look at the hauler's expenses and we try to give them an appropriate rate of return. We examine their expenses for reasonableness and then we set the rate accordingly. And this is done all over the state of Oregon. Local governments have that ability that they regulate to a collection and they

set garbage rates, and they set the service standards, just as Miss Mitchell said. In terms of plastics, actually beginning in 1984 Eugene haulers collected plastic bottles and plastic tubs. We were really one of the very unique communities in that regard, but it wasn't always a great thing. We were -- not the city, but processors in Eugene, and back then it was just these little non-profit organizations, were told by the plastics industry that they could recycle these materials, no problem. And due to the diligence of processors in Eugene we really strive to continue to recycle those materials. And so we've still got one of the very unique programs in the state, although my understanding is now more communities up on the Metro region are adopting tubs as a recyclable material. But there were definitely times when, as a processor of those materials where I would accept them from curbside haulers, I was not convinced that tubs were being recycled. And we were very vocal with the plastics industry that we wanted these materials to be recycled. It was a tough road hoe and the plastic industries, in some cases, responded and in some cases they did not respond. The plastics industry also developed the coding that you see on the bottom of plastic containers, the numbers one through seven.

That was developed by the Society of, Plastics Industry or Society of the Plastics Engineers. I'm not quite sure. There's a couple different acronyms there. You know, those codes were never designed to be used on tubs. They were only designed to be used on bottles. But today you can see that code -- you know if you use a portable toilet there's a code on the inside of the toilet. I mean, this has been incredibly abused. And my point is it was very difficult for us to educate the consumer about what was recyclable and what wasn't. And you can see some of the challenges. The industry rolled out, kind of check the neck, was the standard used in Portland, because they were trying to educate the people, the residents, the rate payers about what was appropriate to put in the curbside container. You know, who paid for those education programs? The rate payers pay for them through the city rate establishment. And we, in Eugene, did a number of things to support plastics recycling through the rate. We paid a premium -- we charged a premium to the rate payer to make sure that plastics recycling continued even when markets were down. So I want to point out that even in -- to the petition, even in ORS 459 today 459A.665 and the opportunity to recycle rigid plastic containers. A

local government (inaudible) about the opportunity to recycle rigid plastic containers in metropolitan and urban waste sheds. Where there is a stable market for -- price for those containers that equals or exceeds 75% of the necessary and reasonable collection costs for these containers. Your local government is really on the hook, according to state law, to provide the opportunity to recycle rigid plastic containers. And that's why the city of Eugene submitted testimony, in regards to this petition. Should we provide the opportunity of the intent to recycle plastic containers? I mean, we're just very nervous about this concept of what's the difference between the actual recycling and the intent to recycle. And for that reason we do not support the petitioner's request. I know, from speaking to a lot of rate payers, what they think about recycling. And I'm convinced that our rate payers in Eugene -- if they knew that 20% of the rigid plastic containers that they're putting into their curbside bin were being disposed of by a paper mill they would not call that recycling. Now, a definition, a common use of the term might be, "I recycle my plastic bottles." But I've stood at the end of drum pulpers at paper mills and seen them spit plastic bottles out that are

far beyond recyclable by that point in time in the process, because they're so contaminated by other paper pulp and ink. This isn't -- that would not fly for them to be considered recycling. And it's a tough -- tough for us to mandate, as a local government, it's tough for us to mandate how these containers are actually recycled. You know, you've heard that, yes, 20% of the plastic containers are perhaps going into a paper mill where they aren't recycled, but if you look at the newsprint it's less than 1% contamination of the newsprint because there's such a drastic, huge amount. It's the most recycled material on the curb is newsprint. So this teeny, tiny fraction of contamination in newsprint is actually -- amounts to 20% of the total recycled bottles collected. It makes it very difficult for us to suggest that newsprints should somehow be even pure than 1% contamination. So you know, this is the challenge for local government. Notwithstanding, that we really don't have the authority, through our licensing agreements, to suggest where materials go from the haulers, because there's really no good way to define how -- what kind of facility they should go to. Not only are there some court cases that have been all the way to the Supreme Court called flow

control, where you cannot direct where garbage shall go. So we're a little nervous about going down that road to say, well, we suggest that the curbside materials that the hauler collects shall go to a facility, said facility that we know is perhaps better than another one or has better equipment than another one. We can't control that. And more over than that, we can't even say you shall go to a facility that is permitted by DEQ, because DEQ does not permit these kinds of material recovery facilities. We use that language when, in our yard debris collection, we say that material collected on the curb for yard debris has to go to a facility permitted by DEQ, thus we have the little bit of security we can promise our rate payers that that material is going to a facility that is above board. But we have not any of that control, because DEQ does not regulate these kinds of facilities, okay? Final point, the petitioners knew or should have known that the plastics recycling rate was falling. Combing old recycling did -- it's come across this nation like a fire storm. And many of the industry associations analyzed it right off the bat. The American Forest and Paper Association public shed a report 2004 that they'd been working on for a number of years document the cost shift from

collection to the end use processor. This was well known -- DEQ has been publishing this plastics recycling report for a number of years. And while, you know -- anyway, that's my point. Two things that I wanted to respond to that I'd heard in testimony. Kristin Mitchell testified that what rate payers want is rigid plastic container recycling. Rate payers really want low rates, and the reason Eugene accepted co-mingled recycling wasn't because it was something that the city of Eugene initiated, it was something that hauler initiated. And the hauler promised us that they could initiate this massive change of retooling trucks and providing a roll cart to every single customer at no net increase in cost. And after we had been looking at residential rate increase year after year after year we thought that was a heck of a good deal. Now what did we do though? We got a call from the paper industry that said we're very concerned that Eugene keeps glass separated. We heard them, we were aware that there was this problem of contamination. As a result, we have kept glass separated even though it's cost more for our rate payers. The plastics industry never came forward and said we're concerned about our falling plastics recycling rate.

LYNN HAMPTON: I'm gonna ask you to wind up now, Mr. Kylar.

ALEX KYLAR: Thank you. I don't have any other questions.

LYNN HAMPTON: Is that all right with you?

ALEX KYLAR: You've got our testimony that we've provided in written form. We mainly are opposed to the -- the first point of the petitioners. We didn't really take a position on the second point, so I'm not speaking to that.

LYNN HAMPTON: Questions, commissioners? Thank you, Mr. Kylar. Our final person signed up to give public testimony is Rob Guttridge. Good afternoon, Mr. Guttridge.

ROB GUTTRIDGE: Good afternoon, Madam Chair, commissioners. I'm Rob Guttridge and I'm testifying on behalf of recycling advocates. I am a little unique today in that our organization is a grassroots membership organization. It's not a professional organization or an organization of manufacturers or corporations of any sort. We're individuals. We are consumers, of course, like everyone else in the world. And our organization's mission is to involve people in creating a sustainable

future through our local efforts to reduce, reuse and recycle. We're interested in solutions that are workable for everyone that don't cost an inordinate amount, that are good for the earth. And we come -- from that perspective, we know that we pay if a product costs more or a package costs more or regulation costs more or a fee imposed by a collector costs more. So we're really looking for the best solution and that's why we supported the efforts in the legislature back in the 80s. We've been around for 20 years to create as good a recycling law as we could that would work for everybody. And when we'd heard the plastics recycling was constantly, "well, it's a manufacturer's choice." We do the best we can with what we have to recycle, but what we see in the store, as a consumer, and what we see on the curb, as a recycler, is a package that a manufacturer chooses. So we need to get the manufacturers getting involved in feeling like they can be a part of the solution if we're going to have a workable solution. We do regulate the haulers, we regulate the processors. Could we get the manufacturers to at least play and participate and recognize the choices they make do affect all the rest of our choices, all the different things we get to do? We do have --

actually we had a plastic recycling tax credit program offered by the DEQ to encourage infrastructure in plastics recycling. That program was grossly underutilized and eventually did -- some said that it was in effect before and after the passage of the law that we're discussing today. What we feel as an organization is that that law is a good law and it should be allowed to work. The manufacturers have so far mostly chosen ways to avoid participating, unfortunately, and their petition before you today is a continuation of that, I'm afraid. But we do think the law can work. We see the manufacturers making the choices. We're gratified just this week with a major manufacturer, Hewlett Packard, announcing something that they were very proud to announce they were making a change in a packing that would reduce their use of Poly Vinyl Chloride by a huge amount, would reduce transportation costs, and energy costs, and would reduce their costs. You know, it's a smart change for them. They're changing their container. They're changing from unrecyclable container to a more recyclable container and a smaller container. It's the kind of choice that manufacturers make all the time that manufacturers are constantly able to make that made choices to reduce their packaging. And they

do that constantly. It's one of those things where you don't have to require them to do it. They do it because it's good sense. For the two requests that we saw here today I'm disappointed we can't support either of those requests. Both of them, essentially, would ask DEQ to change the rules intended to implement the law in such a way that the law would no longer have its intent implemented. The first one would substitute an intention for an action, which flies in the face of common sense and it flies in the face of the law as well, in terms of how well intent can connect with action. It varies very much by, you know, what the situation is and it's impossible for DEQ realistically know the intent of a third party. And it's unreasonable for the manufacturers to say, "Well, we think that this third party intended to do this, and therefore it should count." It's not reasonable. And again, as Commissioner Blosser pointed out, the standard 25% is horribly low minimum. It's lower than the similar ratios that were part of this same act for other materials, and so it's a bottom of floor not a worthy and un-hard to reach goal. For the second petition on (inaudible) nationwide averaging for Oregon product averaging, we again feel it's unreasonable to say that

here in Oregon we intended our law to affect recycling and in a positive way for this state. It doesn't implement the law to say, well, if a company does something on a nationwide basis that should be good enough. I don't think it answers Oregon law to say, "Well, gosh, they can do it a different way in California, which has different rules. Well, if they do it in a way that satisfies California law it should be good enough for Oregon." California law is different. It's more restrictive than Oregon law in a lot of ways, and allows a lot of exemptions because of that restriction that Oregon law does not. I don't think it's DEQ's place or the EQC's place to say, "Well, the legislature was wrong. Let's change our law to meet whatever California did after we did ours." That's hardly appropriate. Thank you. I appreciate the opportunity to comment. Again, I'm unique in that I'm here on my own time. I took the day off work to be here speaking just as a consumer for grassroots consumer organization and we appreciate the opportunity to comment for recycling advocates.

LYNN HAMPTON: Thank you. I appreciate your taking the time to be here. Questions? Comments? Thanks.

ROB GUTTRIDGE: You're welcome.

LYNN HAMPTON: All right, that concludes the public comment period. Do we need to close public comment or is that just inherent as part of the process?

LARRY KNUDSEN: I don't think you need to take any formal step to do that.

LYNN HAMPTON: I think, Larry, I'm gonna ask you to maybe comment thus far, because there's been a lot of reference to what this opinion means and what it doesn't mean. And do -- if we need to hear from Mr. Eddlman, I don't' know. But do you have some guidance for us about this at this point?

LARRY KNUDSEN: Let me provide just a very general answer to that and if you'd like detail Larry Eddleman can come up and provide that. The advice from the Department of Justice was that while we recognize the answer is somewhat uncertain we believe that a court would be more likely to conclude that recycle means to make -- to use the material for another product, rather than just the intent to do that. So it was one of those decisions that it's, you know, more likely or not -- more likely than not that a court would find that the rule change proposed was inconsistent with the statute, what lawyers called ultraviries [phonetic]. It's more or less the same

conclusion, with respect to the notion of whether or not the 25% recycled content could be averaged across product lines or product sizes. And again, the notion was the law is not certain, but we think that it's more likely than not that a court would reject that kind of a decisions. That isn't to say we would not defend the rule, if you choose to adopt such a rule after you go through the regular rule making process, but it is not -- it's not a position that we would recommend that you take as your lawyers.

LYNN HAMPTON: All right. If my fellow commissioners don't have any other questions for you at this point I think I'm gonna give three to five minutes to Al Kiphut and Loretta and Peter Spendalo to come back up here and offer a perspective now that they've had the benefit of the public comment. Is that okay with you?

ALAN KIPHUT: Thank you, Chair Hampton, members of the commission. I would like to make a couple clarifications I think on comments we did hear earlier just to make sure that we feel you've go the full picture on some of these issues. So I think Loretta and Peter have a couple of points they would like to make here.

LORETTA PICKERELL: Thank you, Chair

Hampton and commissioners. A couple quick points. One, this is tough law. It's a carrot/stick law, and the carrot is the aggregate recycling rate. The stick is (inaudible) standards for product manufacturers if we don't meet that rate. Early on the plastics industry recognized there were some producer responsibility elements in the law. They came forward. They guaranteed plastic recycling rates, prices for three years. They (inaudible) or funded a plastic recycling facility in Salem and took a number of other initiatives. So clearly there was a recognition. The product manufacturers had some responsibility under this law. And they still do. There are some options for compliance that are tough. The standings are high. That's how the law was designed. And the issues before us today were highly debated before the legislature and by the commission in '94 when we adopted rules (inaudible) that statute right after the statue was adopted. So clearly the issues are the same, it's a hot topic, the standard are high. And I'm not sure what we, as an agency, can do about that, given the statue as it's written. Secondly, there were some questions raised about the material recovery survey and the figures and the data. We can go through -- Peter can if you're interested

-- I'm guessing that you're not at this point. We could go through and explain how we do this study every year and the kind of sampling analysis we do to account for contamination. But basically the numbers -- we generate the number of recycling rate overall and for rigid plastic containers every years. We've done that for a number of years. We now set rate every fall. The rate has been declining. We've made some minor adjustments in that rate as we've gotten better data that showed what actual contaminates were -- contamination rates were versus what we had assumed they were, and we base it on sampling. So we have made some adjustments to that rate, but the rate has been declining. And so announcing this December that the rate was below 25% was not a surprise. It was more a wakeup call. We're close to 25%. There's no reason, with some effort, we shouldn't' get the rate above 25% and take advantage of this way to comply. And finally, with co- mingling, I think there was something said that indicated that co-mingling had actually -- more tons were lost than captures. I wasn't clear on the date, but I wanted to point out that we do have data demonstrating clearly that co-mingling has resulted in a net increase in recycling to spend fairly significant, even after we

take out the losses. It's important to get -- to reduce those losses, but co- mingling has been a result within that increase. And finally on a couple other minor points that I think are the important, the corporate averaging -- we do not do corporate averaging under our statute at all for determining minimum recycled content. Currently we allow -- we look at each individual container, and we look at the product run for that container, whether the product run lasts a day or up to a year. If that product run has relative -- the same amount of recycled content, ratio to non- recycled resin, we allow that product run to be what's used to calculate the resin. So that's not very simple, but the simple response there is that we don't allow corporate averaging. We allow a container, the product one, for the container to be used as the recycled -- to determine the recycled content of that container.

LYNN HAMPTON: What do you mean by product run?

LORETTA PICKERELL: A product run would be -- the milk jug get -- resins are poured into the vat and sent to the smoll to sent through -- or plastic are sent through the mold and these little milk jugs come out the end. That is a product

-- the mix they put into the vat, oversimplifying it, that's a product run. They may use the same recycled content ratios going into that vat over the course of a year. We allow that whole product run for that whole year to be used as the -- to determine their resin content.

LYNN HAMPTON: So are you saying if they're 50% in January but 10% in April, and they're varying throughout the year, if you -- at the end of the year reach 25% you're in compliance?

LORETTA PICKERELL: No, we allow -- we allow -- if that -- we allow that run to be used if the ratio of recycled resin to non-recycled resin if that remains relatively the same over the year. If they do a product run A and use 25/75 and then shift and do product run B 50/50, they have to count only the run where that ratio remained relatively the same. So that's -- we don't do corporate average, even under our existing law. Finally, we do allow source reduction. It's still an option. I think there was a statement made that it's no longer allowed. It still is an option for compliance under our law. And with that, I'll -- I think my time is up.

ALAN KIPHUT: If I could, Madam

Chair, members of the commission, just say that I think you've heard a lot of different issues and possible solutions raised today around this particular topic. I think it's our feeling, as we've made in our recommendation to you in the staff report, that this petition is not the way to get there and so we still recommend denying the petition. I think there are other avenues that need to be pursued by everyone in the room, DEQ and the product manufacturers as well.

STEPHANIE HALLOCK: Madam Chair, if I may, I think in the interest of equity Mr. Cosgrave is not in agreement with the statement the department made about averaging. I think it's only fair that he should get to say to you what his concern is, if that's all right.

LYNN HAMPTON: Yes. (inaudible) body language totaled around the room.

STEPHANIE HALLOCK: Before he drags me out of the room.

LYNN HAMPTON: Mr. Kiphut, had you finished your primary points of you -- okay.

(Inaudible discussion)

BILL BLOSSER: Just one question. Just one of you leave, let Paul come up, and the

others stay and then (inaudible) resolve it.

(Inaudible discussion)

LYNN HAMPTON: In my trade we would call this sir rebuttal, but I don't think we're gonna name it that here. We'll just give you a moment for that problem that you had with that one part of the statement.

PAUL S. COSGROVE: And it's only that one part. I had two comments. Paul Cosgrove again. When staff is telling you that we don't allow and we do allow you have to remember that none of these things have never been dealt with at all in reality in Oregon. None of these regulations have even been interpreted. None of these regulations have ever been applied. We have been relying on an overall aggregate recycling rate. We have never dealt with recycled content. But the comment that we don't allow averaging and recycled comment I think the rules, as currently written do. And they are OAR 340-090-410 Sub 2 Sub a Sub B and sub ii, which says, "Recycled content for each container is documented by the weight of the recycled materials used to manufacturer that type of rigid plastic container during the same time period within a one year period as determined by the container manufacturer." Now staff may say that they

don't think that's averaging over a year, I would suggest to you that this regulation, as written, a plain reading of that is exactly that and that's how we certainly have been reading it. As I say, no has ever applied this regulation because it's been unnecessary. So based on my comment that we allow -- would allow recycled content averaging over a time is that language.

LYNN HAMPTON: Based upon that.

PAUL S. COSGROVE: Thank you.

LYNN HAMPTON: Thank you, everyone. All right.

LARRY KNUDSEN: Madam Chair?

LYNN HAMPTON: Yes.

LARRY KNUDSEN: I assume at this point you're gonna move to deliberation?

LYNN HAMPTON: Yes.

LARRY KNUDSEN: And if I could make a couple of procedural comments about that.

LYNN HAMPTON: Would you please.

LARRY KNUDSEN: Since you are now down to three commission members the way the law is set up for this particular board and commission, it takes three affirmative votes to act. And so I think it might be helpful to kind of nail that down a

little bit, in the sense that, the way I see it, all three of you can vote to accept the petition, in which case we would go out to rule making. But Ii want to note that as I interpret the law and am advising you that is regular rule making, which is not a quick process. That would mean that we start the process for doing the rule, and as you know, because timeliness has been a big issue here, it takes herculean efforts for a rule to be adopted within less than six months by a board or commission as the APA, as it has been amended over the several years. Another alternative would be for there to be three affirmative votes, which would have you proceed both with regular rule-making and to come back with a proposal for a temporary or emergency rule. There are -- but you can't do a temporary rule unless you make findings and those hadn't been discussed today, obviously. And a temporary rule can only be in effect for six months.

JUDY UHERBELAU: Larry, clarification. But even with the temporary rule, we have to accept the petition?

LARRY KNUDSEN: I think you would, yes. But I think that's a separate step, at any event. I mean, the reason I say that is it would

make no sense to go out for a temporary rule if you weren't planning to also proceed with permanent rule making cuz the temporary rule would expire. If there are three affirmative vote to deny the petition then that's clearly what would happen as well. If you are unable to have three affirmative votes in the same direction, the law is not as clear as it could be, but my advice to you is that we should treat that as if the petition is granted. And the reason for that is because although the statute's not too clear the model -- or the uniform rule adopted by the Department of Justice, seems to indicate that you either have to deny or go forward.

LYNN HAMPTON: And we have a corium problem?

LARRY KNUDSEN: Right. Now you could and a third option of course would be to set the matter over and hold a special meeting, but you could not -- we don't really have time to do it in the regular session so we'd have to set it over and do a special meeting.

LYNN HAMPTON: How does -- I'm sorry, go ahead.

BILL BLOSSER: On a special meeting we have to give 72 hours notice?

LARRY KNUDSEN: Yeah, there wouldn't be a particular problem with doing the notice.

BILL BLOSSER: We could make the April 11th or whenever we have a date -- we could make that date easily.

LYNN HAMPTON: That was my question.

LARRY KNUDSEN: Yes, and you could even do it telephonically if you chose to.

LYNN HAMPTON: And commissioner Uherbelau has a question for you.

JUDY UHERBELAU: Again, a point of clarification, what I think I heard you say and it's contrary to my other experiences, if we do -- let's say, two vote for petition and one vote's against, or two vote against and one vote's for. In both of those scenarios we've accepted it period.

LARRY KNUDSEN: Neither one of those votes would be effective. The reason for that would be -- ordinarily under parliamentary procedure a majority of the corium can make a decision. Under the unique statutes that apply to this body and many other boards and commissions, a majority of the commission must affirmatively act in order to take an action. And a majority -- that's the majority of the

entire commission, and in this case that would be three members.

JUDY UHERBELAU: Okay, than I misunderstood you.

LYNN HAMPTON: So matter what vote, whether there were four or five or three present, three must vote?

LARRY KNUDSEN: Three must vote.

BILL BLOSSER: And you're also saying that if we do not pass a vote by three -- in other words, all three of us don't agree that means we've accepted the petition?

LARRY KNUDSEN: Unless you set the matter over.

BILL BLOSSER: Unless we set it over. So we could -- the three of us could vote to set it over, but if we couldn't agree to set it over either then --

LARRY KNUDSEN: If you can't agree to set it over then, I think, what happens is on the 90th day the department would need to proceed with rule-making.

(Inaudible discussion)

LYNN HAMPTON: Let's deliberate. Let's see where we are before we figure out what

we've got there. Okay, Commissioner Blosser, will you share your deliberation with (inaudible)?

BILL BLOSSER: I move that we deny the petition, and going through the list that our counsel provided us, I'm convinced there is clear need, continued need for the rule. The state set a goal. It's not a worthy goal. It's not a high goal. Secondly, we have listened to the nature of the complaints thoroughly, so I think we fulfilled that. The rule doesn't seem to me to be very complex. It's fairly clear and simple and it's been forced for over 12 years, and if there were uncertainties or things about it there was plenty of time, at least six or seven legislative sessions, to have clarified it if it was too complex to understand. The rule does not overlap, duplicate or conflict, so I don't see that issue being a problem. I don't see that, from anything I heard today, that there's any technological or economic conditions that have changed. And finally the statute we've seen -- there seems to be good legal basis for the rule so I don't see that that's in question at all. So I think for all those reasons -- and the additional thing that I think that this has been an issue, we've been flirting with the 25% thing since the year this was adopted. If I

were the manufacturers I would have been worried about this Armageddon occurring for 12 years, not in the last six months or three months, because it's clear that we have not been -- we've been flirting with disaster all the way along. And it's just now that it's coming to a force and I think we need to get with it and get it fixed. And it if needs legislative change, legislature is over there and I would encourage them to go over and talk to legislature. So for all those reasons I move to deny.

LYNN HAMPTON: Okay, do you mind if we hold your motion and wait for a second and let me hear the deliberations? We'll hear, Commissioner Uherbelau, your deliberation about this. Will you share it with us?

JUDY UHERBELAU: Yes, you're putting it on hold but I was gonna --

LYNN HAMPTON: You want to second (inaudible)?

JUDY UHERBELAU: -- Second his denial for all the reasons he said looking at the criteria. And additionally speaking, I think especially eh first request would be in direct contrast to what the law was passed for in the first place. If we

said that to include all containers collected and intended to be recycled, but didn't get recycled -- I mean, the idea of the law was -- I mean, we may not be doing it. I agree. We have a real problem. But to use that language is contrary to what the intent of the statute was. That's my problem with that. And as to the second, I think averaging is questionable, but especially questionable when it's countrywide. If you limited averaging to Oregon I might think, well -- but for everything you manufacturer and make, to average that, I have a problem.

LYNN HAMPTON: And Commissioner Uherbelau, you saw and were aware of all these factors that were in the statute that --

JUDY UHERBELAU: Yes, and he addressed them and I supported him, as I said.

LYNN HAMPTON: Okay, great. So it has been moved and seconded to deny the petition. And I will just say in short form that I'm in substantial agreement with both Commissioners Blosser and Uherbelau. I am concerned about the structure of a statute that sort of funnels all the consequences of this down to one portion of our economy, the manufacturers, the plastic manufacturers and product

distributers. I am a lawyer, but I try to not let that unduly affect the minuteness of my thinking. But I think that we are stuck with the law that we got handed to us in this situation. I am encouraged to hear about the other factors that may have changed in the subject area involving this rule. Both discouraged, in the way that --

(End of Tape 6 Side 5B)

LYNN HAMPTON: -- co-mingling has affected the manufacturers. And how the loss in the recycling stream of even a fairly small amount has a major consequence. I accept that as being absolutely truthful statement. But I'm encouraged also to see that some other factors may come into play in the next year that may counter balance those (inaudible). And regardless of how I feel or how clear it is that this small variation, the loss in the recycling stream, affects the manufacturers that clearly is a part of the law. And therefore I don't have any real trouble in, as far as my oral deliberations are concerned, in analyzing these same factors in ORS 183390. There seems to be a continued need for the rule. The complaints or comments received concerning the rule, from the public, covered a wide variety and I don't see that those necessarily require us to

grant the petition. The rule has -- the rule itself is very complex. The way in which the calculations involved in analyzing the recycling stream do tend to get a little complex. I don't see that this rule duplicates or overlaps. I'm looking down my statutory considerations here. I do think that local governments are going to be bearing some responsibility to help sort this problem out, and I would encourage the DEQ staff to -- Al's nodding me from the back of the room, that this may be a productive area for us to help resolve this problem. And I've already spoken about the other factors, technology, economic conditions, legislation, that may help us resolve this. So are we ready for a vote?

JUDY UHERBELAU: I would just like to add one thing. I think this petition has certainly raised, in my mind and I think in other commissioners, that there are real issues out there that need to be addressed. So I would hate to see this dropped and say, "Okay, the petition was turned down. We don't have to worry about it. We're gonna forget about it." I don't think that's a sense of any of us. I hope that we come up with some ideas that the different entities work together with the industries, counties, DEQ, everyone, cuz I think there

needs to be resolution on some very important point.

BILL BLOSSER: Madam Chair, can I echo that and say that I am not at all (inaudible) with dilemma that the manufacturers are in, presented by this, and I certainly would be open to our considering rule-making after the legislature goes home if there are some things that we can do to fix problems here that will make it more likely that we get to the 25%, 30%, 50%, whatever. I still regard the 25% as a low target. But if there are things that we need to tweak I am certainly open to that and would encourage us to do that. But I would like to see what the legislature does before we launch into that.

LYNN HAMPTON: One thing that I noted as it went by, and in the context of which of the rules I can't always guarantee I'm grasping the nettle completely, but there was a discussion about including rigid plastic containers as a principle, recyclable material, which would require municipalities, this is what I understood, require municipalities to have curbside pickup. Now, if I -- I don't know if that was a correct understanding but, Al, I'd sure like to hear more about that at some point in the future. All right, I'm ready to cast our vote, if

the commissioners are. All those in favor of the motion, which would result in denying the petition, signify by saying, "I."

COMMISSIONERS IN UNISON: I.

LYNN HAMPTON: I. Motion is carried. And we're not going to -- having denied the petition I think you can see that our sense is we're not going to ignore this issue and we're wanting to keep those lines of communication open.

STEPHANIE HALLOCK: So Madam Chair? I'm sorry, go ahead. Did you want to continue?

LYNN HAMPTON: Commissioner (inaudible), did you want to say something?

JUDY UHERBELAU: I said the answer to this issue is to make the rigid plastic, at least water bottles, subject to the bottle bill. (inaudible).

LYNN HAMPTON: Stephanie?

STEPHANIE HALLOCK: I just had one other thing before you adjourn that I wanted to advise you and I didn't yesterday because I was waiting for an email to come out to all my staff. But my deputy, Paul Flammen, is going to be leaving DEQ. He's taking a position with the Portland Development Commission. And he will be leaving on

March 12th and Dick Peterson, who is the administrator of our Northwest regions is going to come over as the interim deputy.

LYNN HAMPTON: Okay, thank you. Is there any other business? Do I hear -- can we adjourn by consensus? Okay, we are adjourned.

(End of Tape 7 Side 6B)

CERTIFICATE

I, Aimee L. Clem, do hereby certify that the matter herein mentioned on the preceding title page was transcribed. I transcribed all requested audio in its entirety in the foregoing matter; and that the foregoing transcript pages constitute a full, true and correct record of such audio.

IN WITNESS HEREOF, I have hereunto set my hand this 13th day of March, 2007.

Aimee L Clem

Tape Transcriptionist

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ENVIRONMENTAL QUALITY COMMISSION MEETING

MEETING
FEBRUARY 22ND AND 23RD, 2007

TRANSCRIBED BY AIMEE CLEM ON MARCH 13, 2007

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LYNN HAMPTON: -- Meeting. And has everybody had a chance to review those and the materials you received?

UNIDENTIFIED SPEAKER: I did.

LYNN HAMPTON: Commissioner Uherbelau?

JUDY UHERBELAU: Yes, I have one question -- thank you -- on Page 3. If you look in the second paragraph five lines down it doesn't make sense. Either that, or my brain isn't tracking where it says, "Require the ALJ to respond by denying the request for clarification or by responding." We've already said the respond, why are we adding the last three words?

LYNN HAMPTON: I think what it was intended to mean, and it isn't worded clearly, is require the ALJ to either deny their request or respond to their request.

JUDY UHERBELAU: Okay, so we need to clarify that.

LYNN HAMPTON: Sure.

JUDY UHERBELAU: And then I think we had another -- okay. That's it.

LYNN HAMPTON: Okay. So with wording as follows: "Respond to or deny the request for clarification period," be acceptable? Does that sound right, Judy?

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JUDY UHERBELAU: It's what they want to (inaudible), yes.

LYNN HAMPTON: All right. Do -- are the other commissioners all right with that change? Okay, any other noted changes? Anybody want to move to accept the minutes as modified?

UNIDENTIFIED SPEAKER: I so move.

UNIDENTIFIED SPEAKER: Second.

LYNN HAMPTON: Okay, it's been moved and seconded. Those who approve say, "I".

GROUP IN UNISON: I.

LYNN HAMPTON: I. Okay, onto Item B, Umatilla Chemical Demilitarization Program status update. And I see we have Colonel and Don with us. Good morning. Thank you for coming.

JONIE HAMMOND: Good morning, (inaudible) Hampton, commissioners. I'm Jonie Hammond, Eastern Region Administrator. With me is Rich Duvall, Umatilla Administrator, Lieutenant Colonel Rettan [phonetic], and project manager Don Barkley. Rich will start off by giving the update and then if you have questions we're all available for questions and answers.

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RICH DUVALL: Good morning, madam chairman, commissioners. As you can note on the first item on your update, we've sort of reached the halfway point, which is kind of encouraging cuz a lot of us thought we'd never get here. And things are going fairly well. The second item on there, the Secondary Waste Trial Burn, was completed at the end of January. What this enables them to do is increase from 50 pounds to 300 pounds every tray of secondary waste that goes through the metal parts furnace. And in their shake down and trial burn process they came very close to running out of secondary waste before they got the trial burn completed. So it's anticipated that by the end of the GB campaign this summer all of the GB generated secondary waste should be gone. And the third item on the agenda -- I just wanted to point out the Facility Safety Award. Washington Demilitarization Company was officially awarded the -- OSEA's VPP star status, which is very prestigious for a company out of some 4 million companies in the US, only 1600 have achieved this level of safety performance. And I wish Doug Hammerick was here so we could pat him on the back, cuz they've done a very good job.

UNIDENTIFIED SPEAKER: Can you tell

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us just in a very brief way what it takes to get to be one of the 1600? I mean, does that mean like zero lost hours in so many months or years or what? Just very briefly, kind of what you have to do to --

DON BARKLEY: Yes, very briefly, Don Barkley, (inaudible) project manager. It's basically the result of implementing a management system, a safety management system and not necessarily a statistics based approach, because those are generally lagging indicators. So we institute a management system and it is an OSEA defined process that, I guess, in its basis terms promotes a system of leadership involvement and an employee-based or led process where from top down and bottom up everyone is working to a common set of goals to improve the safety performance, both as an organization and as individuals. And OSEA actually has a set of metrics that they come in and evaluate us on. I think it was about a year ago they came in with their first kind of screening, or maybe it was two years ago -- I've lost track of time. Was it due? So probably early in Colonel's 10 year a couple of years ago. They come in, do an assessment, leave us a list of action items to address to elevate our performance and then they came back last summer for a final

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evaluation, and based on our commitment to that management process, which if followed, elevates, I guess, confidence in OSEA that we can operate more on our own, more self directed without oversaught and (inaudible) to go.

UNIDENTIFIED SPEAKER: Thank you.

RICH DUVALL: Okay, next thing I wanted to present to the commission is on Page 2 of your update, the first bullet, is a permit modification we worked on for a minimum temperature limit change in the deactivation furnace. I kind of wanted to show you why we were doing that.

LYNN HAMPTON: Commissioner Uherbelau is noting you need to speak more directly into the microphone.

RICK DUVALL: Thank you. I'll do my best. This is a view of what the de- activation furnace is supposed to look like. It's relatively clean. This is the burner end of the de- activation furnace. And what we ran into on projectile processing because the temperature limits were set during rockets, the furnace seemed to be a little bit hot and it was melting the aluminum casings on the bursters from the projectiles. And this was presenting some damage problems to the furnace and is

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also accumulating enough that the furnace drive wouldn't turn it like it was supposed to. We managed to limp through the 8-inch campaign just by shutting the furnace down regularly and sending somebody inside to clean out the accumulated aluminum. It came out in some pretty good sized sheets. This is the heated discharge conveyor. A lot of the melted aluminum ended going out onto that conveyor and chipping it up. It also caused several delays, because it had to be shut down so somebody could go into this area and chip off the aluminum. Now this was a hot area so when they had to shut it down and send somebody in, they either to be in DPE suits or they had to de-con the area to get people in to clean it up. And all the bright shiny stuff on there is the melted aluminum, but isn't supposed to be where you see it. This is the ash bin for the de-activation furnace. What you can see there are a few of the burster casings, mostly on the nose coned lifting lugs and a lot of little pieces of melted aluminum. And in this view you don't see anything other than the lifting lugs, because there's nothing coming through expect the steal pieces. And what we have agreed with the army to try is to drop the minimum temperature in the furnace by 50 degrees, based on the trial burns that

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were done at other facilities, Tuella [phonetic] and Aniston, to see if that wouldn't correct this problem. And we did that starting with the 155 projectiles at the end of January, and it seems to have benefited. We're not quite ready to declare victory yet, because we haven't really re-amped up to full processing speed, but things are looking up. And there haven't been any melted aluminum related shut downs so far in the 155 campaign. And we --

LYNN HAMPTON: Are those results that you picture the result of dropping the set point by the 50 degrees Fahrenheit, or was that a greater drop?

RICK DUVALL: What really resulted from this -- when we dropped the minimum temperature at the feed end of the furnace by 50 degrees it enabled a temperature drop of close to 300 on the burner end, which is where most of the melting problem was going on. The temperature at the burning end of the furnace was getting as high as 1500 degrees, which is about 300 degrees above the melting point of aluminum. And with this change it's dropped into the 1250 to 1300 range. And it seems that the aluminum pieces are making it through the furnace. There's some melting still going on in the conveyor,

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but not as much and not enough to impede the progress.
UNIDENTIFIED SPEAKER: What temperature -- do you know what temperature you need to adequate burn off any of the chemicals that are still on there? Could you be down another 50 and eliminate the last part of your melting?
RICK DUVALL: Possibly, yes. We don't know. We've -- we really don't understand -- well, I shouldn't say, "don't understand." We're not sure that dropping the temperature would have any other impacts, other than preventing the melting aluminum. With the regulations the way they are it's difficult just to drop the temperature without fronting some type of trial burn or having something we can base the decision on.
LYNN HAMPTON: So that's why you authorized the temporary authorization?
RICK DUVALL: Yes, madam chairman, that's why.
LYNN HAMPTON: So what's the next step in this process then if you decide that this is a justifying step?
RICK DUVALL: If it's a justified step we will continue processing of the class 3 permit mod --

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actually make it permanent in the permit that they can operate the de-activation furnace for projectiles at 950 rather than 1020.
LYNN HAMPTON: Is there any other data you still need to get before you are ready to say yes to this?
RICK DUVALL: Just to make sure that we've dropped low enough. Okay, and the last thing on my agenda was the next permit one down on the Page 2, talking about liability insurance requirements. The existing permit requires the Washington Demilitarization Company to maintain $375 million of liability insurance. And they've asked to be -- to have their liability requirements change back to what the rules requires, which is much lower. I believe it's $2 million and $4 million instead of $375 million. These permit mods currently out on public comment and at the end of March when the comment period closes we may have to make some sort of decision on what to do.
LYNN HAMPTON: Since that provision was added to the permit by the EQC does the modification need to be done by us?
RICK DUVALL: Well, madam chairman, legally speaking, probably not, but if there is any

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public comment we may want to have you guys look at it, rather than have us try to force it.
LYNN HAMPTON: Commissioner Uherbelau?
COMMISSIONER UHERBELAU: Chair, I noticed in the report that one of the conditions was to -- as part of the process to add Raytheon. What do they do? What is their role in this?
RICK DUVALL: Well, commissioner Uherbelau, Raytheon was a predecessor for the Washington Demilitarization Company. They're actually the same entity that Washington Group bought from Raytheon.
COMMISSIONER UHERBELAU: Okay. Was neither Raytheon nor Washington, whatever it is now, on the liability before because they're saying, "add them"? Were they not named on the policy?
RICK DUVALL: The original policy that was done was for Raytheon.
COMMISSIONER UHERBELAU: Okay. I'm looking at the last sentence where it says, "The condition was added to the permit by EQC as part of the process to add Raytheon (inaudible) DC."
RICK DUVALL: Oh, yes, commissioner Uherbelau. The original permit was issued only to

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the Army and when the Army hired Raytheon as their contract, or the permit was modified to include them.
JUDY UHERBELAU: And it was just modified recently?
RICK DUVALL: This was back in '98 when that was modified.
JUDY UHERBELAU: '98?
LYNN HAMPTON: I think what they were doing was adding the WAC as a co- operator.
JUDY UHERBELAU: Okay. No, I know that. Yeah, I was just trying to find out when.
RICK DUVALL: Yeah, '98. Okay, and lastly, the only thing I want to point out is we are --
LYNN HAMPTON: Rich, I am sorry, but I have one last question on that last item so I'll interrupt you. What kind of process will you be going through in analyzing the diminution, if there's been any, which I presume there has been, in the overall risk and how that's going to relate to the amount of insurance that would be appropriate to maintain at this point, as opposed to the insurance that was required back in '98?
RICH DUVALL: Well, madam chairman, what we'll have to do is go back to the 1998 analysis and

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see what risks were addressed to justify the $375 million requirement. Try to figure out which ones are still here and which ones are gone, and see if there is a justification for dropping the number as low as they've requested.

LYNN HAMPTON: And keeping in mind what unknowns there were, at least as far as Oregon was concerned at the beginning of the process and try to maybe nail down what of -- that was unknown has now become known. Anyway --

RICH DUVALL: Yes, there were a lot of unknowns at that time.

LYNN HAMPTON: There were a lot of unknowns at that point.

BILL BLOSSER: And also -- I presume you would also look at what the cost implications are. I don't know -- if the risk is actually very low the $375 million may not be costing them very much, because the insurance companies would recognize it. I don't know. Or maybe it's costing them an arm and a leg and it would save the Army and us, presumably, money if they didn't have to pay it.

RICH DUVALL: Yes, commissioner Blosser, the expense is steep. It runs around $400,000 a year to maintain that insurance level.

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LYNN HAMPTON: Great. These will be issues that we --

BILL BLOSSER: If they didn't have to pay it could it just be paid to DEQ as --

UNIDENTIFIED SPEAKER: As a body right down the road we could maybe ask that question.

LYNN HAMPTON: Sorry to interrupt you, Rich.

RICH DUVALL: And the last thing I wanted to point out is we are in the 155 artillery round campaign, which is the last one for the GB Saran [phonetic], and it's anticipated that this campaign will end by June 30th, which will mark the end of the Saran campaign and there will be no more munitions containing Saran left.

LYNN HAMPTON: That's wonderful.

RICH DUVALL: Just something to look forward to.

LYNN HAMPTON: Absolutely. It may be in here and I may have missed it. Remind me of the proportion then of what we will have completed as to what's left, the various other kinds of agent that are left there to do?

RICH DUVALL: Okay, madam chairman, after the Saran is done we'll still have VX and

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mustard. The VX campaign has bulk spray tanks, rockets, projectiles in mines, but fairly low numbers of each of those. And to expect that the VX campaign will take from six to nine months. The bulk of the mass left is in mustard.

LYNN HAMPTON: And those are in the big --

RICH DUVALL: Those are in the ton containers.

LYNN HAMPTON: -- Okay. And how about permit renewal? Who's going to be talking about that?

RICH DUVALL: Oh, excuse me. I knew there was something else I needed to talk about. The permit did officially expire on the 12th of February. As noted in here, our permit writer that has been with us for a long time left just before Christmas and we're currently without a permit writer. The rest of my staff are doing Yeoman [phonetic] work, keeping up on the modifications. But until we get a new permit writer hired we probably won't make much progress on the permit renewal. Fortunately the recruitment for the permit writer was successful and we have some very good candidates that we hope to be interviewing the first or second week of March. And

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when we get somebody on that will be their sole priority, is to get the permit renewal put together and out on public comment.

LYNN HAMPTON: And the permit continues by operation of law until you renew then?

RICH DUVALL: Yes, ma'am.

LYNN HAMPTON: Because you made your determination of completeness at the renewal application prior to a certain date?

RICH DUVALL: Yes.

LYNN HAMPTON: Okay, commissioner Uherbelau?

JUDY UHERBELAU: That was the question is if it expired in February, what are they operating under? And you just said that they are able to continue operating under the rule of law, and where do you get that?

LYNN HAMPTON: Well, if you look in this last paragraph.

JUDY UHERBELAU: Yes.

LYNN HAMPTON: And we had a discussion about it. I'm not sure if you were here, Judy. What they -- what the facility -- makes an application for a renewal of the permit, then there's a determination by the department whether that

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application was complete, and they made that determination. So my understanding is that the law says that if that application for renewal is determined to be complete then -- even though the original permit expires, you continue -- they're allowed to continue to operate under its terms and conditions.

JUDY UHERBELAU: So it's just kind of clean up work that needs to be done?

LYNN HAMPTON: Well, and they want to encourage the facilities, I imagine, to make their applications in a timely manner but allow the government the opportunity to review it completely. So we're in that sort of medium state right now.

STEPHANIE HALLOCK: Madam Chair, just one thing that you might find interesting, that law applies to all of our permits. And when you've heard people come before you on staff and talk about permit back logs, etcetera, because of lack of resources -- what this does is protect, if you will, the company so that as long as they've made timely application, if we're unable to get to their permit for whatever reason, either we've lost a staff person or we don't have the resources, they are allowed to continue to operate. They don't have to shut down

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just because we haven't been able to get to their permit.

LYNN HAMPTON: But (inaudible) of the terms and conditions (inaudible)?

STEPHANIE HALLOCK: Absolutely not. They're operating under the existing -- and that's why we want -- like in the water program, for example, where we've been on this concerted effort to eliminate back logs and get permits current, because you obviously want to make sure the conditions that are in the permits are current and up to date.

JUDY UHERBELAU: Stephanie, is that continuation -- is that in the RS's --

STEPHANIE HALLOCK: It's in the ORS 468, isn't it, Larry?

LARRY: Well, it actually -- interestingly enough, it applies under -- probably under both state and federal law. Almost all of the major federal permitting programs have expressed provisions relating to that. Those were developed out of the federal APA, Federal Administrative Procedures Act. And then we have similar provisions in state law that apply to our state permits. So it pretty much applies across the board.

LYNN HAMPTON: Okay. Did you have

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anything else you wanted to (inaudible)?

RICH DUVALL: No, that will do it.

LYNN HAMPTON: All right, anybody else? Anything to report on (inaudible)?

UNIDENTIFIED SPEAKER: Sure. I can't resist.

LYNN HAMPTON: Good.

LIEUTENANT COLONEL RETTIN: Lieutenant Colonel Rettin. I am 18 months through my command and only have six months remaining. I will be leaving this summer.

LYNN HAMPTON: Oh.

LIEUTENANT COLONEL RETTIN: And the thing I mostly focus is is on the deliveries, cuz that's mainly what I'm responsible for. And my 10 year safely delivered over 3500 of the (inaudible) onsite containers. And all I'm worried about now are the 550 left.

LYNN HAMPTON: Congratulations, Lieutenant Colonel Rettin. And thank you for coming. You've been at a lot of meetings where you haven't been speaking and you've shown up faithfully. I appreciate that. Anything else? Okay, thank you very much. Action Item C; we're a little bit ahead of schedule. Are we waiting for anyone? We'll have

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Jonie and Larry Knudsen, sub delegation of signature authority for sewer system adequacy in sanitary districts.

LARRY KNUDSEN: Thank you. I thought I'd move up here so that I'm not looking at you sideways. Shall I go ahead?

LYNN HAMPTON: Go ahead, please.

LARRY KNUDSEN: Thank you. This is a recommendation to the EQC to delegate to the department the responsibility to review and approve certain sewage system plans. The review requirement arises under a statute that allows the Department of Human Services, DHS, to order the creation of new sanitary districts or to annex -- force the annexation of areas into existing sanitary districts in order to deal with water supply or sewage or some solid waste problems. Today we're only concerned about the sewage side of things. Under those statutes there's a role for the Environmental Quality Commission to review some of those plans. The process specifically is that the county or the local heath district petitions DHS to do the annexation or create the territory, the new sanitary district, and the county or the local health department also provides plans that they feel are needed to alleviate the health hazard. The statute

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then provides for DHS to send those plans to the Environmental Quality Commission for review and the Environmental Quality Commission would initially determine whether or not those plans are adequate to either address the situation or to alleviate the problem. There's also a provision in the statute that allows the residents in the area that would be annexed or be put into a new sanitary district to propose a new alternative plan. And if they do that, then the statute provides for those plans to come to the commission to decide whether or not the alternative plan is preferable to the initially proposed plan. It's the department's view that it's probably most effective to have that kind of review function performed by the department rather than the commission. I'd advise that it's certainly within the commission's authority to sub delegate that function to the department. I am certain that the reason that it reads that it did is because back in 1973 when these statutes were adopted it was fairly common just to say that the commission shall do these things and allow the commission then to decide how it wanted to do these functions. The question comes up because of a particular petition that's been filed in Hood River County to annex certain areas near the Hood River

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Airport into an existing sanitary district, that's called the Witten Master Corners area. It's an area that's had a long time problem with surfacing sewage from inadequate septic tank systems. That's really about the only thing I have to say, expect to say there is another similar statute that provides for annexation into cities for health hazard reasons. That also has a role for the commission but it's somewhat different and we're, at this point, only asking to address the issue under the statutes involving the health hazard annexation to a sanitary district. I'm happy to answer any questions and Jonie is here if you have particular questions about the Witten Master Corners.

LYNN HAMPTON: Commissioners, questions? Judy -- Commissioner Uherbelau?

JUDY UHERBELAU: Yeah, thank you. Larry, if the statute -- and I've not read the statute -- if the statute says that the commission shall do so and so -- shall approve, shall review, whatever, where does the authority come to delegate this to somebody else?

LARRY KNUDSEN: The Oregon Case law says that there's no general prohibition on sub delegation by order or commission to the department.

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In some cases that may arise either expressly or it may arise by implication. Sometimes you'll have these elaborate situations where it will say, "The commissions gonna do this and the department is gonna do this and somebody else is gonna do that." And if you have a situation like that sometimes the courts will imply that there was a -- or they will say that statute implies that there is not a right to delegate. But other than that, the general view is that you can sub-delegate and, in fact, you do do a number of sub-delegations, probably dozens already, for an example -- excuse me. For example, the tax credits, the chippers, that function has been delegated to the department and no longer done by the commission, but there are many more examples of that taking place. It's really just a question of whether or not it's something you want to do and something you think is effective and efficient.

LYNN HAMPTON: Follow up?

JUDY UHERBELAU: You know, I'm curious. Haven't we been doing this, because this is a very technical matter? And if they come and dump it on the commission we read it and think, "Huh." Isn't the department looking at it first and giving a review? When -- I don't remember any coming before

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us before, but I can't imagine it just being dumped at this point. I would think the department had done a review and an analysis and a report. Now that doesn't happen?

LARRY KNUDSEN: Well, we've had very few of these. Over time I'm only aware of one or two involving districts and one or two involving cities. Certainly there haven't been any in recent years. Now there is a similar provision that allows for general review of plans and specifications for sewage systems as part -- or related to the MPDS or WPCF permitting process. And under that statute it merely says that the department may review and you have adopted regulations that say when the department will review and when the department won't review those plans and specifications. But you're right, it is a technical exercise and what we will do if you decide that you don't want to delegate this function to the department is we'll have to have the department review the plans and specifications and bring them to you and make a report on what the department thinks is the appropriate response. And we can do that and in fact the department has seen and made some preliminary review of these plans and specifications already.

JUDY UHERBELAU: So what we're

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talking about here is actually the department will not only review it and analyze it, but they will also make the decision?

LARRY KNUDSEN: They will communicate back to the department of human services whether or not they think the plan is adequate.

JUDY UHERBELAU: And we won't have any part of it?

LARRY KNUDSEN: No, that's right.

UNIDENTIFIED SPEAKER: So (inaudible) more of this technical review. All we're doing is saying, "Is the pipes big enough? Do they flow down hill?"

LARRY KNUDSEN: Yeah, there are two steps. One would be whether or not you think the system proposed by the county is adequate to either solve or alleviate the problem, so it really boils down to it's better than status quo. And the alternative would be -- if an alternative plan is proposed then you would have to judge between the counties proposed plan and the alternative plan prepared by the group in the area to be annexed and you'd say, "We think one is preferable to the other." That's the sum total of the exercise.

UNIDENTIFIED SPEAKER: I was going

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beyond this, but I was under the impression that now we have this mechanism of onsite treatment where you build up a three foot or a five foot sand thing and you can treat anything anywhere per cost without having to put sewers in. Does it really come down to it's cheaper for these people to put sewers in and go to the (inaudible) district then to do the onsite? Is that what it comes down to or am I wrong about this onsite being possible and even on a pile of rocks, virtually?

LARRY KNUDSEN: Well, I'm way out of my technical expertise, but certainly there is an issue of whether or not it's cost effective to -- in this case they would be just building a collector system to join to an existing sanitary system. I believe in some of the other cases they've developed what are known as step systems, if you're familiar with that term, thinking that that was preferable to the individual high tech onsite sub surface treatment systems. And part of that is cost factor, part of that is a maintenance factor, because those other systems don't work well unless they're rigorously maintained. And then they can also be a factor of the amount of space you have available. But beyond that I'll have to defer to Jonie.

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UNIDENTIFIED SPEAKER: I think what happens in these cases is they form a sewer district. A sewer district does the power for taxation. And they tax to cover the cost of putting the sewers in, so it's to everybody's advantage to connect to the sewer. So the option of putting in these onsite thing -- I mean, you can still put in an onsite system, but there's no reason to do it cuz you're gonna get a (inaudible) anyway whether you hook up to it or not. And that's what happens in these things is you just get full compliance because it's in everybody's best interest once the sewer district once the sewer district is created.

UNIDENTIFIED SPEAKER: Right now the situation is they're outside the sewer district and they're asking for permission --

UNIDENTIFIED SPEAKER: There is no sewer district in the county. In the county they're covered by -- they can have individual treatment sites; they can have septic tanks or whatever. The real problem is in the health side is -- is the health issues really show up as a non-point source problem, so you get the health condition in some local ditch, you know, where it came from. So all the county does is say, "Look, in this general area

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we have a health condition that's not acceptable." Do we ever, in terms of systems -- maybe Kent knows the answer, do we ever do what -- and I have an arterial motive for asking all these questions. Do we ever do systems whereby there's an onsite septic tank, but the black water coming out of the septic tank then goes in the sanitary sewer so the sanitary sewer can be the quarter of the size cuz it's only handling water -- there's no solids in it? Is that an alternative that's ever put in in these conditions?

JONIE HAMMOND: Yes, commissioner. This is Jonie Hammond. Yes.

LARRY KNUDSEN: And that could, in fact, be an alternative proposal in a case like this is rather than just build a collector system to go to some kind of a step system. It isn't, but it could be.

UNIDENTIFIED SPEAKER: With those systems though typically what you have to do is pressurize the mains.

UNIDENTIFIED SPEAKER: No, they can be gravity too.

UNIDENTIFIED SPEAKER: Right, but you don't take (inaudible) from septic systems and put them into concrete sewers flowing down hill.

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UNIDENTIFIED SPEAKER: Why not?
UNIDENTIFIED SPEAKER: Cuz you've got odor problems to no end, cuz this stuff is (inaudible) coming out of the septic system. So typically in those cases people look at putting them into some sort of pressurized pipes. You can use very small pipes, and they've been put in places where excavation costs are really high, places that have a lot of rock or whatever. And that kind of system -- I think one was promoted for Cottage Grove or drain, or something. I reviewed one of these once. Yeah. But they're really uncommon. They're really uncommon. So once you -- the cost is all in the sewers. Once you get the sewers in there's nothing to be gained by running the septic tanks, and then you've got to maintain them and pump them and all kinds of things. And especially -- usually what happens, as in this case, is you've got some large treatment plants in place and then you're adding on this little bit of addition that the treatment plants not gonna even hardly notice. So I mean, the way this thing works is the septic tanks go away, they rapidly go away.
UNIDENTIFIED SPEAKER: I think the underlying issue that I'm getting to is the sizing of

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that sewer line, obviously, is it's sized just to handle the 40 houses that are out there or for the, I presume, possible future density of 5,000 houses when those things go from 10 acre lots down to 1/4 acre lots. And that's been the perennial issue in the whole -- in Oregon over these health annexations is are you, in effect, permitting expansion of the urban growth boundary, in effect, without them being part -- without them going through any process to decide this is where we want to have growth and merely because of the size of the sewer that's put in the ground.
LARRY KNUDSEN: And that is part of the equation and typically these were done unlike the municipal ones you may be thinking out where that is the big issue, do you expand the urban growth boundary or what kind of development do you allow inside the UGB? These annexations allowed with these sanitary district health hazard debatement [phonetic] projects generally involve small rural residential exception areas. And so they're typically not designed to hold more load than what's in that little area.
UNIDENTIFIED SPEAKER: Well, if they're designed to head just the load there then the issue goes away.

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LARRY KNUDSEN: And the reason for that is, well, twofold. One is because of the land use implications and the second is because of the cost implications. Typically the folks in that area don't want to pay to oversize the lines.
LYNN HAMPTON: Particularly since it's kind of a forced -- are the total costs imposed on the residence when this health annexation, sort of, against their will happens?
LARRY KNUDSEN: Yes, as commissioner Williamson pointed out, once they're inside the district then they're subject to the district's assessment capabilities.
LYNN HAMPTON: And is it always the sewer district or is it sometimes simply a municipal -- or in this case, well I guess -- I'm -- I see what it would be with the city, but I'm a little confused of how it would legally run with (inaudible).
LARRY KNUDSEN: This particular statute only applies to special districts, and I use sanitary district, but as you know, there are a host of special sanitary -- special districts that can provide sanitary services. It doesn't apply to cities and counties, but there is this other statute that

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would address those issues.
LYNN HAMPTON: I have a couple issues then. Assuming that the costs of this are spread by some sort of rational basis over the users that are specially annexed -- what I hear you saying is that that's generally the cost -- the cost is generally limited to that which is adequate to serve those already there and with the -- whoever has the ineffective -- let's say you've got this area, you've got some which have ineffective sanitation systems, septic, whatever it is, and some who are fine, are they extending this only to those who are not adequately dealing with their effluent or are they extending it to the whole geographical area?
LARRY KNUDSEN: What's happened in this case and typically is they will draw lines on the map and they will isolate where the problems are and they will try to draw a line around that to add it to the district boundaries. Within that area that's added there will be systems that are obviously fading and there will be systems where at least the owners and operators will claim that they're functioning well. And that is just the nature of it. I mean, if you have a septic tank that you pump often enough it will probably work okay. But typically

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DEQ doesn't get involved in those determinations. The law, unfortunately for us, provides for DHS to make those difficult calls about appropriate boundary, etcetera. The task for the commission is to determine whether or not the proposed hardware is going to meet the requirement.

LYNN HAMPTON: And is your proposal -- I'm looking at Page 2 of your agenda item where the paragraph begins, "51% of the electors within the effective territory may propose an alternative plan. And then under the current system the commission reviews the alternative facility plans and time table and determines which plan is preferable." Are you proposing that this would also be delegated to the department?

LARRY KNUDSEN: Yes, what we're proposing is for Witten Master Corners and for anybody else that comes up until you revoke the delegation all review under this chapter, that would be the initial review with the petition, and any subsequent review that might come with an alternative proposal would be done by the department.

LYNN HAMPTON: Can you maybe make it clear for me, Larry, at what points in this process would land owners have an opportunity to go

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before an elected body and object, make their case, discuss, and have a fact finding?

LARRY KNUDSEN: There is a requirement for a hearing that is conducted by DHS. There is some -- because of some statutory changes it became unclear what the nature of that hearing is, but DHS has held at least one contested case hearing already. It may hold a second hearing or a continuation of that hearing, and so there is that mechanism for the hearing. And then again, if there's an alternative proposal filed there would be a hearing on that as well. As they have done it, DHS has held that -- the administrative law judge has been the presiding officer at that hearing. Much like you do the -

(End of Tape 1 Side 1A)

LARRY KNUDSEN: -- Of the ALJ's decision by DHS.

UNIDENTIFIED SPEAKER: If we go with your proposal, alternative (inaudible) you've got three alternatives there -- it says, "Delegated to the director or some other," if we just delegate it to the director doesn't that take care of it? The director can then say do whatever he or she wants (inaudible)?

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LARRY KNUDSEN: That's correct.

UNIDENTIFIED SPEAKER: Okay. Well, I would move that we --

LYNN HAMPTON: I think Judy has a question. Go ahead, Judy.

JUDY UHERBELAU: Yeah, I have a legal question and then a comment. The way I read this, Larry, right now the Environmental Quality Commission if we delegated DEQ has the final say. If we do not approve of the plan they're dead in the water, is that correct?

LARRY KNUDSEN: If you were to determine that the proposal would not alleviate the health problem then it would end up going back to the county and the county would have to develop another proposal and run it through the process again.

JUDY UHERBELAU: Continuing that, if we approve it and it later turns out that something is wrong with the plan and harm happens, is not the EQC at this point liable or approving something that wasn't kosher?

LARRY KNUDSEN: No. I mean, not nearly the fact that something doesn't work doesn't create liability. Also, as I pointed out before, I believe in this case -- in most cases the plans and

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specs would also be reviewed again as part of the permitting process.

JUDY UHERBELAU: So we're not the final review?

LARRY KNUDSEN: Well, not on that level of review. What we really had was talking about different kinds of plan review. This is kind of like a 5,000 foot level plan review. Is this kind of a system going to be adequate for what you're going to do? And then the part of the permitting process the department will either do a more specific review or in some cases that specific review is not done, but the local government that actually does the construction will accomplish that through its own staff and its own certified engineers. But that's when you get down to the level of whether or not this is adequate engineering.

RICH DUVALL: What's needed here is -- (inaudible) there is opposition of putting in the sewers, primarily because people don't want to move in the high density development. So that's where the opposition comes from. And so the first stage, when people have to do something, is there's usually a whole variety of less than optimum suggestions of how to fix this. And what this process here does is sort

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of filters out those suggestions. And usually people are trying to save money. People are still trying to do something so they can maintain low density. And I've been involved in these before and there's just -- it's incredible the ideas that come up by a group of citizens on how they're gonna fix this. Ultimately, like Larry says, they have to come up with some sort of plan. It's got to get approved, and typically what the (inaudible) comes down is the pretty standard technologies.

LYNN HAMPTON: And from what I'm hearing from you, and I invite anyone involved in this to comment, to some extent I'm concerned about the political rights of those people who are resided and it sounds to me like that's happening at the county level with the county proposing --

LARRY KNUDSEN: Well, that's not our issue, that's the department of health services. So really, we're sort of in the secondary role here. The department of health services is the driver for all this, because they're using police power under public health. We're not involved in that part.

JUDY UHERBELAU: I think Lynn has brought up a very important part. For example, if we are delegating to the director and I have no problem

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with it in a regular course, but if we are looking at where citizens have brought a plan and the other entity has brought a plan I think it would not be a good thing to delegate that on a political basis, having been involved with many of those things. I think when you have citizens versus the bureaucracy, two different plans, and you're telling the director to come in and approve and not approve, I think those (inaudible) should stay with the commission and we should take the heat after they do the review and so forth.

UNIDENTIFIED SPEAKER: Is that what happens? Do you -- do two of them come to you or does DHS give you one and say, "Is this okay?"

LARRY KNUDSEN: Well, initially you get one. In some cases if 51% of the voters in the area proposed to be annexed come up with their own plan then there would be two. And you would judge whether or not the alternative is preferable to the original, not whether or not some third thing would work, but just A or B.

UNIDENTIFIED SPEAKER: Could I ask a question before you leave this point? If we in fact had to make a decision between two plans is there any appeal to the commission in this process?

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LARRY KNUDSEN: The way it's set up now that appeal is through DHS. Essentially DHS incorporates what you do and --

JUDY UHERBELAU: Before it gets to us or after?

LARRY KNUDSEN: After. You give your certification, if you want to use that term, to DHS, and DHS then moves with it. So the public process is first. On the county level the county level the county holds hearings, did ordinances, etcetera, to get this to DHS. Then DHS holds a contested case hearing, reviews everything, and then that would go up through the process. Right now there isn't a public process in front of the commission.

LYNN HAMPTON: Okay, so what I'm hearing you say is that the public process is for discontented land owners and will take place, obviously, at the county/city level, whoever is the initiating body under this statute, and then at the DHS level. And that essentially what happens with the involvement of this department is, or with this body, is to stamp the adequacy, scientific adequacy if you will, of the proposed plan, whether they're by the governing body or whether they're by the land owners, if they object?

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LARRY KNUDSEN: That's right. And it's basically a ministerial process and that's why we thought it might be something that you would want to delegate.

UNIDENTIFIED SPEAKER: And could I just comment on this? I don't see the date in here for the original statute, but the intent of this was to have the Department of Environmental Quality/EQC give the technical opinion on functioning onsite systems. Historically, and I think Jonie and/or Larry would tell me, the onsite program ever since it became -- the state sanitary authority was one of the first things included in the formation of DEQ. So I suspect the reason for your involvement in this goes way back in time when everything having to do with the onsite program either had to be decided at the commission level or with the director. Now over the years some balance has been applied to that as the program has grown and it obviously didn't make sense, in some respects, to have highly technical decisions being made by a volunteer commission and/or even the directors. So this is a vestige, I think, of some of those earlier years where the intent was to decide those technical issues at the higher level than is probably necessary now in the program.

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LYNN HAMPTON: Well, I feel comfortable now that we've sort of hashed all that out -- I feel comfortable following the recommendation here that we delegate this authority to -- is it to the director that you're suggesting is the best way to do this?

LARRY KNUDSEN: That's fine, yes.

LYNN HAMPTON: I feel comfortable with it for all cases, as this comes up, having in mind that there's still plenty of public bodies and avenues for the political parts of the decisions to get made, cost allocation, etcetera, and that the intent of the statute is that DEQ is basically passing judgment on the adequacy of the proposed system.

UNIDENTIFIED SPEAKER: And madam chair, I would just note since commissioner Blosser alluded to it, there is -- there remains, irrespective of your decision on this matter, an unresolved tension, for lack of a better term, between land use planning and the extension of sewer lines out to these areas. And the point that commissioner Blosser made that the concern has always been if a line is extended, ultimately, what does that do to development overall? And there is an exception process that is

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required on the land use side, and that's a whole other conversation that typically doesn't occur with this commission, I don't think it does anyway. And I think the question that Commissioner Blosser might have been raising is might there be an opportunity for a commission to have a conversation about those things if you retain this process? Obviously you can talk about anything you want to, but that's not really the intent of this approval here. This is just technical. It's not really about the exception process and land use planning.

LARRY KNUDSEN: And actually those issues have been discussed in the past. They were most recently discussed when there were some amendments to LCDC's rules dealing with this issue, their rules under Goal 11. And it may be an issue that will need to be revisited shortly because of measure 37, which has -- we sort of had a constructive balance that may no longer be functioning, depending on how much residential development occurs.

BILL BLOSSOR: I'm gonna move 3, delegating it to the director. But then I was gonna add a little, "In so far as the proposed solution is sized only to serve the people that are having the

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health annexation problem." There is this capacity limitation put into it. So the tent being that if they were gonna put in a line to conserve ten times as many people then that's a policy issue that I would rather have come to the commission personally. But if they're just gonna take care of the people that are having the problem, their size and system just to take care of them, then I'm just gonna -- I would propose that we delegate it all to the director.

LYNN HAMPTON: And so you're talking about that language on Page 3, which reads, "The commission may delegate the pending and any future review and approval or denial of plans and schedules under ORS 431.705 to 760 to the director or some other designated staff person"?

BILL BLOSSER: Yeah, to the director with the condition that --

LYNN HAMPTON: And then I have some proposed (inaudible).

BILL BLOSSER: -- the proposed solution is only serving those that have the health annexation issue.

LARRY KNUDSEN: Just for clarification, cuz I'm gonna actually need to write a

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delegation order because we need to move this on faster than what the minutes would provide -- that would, I assume, mean that if there are undeveloped properties within the annexation boundary those could be developed consist with acknowledge plan and land use regulations, correct?

BILL BLOSSER: Sure.

LARRY KNUDSEN: Yes, okay.

BILL BLOSSER: (inaudible).

LYNN HAMPTON: Well, (inaudible) do you have that in sufficient language that we could precede, Larry?

JUDY UHERBELAU: With his -- with Bill's additional?

LYNN HAMPTON: With that proviso? It's been moved that we accept Paragraph 3 under EQC action alternatives with a proviso limiting so long as the proposed plan or schedule is limited in capacity to existing users or known potential users, I guess, in the area affected. And I would guess Larry Freidy characterized that in another language. Is there a second for that motion? Is there a second? Well, then the motion fails. Nobody is seconding a motion like that. Do we need to discuss a different way to express this?

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BILL BLOSSER: Well, I'll move as it is with deleting that last part about the designated staff member, (inaudible) recommendation 3.
LYNN HAMPTON: Without a limiting provio?
BILL BLOSSER: Right.
LYNN HAMPTON: It's been moved that the language set in Paragraph 3, eliminating some other designated staff person, without a proviso, that we approve that language delegating all pending and future review of these plans and schedules to the director. Is there a second? Okay. I will second that motion. And so we need to decide, vote, on this language. Those in favor of delegating the pending and future review, or denial of these plans and schedules under the statute to the director, indicate by saying, "I."
IN UNISON: I.
LYNN HAMPTON: It's two. Those opposed?
JUDY UHERBELAU: Opposed.
BILL BLOSSER: No.
LYNN HAMPTON: It fails. So think of something else, Larry.
BILL BLOSSER: Or we can leave it

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the way it is.
UNIDENTIFIED SPEAKER: Well, madam chair, perhaps it would be helpful if the commissioner members -- you could discuss among yourselves kind of where -- we obviously know what commissioner Blosser was thinking, and get a feel on if others are not comfortable delegating it all or -- we could keep trying different language options, but it might be helpful to know what people are thinking.
LYNN HAMPTON: I need to take a break before I can discuss anything comfortably. So yes?
JUDY UHERBELAU: I would just say that even if this fails, and that's fine, that I would expect as a commission, that the department, the director, whoever, is doing the analysis and doing a report before it ever comes to us, because I trust that's what you're for. I don't think they expect us to spend hours and days and weeks trying to figure out these plans when that's not our field of expertise.
LARRY KNUDSEN: It may be -- maybe when we come back -- let me think about this, but I think this problem is already taken care of, because I don't think the department can actually permit the

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extension if it's inconsistent with the existing, acknowledged plans. I think what Commissioner Blosser is concerned about is that for municipal health hazard annexations those are exempt from the requirements that require that reconciling of the land use plans with the development. But I don't think that's the case here, but maybe we can think about that if you want to take a break and I'll address that when we get back.
LYNN HAMPTON: Five minutes. I'll be right back.
(Break)
LYNN HAMPTON: Okay, we're back after our recess and, Ken, you were gonna say.
KEN WILLIAMSON: Well, I just wanted to explain my opposition to Bill's motion. When you put in these utilities these things are always designed by an engineer, and often engineers will determine that the most cost effective way is to put in over capacity. There may be reasons to put in over capacity, and I just don't think that we should be restricting those decisions by the professional engineering community not to design these things how they consider to be the best way to do it for whatever client that they have. So when these clients

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come to some professional engineers their responsibility to give them back a plan that they think is gonna best meet their needs under whatever constraints that they have. And so I just don't think that that's a place where the commission needs to be going. Now there's a comfortable sort of thing here. Now if you look at field permits of the Army Corp of Engineers, and then the Division of Lands basically judges on those. Well, all of those things come to the DEQ and say, "Well, tell us whether these -- what they're proposing here for taking out gravel out of the stream or whatever has a problem with water quality?" And the DEQ responds to that. All that stuff doesn't come to this commission, because the point of contact for people trying to get those permits to take gravel, or put in dams or whatever, all that is by the division of state lands. So that's where they get their public testimony. So none of that stuff comes to the commission, but the DEQ does it all the time. And it seems like this is a similar sort of system is that the point of contact is really the health services. They get involved, they balance out public need versus private rights and we're just trying to provide some sort of judgment about whether these things are technically feasible. So that's how

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my understanding of that.
LYNN HAMPTON: Larry, I'm sorry to interrupt you but I just wanted to note that we will have public forum at 11:00. If you're here to speak at the public forum Tanesha can direct you where the signup forms are and be sure and do one of those so that we know that you want to speak. And I'm sorry, Larry, go ahead.
LARRY KNUDSEN: Yeah, I was going to make, I guess, two points. One is that the desirability of the system from a land use point of view, probably is not in the commission or would it be in the department's prevue to make anyway. The decisions are statutorily very narrow, it's whether or not it's adequate to Aleve the health hazard or whether or not it's preferable to alleviate the health hazard. So that would be the first point. The second point would be that fortunately that doesn't mean that the land use consideration isn't subject to review or that somebody doesn't get to make that call. I think that does happen. I think that happens with the DHS decision. I think a DHS decision that approved a system that was inconsistent with land use requirements could be challenged on that basis, either by a property owner or somebody nearby, or even one

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of the interested agencies. So I think there is that role, but I guess I'm not certain that it would be the commissions' role. And then I guess if I can add a third point is, the way we're currently set up there would be a check built into the process anyway and that's because the local planning authority, either the city or county or both if the area happened to be inside the UGB, would have to -- certification that they're requirements are met would be part of the approval of the plans and specs being done by the department as part of the (inaudible), the detailed plans and specs. That I think gets to a part of the issue that commissioner Blosser was raising -- not in -- it doesn't address the whole issue, because the only thing that would say is that it isn't authorizing service to some are that isn't currently authorized to develop in that fashion. So, if for example, it was designed to provide residential level collection for an area that isn't designed for residential, or isn't planned I should say for residential use, then presumably the county couldn't certify the construction under the land use compatibility requirements. That doesn't address entirely the issue. But also this particular process does not involve UGB amendments, which is a part --

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or a potential part, of the health hazard annexation debate for the municipal statutes, which is one of the reasons we didn't include that process in this recommendation for delegation.
BILL BLOSSER: Just -- can I respond?
LYNN HAMPTON: Go ahead. Yes.
BILL BLOSSER: If -- if the -- the -- if the issue -- the annexation is coming up within a UGB, then it's not an issue. That is taken care of by other things. I'm not worried about that. If the health annexation is part of a UGB amendment I'm not worried about that cuz that's taken care of by other things. But my recollection is that the majority of these are neither of those. They're isolated things out someplace where a pocket is gonna be created and a line will be run in to connect to another system. So my only issue was I didn't want us to, by accident or whatever, cause a problem for the land use plan of that county and the cities around there by our approving something for more capacity then was needed to solve the problem. You start out saying that we certify it as adequate to alleviate, and so I was just trying to put words around adequate to alleviate being adequate to solve that problem and

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not solve some other imagined problem like we might eventually want to put a subdivision of condos out here or something; that imagined problem. So that's why I was trying to eliminate to make sure that we didn't accidentally, as a department, create another problem under the guise of solving health problem.
STEPHANIE HALLOCK: Madam chair, could I interject something here?
BILL BLOSSER: That's all I was trying to -- just to make sure that we weren't accidentally. And I don't agree with Ken's comment cuz I've just seen too many situations over the years where -- particularly with sewers, the cost go up an inch and diameter of a sewer, or two inches or three inches, is very, very minimal. And so virtually always the engineer will say, "Well, you could get by with a six inch sewer, but gee, just for another buck you can go to an 8 inch and you have double your capacity." And a lot of people say, "Well, gee, okay let's double it." Well, you've just thereby created the potential for a major land use problem in that area. And so it's not a simple engineering issue. There is a capacity needed to serve those people and it's a four inch or a six inch or whatever line, and upsizing it to eight or ten may be very cheap, so it

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may be "cost effective," but it creates an eventual major potential problem for that whole area. So that's why I was saying adequate to just solve the problem, cuz the engineers can tell you what will be adequate to solve it and that will be it. Anyway, that was my thinking.

STEPHANIE HALLOCK: Madam Chair, my recommendation is that you reject our recommendation to you. You are clearly not comfortable delegating this for whatever reason. We thought we would be sort of helping you not have to deal with a technical issue that you might not want to deal with. There have been, as were pointed out, maybe two of these in the last ten years. I don't even remember when the last one was. We would probably be taking this much time for you to address one of these issues if it came to you, and so rather than to continue to agony my recommendation would be that you just simply reject our proposal to delegate it to the department.

LYNN HAMPTON: But it's not agony. We're enjoying this very much. Ken, you were speaking.

KEN WILLIAMSON: That's the problem. But it seems like to me that these sewer districts, once they're put into place they're a legal entity.

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They got a right to put whatever pipe they want into the ground and the only thing we can do is set some sort of minimal requirement, and minimal requirements are that they have to alleviate the condition. So I don't think anybody can tell them what pipe they can put in the ground.

LYNN HAMPTON: What you're saying is that the actual standard itself, which is alleviating the condition, operates as a check on the zealous overdevelopment or may?

BILL BLOSSER: As a minimum condition and they can -- if they're dreaming about putting in condos some way down the line they can put as much sewer pipe in the ground as they possibly want, and it just seems like, to me, it's not our obligation to get involved in that fight. Now clearly people have to get a permit to do this kind of development. They have to fit a land use law, but it's not this body that's getting involved in it.

LYNN HAMPTON: Commissioner Uherbeleau? Thank you, Ken.

JUDY UHERBELAU: Yes, I just want to say that I still would not vote for Ken or for Bill's, and I also won't agree with Stephanie, because I think there is -- there's room and should be that

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the department, the director, or whatever, should be -- we should delegate to them when it's just a straightforward, "Here's the plan. Does it fit?" But when there's two plans and because we're not allowing that -- when the electors themselves have brought a plan in opposition and you're looking at two plans, I think that the commission should deal with those, because even though Larry has said the DHS they can go to them and have a hearing, the DHS to the electorate is still the elitist bureaucracy, and they do not feel or think many times that anyone is listening to them. And so I think that's where the commission can come in. They may feel a little differently about that. So right now the two proposals -- I can't vote for them. But I don't like Stephanie's either, as I said, cuz I do think they should do the ones in the regular course.

LYNN HAMPTON: Well, I'm sensing -- go ahead, Ken.

KEN WILLIAMSON: If there were two plans that come -- I mean, the way this thing is set out, the plan that would have to be looked upon is the 51% plan. I mean, the people that they decide within a sewer district, they get -- they do the petition, they say, "This is how we want to do it."

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And DEQ has to decide whether it's acceptable or not. DEQ wouldn't choose one plan over the other. They don't have that --

JUDY UHERBELAU: Well, they compare. They determine --

KEN WILLIAMSON: -- No, they don't compare either one of them. They just decide --

JUDY UHERBELAU: --They determine which of the ones is preferable. Read the language in the thing.

KEN WILLIAMSON: -- But they still don't determine it.

JUDY UHERBELAU: Whatever.

LYNN HAMPTON: What you're saying is they would make that indication back to DHS, and DHS would make the final decision? Well, I'm sensing complete lack of consensus on this issue, and I would recommend that we table this for a future occasion, and maybe we'll be better able when you bring us, or if you bring us, when Master Corners should get to that point. We'll have some direct experience with the issues and maybe we can decide this for future.

BILL BLOSSER: Since we haven't had one of these in 10 years.

LARRY KNUDSEN: We will, in fact,

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bring it back to the next commission meeting cuz DHS is waiting for a decision.
JUDY UHERBELAU: Then we can all lobby to know, but in the meantime.
LYNN HAMPTON: Is that acceptable to everyone for the moment?
BILL BLOSSER: Why does DHS need a decision? Why don't they just send the thing to us cuz we've got an existing procedure?
LARRY KNUDSEN: Well, they have and we were just asking you whether or not you wanted to make the decision or not, and since we'll --
BILL BLOSSER: We didn't make a decision.
LARRY KNUDSEN: -- next meeting we'll have you make a decision.
LYNN HAMPTON: Well, do I need to move to table this or this passes without action by us. Okay, having made -- Agenda Item D, is that where we are? Wait, I will invite them up and I will make one more reminder to (inaudible) Sewer here for the public forum. That will take place at 11:10 as it says on the agenda, with apologies to Andy Ginsberg, David Callure, and Mary Anne Fitzgerald, we will interrupt their presentation. Having delayed

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them, we will interrupt them at 11:10.
STEPHANIE HALLOCK: Madam Chair, only one caveat on that. If anyone signs up to speak on the agenda item that these people are going to present, they have to do that after you've taken your action, so we'll have to redo the --
LYNN HAMPTON: Cuz the public comment is closed.
STEPHANIE HALLOCK: -- Right, you'll have to look at the (inaudible).
LYNN HAMPTON: And I wanted to say, after discussion with Helen, that if anyone is here to speak with -- is it Item N, Helen, that we're talking about for tomorrow?
HELEN LOTTRIDGE: yes.
LYNN HAMPTON: Item N is an agenda item for rigid plastic. And there will be an opportunity for comment tomorrow, because public comment is being held open until the -- at the -- to the presentation of that item. If you are here today to speak to this, but can't be here tomorrow please indicate that on your form, so that we'll give you priority. If we don't have enough time we'll give priority to those people who can't be here tomorrow. All right, Action Item D. I'm sorry, yeah, D; Rule

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making, ozone maintenance plan.
ANDY GINSBERG: Chair Hampton, commissioners, for the record, my name is Andy Ginsberg. I'm the air quality administrator for DEQ and with me is Mary Anne Fitzgerald who is in the planning section in air quality, and we're here to present Agenda Item D, which adoption of the Portland/Vancouver and the Salem ozone maintenance plans and supporting rule revisions. As you probably recall, in December we had an information item on Syp [phonetic] development on ozone and particularly on the ozone maintenance plan. So you've got a lot of background and we were going to avoid repeating most of that, but if you have any questions, things you don't remember from last meeting that you'd like to raise we can answer those. And so Mary Anne's got a somewhat abbreviated presentation for today since we did that.
MARY ANNE FITZGERALD: And you should have copies. For the record, I'm Mary Anne Fitzgerald from the air quality division in Portland. I'll try to speak better into the microphone, and it looks like we're getting the presentation up and running. I --
UNIDENTIFIED SPEAKER: Can you speak

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up just a little.
LYNN HAMPTON: Let's just make sure there's amplification on that mic. Okay, thank you.
MARY ANNE FITZGERALD: Is that better?
LYNN HAMPTON: No.
MARY ANNE FITZGERALD: Okay, shall I proceed?
LYNN HAMPTON: Please do.
MARY ANNE FITZGERALD: It sounds like the microphone is working now as well. Well, as Andy just said, the last time we came before you we gave a background on how we develop air quality plans and some of the more technical details of the planning effort that we did. So I just wanted to recap -- recap, first of all, that there are actually three components to the thick packet that you have before you today. We have a Portland/Vancouver/Interstate air quality maintenance area in our ozone maintenance plan. We have a Salem/Keizer area in our ozone maintenance plan and many, many rule revisions, including fairly significant changes to the employee commute options program, changes to Portland's industrial emissions management program. And we're correcting the spelling of the name

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of the city Keizer, which we are needing today. So trying to take care of some housekeeping changes as well. On Portland/Salem as well as Medford were considered non-ataman in the 1970's because of actions we've taken over the last 30 years. Medford is in compliance with the standards, and Portland and Salem achieved compliance in the 1990's. But this is Salem's first maintenance plan. We've never -- it's still on the state books considered a non-attainment area and we're proposing to change it to a maintenance area. And Portland was re-designated to a maintenance area back in the 1990's and we are continuing that planning process by keeping the strategies in place. Now the reason why we're doing all this is because of protecting the public health. Ozone is a photochemical oxidant and it primarily affects the respiratory system. EPA has changed the ozone standards several times over the last 30 years from one hour averages to eight hour averages and different levels. But the main reason is to try to protect people with respiratory illnesses and we don't want to aggregate any asthmatics and cause increased emergency room visits. EPA is currently redoing the standard and I'll go through that in a minute when I get to a couple more slides from now. And just as a reminder,

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ozone is not directly emitted into the atmosphere, but it's a chemical reaction, and that's why it needs the presences of sunlight and heat. So we focus on emissions of volatile organic compounds and nitrogen oxides. And in the presence of sunlight and at least 90 degree temperatures it forms ozone. So that's why hot, sunny days are when you're more likely to see the summer time smog. Now this slide I was not able to get into the presentation, but yesterday afternoon I gave you an updated version of it that is in your packet. And I just want to explain a couple of things on here. Over the last 15 years the ozone air quality -- well, I think I'll just continue the thought. I know at least you have the handouts in front of you and for members of the audience, I have copies of the presentation on the back table. For the last 15 years ozone air quality has declined and because f the way EPA averages the three year average of the fourth highest value, it's remained relatively stable in the last five years.

STEPHANIE HALLOCK: Mary Anne, I think it's fine to just proceed from the written copy. Everybody's got it and they're available for the audience. So don't worry about the --

MARY ANNE FITZGERALD: Thank you,

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Stephanie. The -- where EPA is proposing to change the standard to is in the range of .06 to .08 parts per million. And that is kind of where we sit right now. So we know that EPA won't propose the actual number until June 2007, and they're scheduled to adopt a new ozone standard in March 2008. And so they could keep it the same, they could lower it. We don't know yet. But I just want to show you that right now we're comfortable below the federal health standard, but because recent health studies have indicated that people still have health problems at lower numbers EPA may revise this standard in the future. But those four cities are the four areas where we have the ozone monitoring sites in the state of Oregon, and that's where we think most of the problem is. So the current maintenance strategies in Portland -- actually this is an abbreviated list. There are many, many rules that we have on the books to deal with reducing volatile, organic compounds and nitrogen oxides. We adopted industrial emission controls to lower volatile, organic compounds from existing sources back in the 1970's and those rules continue today. We have a new source review program that issues permits, and for the larger sources we have an emission management program that carefully

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monitors what emissions we would add from newer expanding sources, and whether the air shed can handle it. We of course have had a vehicle inspection program since 1975 that continues to keep the cars clean in the Portland and Medford areas. In Portland we have what's called Stage 2 and barge loading rules. These deal with gasoline stations and gasoline storage facilities, and also transfer operations. So not only does it protect public health from DOCs, but it protects -- or reduces benzene emissions as well. That's been a very effective program in the Portland area. We have transportation control measures in place to try to reduce motor vehicle emissions to encourage people to not drive alone, but to take other alternatives like transits and walking and riding their bicycles. We have a couple of Portland specific area source control rules on the books, most notably, lowering the DOC content of certain spray paints and requiring auto body shops to have high volume/low pressure appointing systems that emit less. And we have had over the years an extensive public education and outreach program. Not only the issue air pollution advisories to tell people to not paint, to drive less, not mow the lawn on clean air action day -- or air pollution advisory days. But at one

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point things like a lawn mower buy back program that encouraged people to buy electric or push lawn mowers instead of gasoline powered engines. So in the next slide, in the Salem area, because they have not had the maintenance plan in the 1990's there are fewer rules on the books that are considered strategies. But because Salem is located down wind of Portland, all of the strategies that reduce emissions in Portland also benefit Salem's air quality. So I did mention federal engine and fuel standards in Portland, but you'll see in a couple of slides that motor vehicles are a large source of emissions in the Salem area. And these cleaner cars, cleaner fuels have done a lot to clean up the air in Salem as well. On the next slide, on the pie charts, we went through this pretty elaborately in the December meeting where we talked about the different sources of pollution and I just want to summarize that for volatile organic compounds it's about half of the emissions are vehicles, whether those that are on the road and those non-road engines like your lawn mower and construction equipment. And about half the sources are area sources which are those that are associated with people or small business or other small diffused sources, including open burning and field burning, and other burning

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types activities. And that is true is VOC and both Portland and Salem. If you look at nitrogen oxide emissions, the vehicles, both the on road and off road vehicles are the major contributors to these types of pollutant. Point sources are the industries -- not only industries, but any large point sources that we have at DEQ. And point sources represent 2% of the DOC inventory in the Portland area, 4% of the Knox inventory. And in the Salem area, basically 0%. It's less than half a percent of the VOCs and 2% of the point sources in 2002. So on a relative scale, the industrial sources are much smaller than some of the other ones.

LYNN HAMPTON: Commissioner Uherbelau?

JUDY UHERBELAU: I have a question, thank you. In the top ten sources in both of (inaudible) is graphic arts -- graphic arts how you use it must be different than what I think of as graphic arts, so can you explain to me what that is?

MARY ANNE FITZGERALD: They're mostly the smaller print shops that use the inks -- the larger shops, like the Oregonian --

JUDY UHERBELAU: You're talking about print shops. You're not doing --

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MARY ANNE FITZGERALD: -- Not the home calligraphy types of things, but printing operations. Yes, but the larger ones would be under permit. They'd be considered the point sources. Btu all those small little corner print shops add up. So as you jump ahead here, on the Portland VOC growth projections three out of the top five are the area sources, and that's why we're so concerned about the summertime painting projects, the driveway refinishing, the deck projects and those are projected to grow because they're related to population. That's who we project the emissions through population sources. Consumer solvents is another group. All those sprays, the cleaners that you use around your house, they can be significant. EPA is considering rules that would deal with both architectural coatings and consumer solvents, but those rules are still -- they haven't been proposed yet. But nationally it's better because these types of -- these categories are a problem everywhere in the country. It's not just Portland.

(End of Tape 2 Side 2A).

MARY ANNE FITZGERALD: So generally the manufacturers prefer if the federal government does -- if we don't need additional controls in Portland we have not requested additional controls on

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these sources yet. But I know at your last meeting when we were talking about things that we could do to improve air quality, area sources was one of the things that you asked DEQ to look at.

JUDY UHERBELAU: Thank you. In the Salem area, when you talk about open burning agriculture, there's a bill out in front of the legislature about banning that, but do have a position on that, DEQ?

ANDY GINSBERG: Commissioner Uherbelau, we haven't taken a position on the field burning statute. We're providing technical information to all parties that are discussing that particular piece of legislation. We do have a bill that we have introduced, Senate Bill 235, that would bring agriculture under air quality regulation for the firs time in Oregon, but it doesn't specifically address field bringing. That's a separate bill that DEQ didn't --

JUDY UHERBELAU: But it would, in a sense, have an effect on that, right? In the past?

ANDY GINSBERG: It would. The one thing to think about thought is in terms of this chart where we're looking at top sources for ozone,

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we're talking about summertime emissions, and field burning -- the concerns around field burning typically are around the smoke impacts from, you know, when burning occurs in a day that -- and the meteorology changes and it happens to impact an urban area. And that's more of a particulate or fine particle issue. And typically the field burning does not contribute to violations of that standard because it doesn't occur in the wintertime when fine particle levels are high. It does -- we have said that field burning can create some short term health concerns, especially for people with pre-existing heart and lung conditions. So there are potential health effects. They're not all that well quantified, but it doesn't necessarily contribute to violation of federal standards. So it's a complicated story that we're trying to convey.

MARY ANNE FITZGERALD: And the other thing is that on days you would likely form summertime smog, they wouldn't be allowed to burn because of the air conditions. Okay, now I wanted to get into the more current sides that we have not gone over yet and talk about public outreach and the public comments that we have received. We did hold several informational meetings with local governments in the Portland and the Salem area. Particularly in

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the Portland area we've reached out to the transportation management associations and others to make sure that they understood that we were proposing changes to the employee commute option rules and the other rules on the books. We did have a resolution adopted by the metro counsel that supported the plan that we proposed. And we had a formal public comment period from June 1st through July 13th. We extended it because of the holiday season. And we really had very few people come to the hearings and very few people testify. But attachment B in your staff report has a summary of the various comments that we received and the department's response to comments. So on the next slide I just wanted to give you a quick overview of the comments that we received. And as far as the numbers go, a number of citizens asked us to not change the control technology requirements for new sources in Salem. They were very concerned that it was a slippery slope and that the air was clean, we want to keep it that way, so please don't change the standards for new sources in Salem. But we also received comments from industry groups in the Salem Chamber of Commerce that said, "The air is clean. The air can handle new industrial growth, so please make the rules in Salem equivalent to the

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rules in Portland and please allow new sources to locate here fairly easily." So that was something that DEQ -- we considered both sides of the story. We looked at the air shed of the sources of pollution, and considering that the industry is a very small percent of the emissions, and we did keep our proposal to change the industrial standards for new sources from the lowest achievable emission technology, LAER, emission requirement, to back the best available control technology, which is similar but not identical. We spent quite a bit of time going into the difference, and I wasn't planning on going into it now unless you want me to. Good. The other area that we received comments on was on the growth allowance in Portland or the growth limit. And in the 1996 plan, because we were still considered a non-attainment area, we had an emission offset requirement for the Portland area that limited industrial growth so that no new major sources could come into the Portland air shed, unless they off-setted with an equivalent amount of emission reductions elsewhere. But in the 1996 plan we did set aside a certain amount of tons of volatile, organic compounds and nitrogen oxides to accommodate new growth without having to find the reductions

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elsewhere. That program is still in place. We still have tons of pollutants left within the growth limit, but in this plan we proposed to enlarge it to 5,000 tons for both volatile organic compounds and knots. We received one comment that was opposed to using any growth allowance in Portland or anywhere, and we received several comments from industry groups that felt that it was reasonable and that it should be adopted as proposed, or even enlarged. So again we looked at both sides of the argument, we looked at the modeling. We looked at the air shed capacity and felt that it was reasonable to continue that approach. And so we recommended adopting the rules, as proposed. And the third significant comment was from the Western States Petroleum Association talking -- or asking about the impact of the bio fuels legislation in Portland on the air shed and whether the air shed could handle the increased emissions, particularly from the use of ethanol in the summertime. We did a quick calculation last summer and determined that it would not have a significant effect on the air shed, just based on the emissions and our calculations. We recently completed some modeling that we haven't quite written up yet, and the modeling shows that the bio fuels will not have a significant impact on air

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quality. So we did look at it and decided that we didn't need to re-analyze the maintenance demonstration, that we were still gonna maintain air quality standards even with the bio fuels mandates. So we did receive other comments. Like I said, they were all summarized in Attachment B. So if there's any questions I'd be happy to answer any more on any other comments.

BILL BLOSSER: I have one question. In the staff -- is this the right time?

LYNN HAMPTON: I think so unless there was something else you needed to cover. Are you done?

MARY ANNE FITZGERALD: I was just gonna talk about Next Step, so I was just gonna wrap it up if you want. You know, we're recommending that you adopt the plan and this thick packet of rules. And following ECQ action we will be submitting this to the US Environmental Protection Agency as an amendment of Oregon's state clear air act implementation plan. The two things of the emerging issues, you know, where we're not sure whether we'll need to bring this plan back to you in the near or far future. There was a court action in December where the courts essentially vacated EPA's ozone

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implementation rules. And we base this plan on the best information, on the best rules that we had available at the time, and we addressed all the EPA requirements as they were in place. There were a couple of little details that are very technical in terms of or conforming transformation plans with air quality plans and with contingency plans. We think we're okay but we're just waiting for EPA guidance, but EPA, I figure, will take a long time before they address the court case and come out with guidance. So since this plan is due in June, we're recommending that you adopt it now and if we need to revisit it we'll bring it back, based on what we know. And then the second thing I already pointed out is that EPA is considering revising the 8 hour ozone standard. And depending on what they do with the standard you may need to look harder at some of the sources. So that's it.

LYNN HAMPTON: Commissioner Blosser?

BILL BLOSSER: I just had a clarification. Back on Page 12 of 15 of your staff report you -- extra story on Page 11 that lists how our program is more strict than the federal program. And there's one, two, three bullet items. And then at the very last part of this says some people commented

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that we should defer to the minimum federal standards. And I've referred to commenter number 8 and comment number 8. And I go look at comment number 8 and I don't see that in the comment. The comment just says, "Portland/Salem area should be consistent with the areas attainment designation." It doesn't say you should go back to the federal standards, so I'm just wondering --

MARY ANNE FITZGERALD: Okay, that's a technicality and when EPA wrote its ozone rules --that's how EPA wrote it. It said that if an area -- see, under the federal rules the entire state of Oregon is considered attainment, therefore we should be following attainment area new source review. And so that's what that commenter meant by that proposal.

BILL BLOSSER: In code it means --

MARY ANNE FITZGERALD: Yeah, I'm sorry.

BILL BLOSSER: Okay. Looks good. But what I'm confused at is one of the commenters was commenter 11, Northwest Pulp and Paper, and then I look at other comments that are also attributed to them and they're saying, for example, "DEQ should adopt the maintenance plan as proposed." And then the second one, "Industrial growth allowance is

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appropriate and should be increased or adopted without change." And a third one, "Backed is," -- that one is already -- but anyway, at least those two seem to be saying, "Hey, everything is okay. Adopt it as you have it." So I'm just wondering if I'm just confused. Do you know a good explanation for that?

ANDY GINSBERG: Mr. Blosser, I believe the commenter was saying that what we have proposed is more stringent than federal. In fact, we could relax our current program because of the way EPA had re-designated the whole state to attainment and changing from the 8 hour -- one hour to the 8 hour standard. So -- and what we proposed was more stringent that. But I think they were saying don't go anymore stringent than what you proposed. What you have is acceptable. It's what we had in the past. You could have relaxed it some. What you have is acceptable, stay with that and don't make it more stringent.

BILL BLOSSER: Okay.

ANDY GINSBERG: That was the overall gist of the comment letter.

BILL BLOSSER: So in summary, the major relaxation here with quotes around it is that you're going to allow permitting of new sources in

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the Portland area under this 5,000 ton rule and 1,000 ton increments, right?
MARY ANNE FITZGERALD: Correct.
BILL BLOSSER: And then you're gonna go from an LAER to a back in Salem, right?
MARY ANNE FITZGERALD: Right.
BILL BLOSSER: So I had a question. What's the magnitude of the impact of the employee commute program?
MARY ANNE FITZGERALD: The employee commute changes --
BILL BLOSSER: I mean, do you have any sense of -- does this translate into how many tons?
MARY ANNE FITZGERALD: The changes to the employee commute option would actually cut the number of employers that are covered by this requirement.
BILL BLOSSER: Cuz you go from 50 to 100?
MARY ANNE FITZGERALD: (inaudible) amount. In reality, we don't have enough staff to deal with all of these employers and we thought it would be more effective to have a smaller universe and do it well then to have a very large universe

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and not be able to handle it. And so we projected no changes and emissions. It's essentially going to be the same program that we have today. Some of the real changes cut out some of the loop holes, like if an employer claimed an exemption we never went back and checked up on that. So now we'll be asking the employers to verify, through a written statement, that they still are exempt from the program, so that we'll have a little bit more oversight of the sources or the facilities that are left in the program. But, no, we're not projecting any change at all.
BILL BLOSSER: So this thing is sort of quasi voluntary at this point?
MARY ANNE FITZGERALD: We've enforced once.
BILL BLOSSER: One, okay.
MARY ANNE FITZGERALD: And that was a major buzz in the community. I remember a few facilities really talking about, "Oh, no. They're catching on."
BILL BLOSSER: So how many business out there you --
MARY ANNE FITZGERALD: About 1,200 are regulated now. I thin it will be cut in half when we change.

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BILL BLOSSER: So you'll go to like 600?
MARY ANNE FITZGERALD: Something like that. (Inaudible comment). Yeah, well we figure is that 85% of the emissions -- I mean, the emission reduction credit -- see the companies still have to report. Right now they're reporting every year. We're proposing to change it to reporting every other year, because the data doesn't change that much from year to year. So we know that 85% of the emission reductions come from those larger sources with the 100 or more employees. They're more likely to provide the annual bus passes. They're more likely to encourage carpools. And it's to their advantage to have alternate ways for their employees to get to work. So we think that the effect will be the same. We don't think that they'll be a drop off and people taking commute options. But we think that administratively, the rule changes that we have proposed better reflect how the program is operated.
BILL BLOSSER: But that all looked pretty positive. It made it simpler. You had fewer people to regulate and get about the same impact. I mean, it's like --
MARY ANNE FITZGERALD: Right.

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Right. And early on we did talk to the transportation management association who did not want us to reduce the number of employees covered by this rule, but they understood it was a function of resources. And they would prefer that we have more resources to run the program, but I know the state of Washington has similar requirements and they have many more employees than we do to run the program.
BILL BLOSSER: So if you look at the big variable in all this it's really -- the efficiency of knots [phonetic] emission from cars, primarily, and trucks and the control of the EOC from paints -- I mean, if you really look at the gorillas on the block here, right?
MARY ANNE FITZGERALD: Right.
BILL BLOSSER: And so we can make cars more efficient and they're doing that every year. That's something that we can actually -- you know, mechanical engineers are pretty good at. And then hopefully society will move to more water-based paints and bring the other one down. So it looks to me like we're on the right trajectory here, as far as controlling the ozone.
MARY ANNE FITZGERALD: And we do feel that, you know, we call them multi pollutant

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strategies -- any time you deal with engines or boilers you're reducing green house gases, you're reducing toxics, you're reducing smog producing chemicals, you're producing -- you're reducing a number of pollutants at the same time.

LYNN HAMPTON: Commissioner Uherbelau?

JUDY UHERBELAU: I have a question and a comment. The question is -- once this program is okayed and approved and everybody is on board with it, will you do, at least for a certain period of time, more intense (inaudible) training to make sure you're not going backwards?

MARY ANNE FITZGERALD: Yes. Well, I have a couple of things that we're planning on doing. As far as the employee commute option program -- we're eager to do a full court press on reaching out to the employers and monitoring that program a little bit better than we have before. That's why we want to move forward with this package. Then our contingency plan is our normal way of monitoring the air quality levels, monitoring the emissions. We do an emission inventory every three years. And we have a unique thing in this plan actually that's tied to vehicle miles traveled, because the Portland/Metro government

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understands the connection between cars and air quality, and they know that if cars cause an excedance [phonetic] of the air pollution standard industry will get hit hard. And they want to balance the economic development, as well as travel within the Portland area. So we are monitoring vehicle miles traveled, ambient air quality, and the emissions increases. And so we have triggers built into the contingency plan so if it looks like we're approaching the standard we will do something about it.

JUDY UHERBELAU: Which brings me kind of to my comments as I live in the Rogue Valley. We're still hemmed in by the mountains, that hasn't changed. Our population has increased enormously, the air still stinks and yet, we're supposed to be in compliance. How often are you measuring there?

MARY ANNE FITZGERALD: Well, ozone is continuous. We measure that from May 30th through September 30th of every summer. And so summertime smog has not violated, or has not exceeded the standard. Actually, last year it did not exceed it at all.

JUDY UHERBELAU: That surprises me.

MARY ANNE FITZGERALD: That's why there's different kinds of pollution, whether it was

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the woodstoves, the particular pollution, it might have been some other type that --

JUDY UHERBELAU: There's been a lot of articles in the paper recently about the increase in asthma and upper respiratory conditions in the woods -- we still have a lot of the very old woodstoves. You can't get people to change them and everything like that. And I see some difference in the environment over the years -- I mean, in the air, but it's still crumb -- so I wonder how well it's being monitored.

ANDY GINSBERG: Commissioner Uherbelau, I'll just mention that we have had significant reductions in our monitoring since 2001, both because of cuts on the state level and on the federal level. We lost monitors in the Medford area. We're monitoring them -- we're checking them less frequently and it's a major concern, especially given now that EPA has lowered the pine particle standard, and Medford is right below it. I mean, they were just, just below the standard. So we have in our budget proposal for this upcoming -- this current legislative session a request to increase funding for monitoring. We also have -- the Senate Environment Committee has introduced a bill that would address

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some of the woodstoves -- the older woodstoves by having them removed when people sell their homes. So there are things that will be done, but you're absolutely right, the monitoring is a significant concern.

MARY ANNE FITZGERALD: Thank you.

JUDY UHERBELAU: Yeah.

LYNN HAMPTON: Further discussion, commissioners?

BILL BLOSSER: I would just echo Ken's comment that we may look at the 2015 VOC projection for the Portland/Metro area. Surface coding just leaps out as -- and so it seems like if we have to go back that would be the place that you're gonna get the most. I was pretty shocked -- the other day I bought water-based latex and they told me the range of EOCs in latex, from zero up to huge amounts, just in latex. It's not water-based. It's just in latex there's a huge range and I can just think of all the houses being painted, apart from the cars and everything else. None of that, of course, is any vapor recovery. It just goes out the window. So anyway.

LYNN HAMPTON: All right, if everyone is done with discussion then we'll need to

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entertain a motion about this agenda item.
BILL BLOSSER: I move to adoption of the proposed maintenance plan and supporting rule revisions for Portland and Salem. Second.
LYNN HAMPTON: Larry, any suggested changes?
LARRY KNUDSEN: No, I think we will understand that means a sit out in attachment A and that should be fine. Yeah, that actually is -- I think did you say as --
BILL BLOSSER: As proposed in Attachment A.
LARRY KNUDSEN: -- Okay. Well, maybe I can clarify then. What we really -- I think what the motion really is is to adopt the Portland/Vancouver and the Salem/Keizer area ozone maintenance plans as a (inaudible) provision and to make the related amendments to the DEQ rules, set out in Attachment A2 as sep provisions.
LYNN HAMPTON: Is that a good (inaudible)?
BILL BLOSSER: That was my motion, exactly.
LYNN HAMPTON: And Bill, do you second that?

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BILL BLOSSER: I second that. That's exactly what I was saying.
LYNN HAMPTON: Thank you. It's been moved and seconded to approve the air quality maintenance plans set forth in Attachment A1 to Agenda Item D. And will those in favor please (inaudible) by saying, "I"?
IN UNISON: I.
LYNN HAMPTON: The motion is carried. (Inaudible) is approved. Thank you. Thank you very much for compressing your presentation to the available time too.
STEPHANIE HALLOCK: Madam Chair, as Helen is bringing you the people who signed up I just asked her to write a note. I will try and write our staff report so that we put the recommendation to you in the language that you will need to make a motion, which will probably help a little.
LYNN HAMPTON: Sometimes that can be done and sometimes you can't. We have to do our part too.
JUDY UHERBELAU: It makes it more interesting while we don't --
LYNN HAMPTON: Now, are these in the order that people signed up, Helen?

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HELEN LOTTIRDGE: No.
LYNN HAMPTON: Okay. Bill, did you want to say something? All right, we have one, two, three -- we have four people who have signed up to speak. I'm gonna read the names off. If you're here and haven't signed up but want to speak please raise your hand. We have a Heidi Dalyn, Nancy Hatch, Carol D. Johnston, and Ellen Twist. Is there anyone else that wants to speak? All right, this agenda item is allotted 45 minutes, so you have approximately 10 minutes each, and why don't we begin with Heidi Dalyn. Is it Dalyn?
HEIDI DALYN: Dalyn.
LYNN HAMPTON: Dalyn, okay.
HEIDI DALYN: Thank you.
LYNN HAMPTON: Good morning.
HEIDI DALYN: Honored commissioners, good morning. My name is Heidi Dalyn and I am a resident of Oregon City. I am a mother of two, soon to be a grandmother of one, and I work as an educator for Oregon City School District in technology education. I have lived in Oregon City for over 24 years now and I love my community. I am concerned about the health of our town, and specifically to our children due to toxic mixing zones. And I'm here

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today to urge you to work to eliminate mixing zone permits in Oregon water ways. For those of you who don't know my city's proud history we are the end of the Oregon Trail. Our town is sited at the Willamette Falls and we have always had a close identity with the Willamette River. We have a major community park at the juncture of the Willamette and Clackamas Rivers, a prime salmon fishing area just down stream of the falls, several public boat launches, marinas, and public docks. Native Americans -- Native Americans fish the eel populations at the base of the fall, children regularly swim at Clackamit Park and Meldrum Par Park in nearby Gladstone in the summer. Our community lives near, works by, and recreates in and around the river. But also sited at Willamette Falls are two paper mills, Blue Heron and West Lynn Paper, who together hold several permits to legally dump toxic materials, including lead, mercury, arsenic, chromium, aluminum, and zinc at levels far above DEQ's standards directly into the Willamette River. This is done via toxic mixing zones with the premise being that these chemicals will be diluted and that this will somehow make them safe. These chemicals are dumped into the river less than a half a mile from Clackamite and Meldrum Parks. Those same parks

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mentioned above where children swim, people fish, kayak and water-ski. And it is not just these two mills dumping affluent into the river, rather they are two of many, many mixing zones, both up and down stream, which dump toxins into the river. I ask you, how many of you, if you were parents, would allow a stranger to come into your house and dump a small amount of mercury into your child's bath water? Would you feel safe if they told you that it was only a small amount and the water would dilute it? I used to take my kids along the river all the time to view the falls and I must confess that I am outraged that this spray that we felt on our faces was contained -- contaminated with heavy metals that were dangerous to our health and that this is legal. So where does this mercury and other chemicals go? Does it disappear and cause no harm as I've heard claimed? I urge you to look at a can of tuna. It warns that pregnant and nursing women should not eat more than one can a week due to the mercury content. Children should be limited to three ounces or a half a can per week. We know a lot about mercury that we didn't know just a few years ago. We know for example that now one out of every three American women has so much mercury in her womb that her children are at

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risk from a grim inventory of diseases; autism, blindness, mental retardation, heart, liver, and kidney disease. We have 630,000 children who are born in America every year that have been exposed to dangerous levels of mercury in their mother's wombs. We certainly know that mixing zones are not the only source of these toxic chemicals, but if we know that there is a problem with mercury entering the food chain why would we legal allow companies to further add to the problem? I've heard the argument that it will cost money for industry and municipalities to deal with waste responsibly. I have heard that the complaint that it costs too much. I think we're smarter than that. New technologies can be implemented and jobs can be created in green industries. For myself, I work in technology education. That's what I deal with every day. But I am currently half way through a master's program and at 46 years of age this is my fourth career change. According to statistics, I've got one more to go just to be average. Change is part of life and it doesn't make sense to continue doing something wrong just because we have done it for 100 years. And what is a health community worth in dollars? Why are we willing to sell our community so cheaply? Three

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years ago when I began volunteering for the Sierra Club's Building and Environmental and communities program I personally conducted a survey of friends, family, people I met in the grocery store, and I asked them the question, "What is your major environmental concern in Oregon?" The overwhelming response was clean water. Average citizens, such as myself, we want clean water to drink, we want clean water to recreate in. We depend on the government to protect us and our children. I do not believe that industry and municipalities will voluntarily stop dumping toxins into the river on their own. Face it, it's cheap and it's easy to do. When I moved to Oregon in the 1970's I remember the efforts by Oregonians to clean up the Willamette River and to leave a legacy of clean water and a healthy environment for future generations. 30 years later here we are. The Willamette is still one of the most polluted water ways in the country. I do not believe that we have another 30 years to debate this issue without causing irreparable harm to the river, its inhabitance, and our communities. Thank you.

LYNN HAMPTON: Thank you very much. Any comments? Thank you, Miss Dalyn. Next up is Nancy Hatch. Thank you.

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NANCY HATCH: Good morning. My name is Nancy Hatch and I'm a resident of Northeast Portland. I want to thank the chair and the members of the Environmental quality Commission for holding this public forum. Last summer I was riding my bike along the Willamette between Omsi and Sellwood bridge in Portland and feeling a sense of peace and contentment while watching the river flow by. However, those good feelings quickly came to an end when I started to think about all the toxic chemicals and heavy metals being legally discharged into the Willamette every day. I began to think about all the Oregonians who also feel drawn to the Willamette because of its natural beauty, but who are unaware of the existence of toxic mixing zones or at least of their locations. I believe that it is bad enough the DEQ continues to permit toxic mixing zones in spite of the clean water act, but even worse, that there is no way for the general public to know if their locations or contents. I believe that Oregonians have the right to know the existence and location of mixing zones through buoys in the water, signs on shore, and maps on DEQ's website. Also it is imperative that DEQ begins to thoroughly test/monitor water, plants, fish, and river sentiment within and

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downstream of mixing zones. Doing so will definitively show the hazards of toxic mixing zones. The DEQ already warns the public about air pollution. Why doesn't DEQ do so for water pollution, particularly point source pollution? Thank you for your support of increasing toxic monitoring. Please fully fund toxic mixing zone moderating programs and please make sure that the public knows where our rivers have chronic levels of toxic pollution. Thank you for your consideration.

LYNN HAMPTON: There's a question from commissioner Uherbelau if you'd like to engage in discussion.

JUDY UHERBELAU: First, it's a comment. I certainly think fully funding/monitoring of every sort is what we would all like to do, but I would urge you to go before the legislature and when -- in the budget hearings and say -- I mean, one of our problems is that the money that DEQ has is not nearly enough to take care of all of its needs. And I think the public needs to consider that and certainly you speak to their legislatures about it. The other question I really have for you, Stephanie. Do we not have on our website where these zones are?

STEPHANIE HALLOCK: Commissioner

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Uherbelau and member of the commission, we have some information but, in fact, as you just alluded to, part of the budget request that we have in this session of about $2 million dollars would in fact allow us to make this data much more available than it is now. It takes a lot of manual work. When Lorie Aunen is up this afternoon on her other water quality issues she can give you more detail, but it is not anywhere the way we would like it to be, in terms of accessibility, which is one of the things we hope to get with the funding this session.

JUDY UHERBELAU: So march on Salem.

NANCY HATCH: Could I make a comment in response to your -- you know, I realize that the funding is limited that's been available to DEQ and I've heard comments that part of the issue is that funding often comes from doing things like permitting. And it's my understanding that the permit fees that dischargers have to pay are fairly minimal when you consider what they're allowed to do. And one thing that I would think would be quite reasonable to increase funds for things such as monitoring and also marking of locations would be to simply increase permitting charges. I -- and I think most citizens of Oregon feel that being able to discharge chemical

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and heavy metals into rivers, especially above EPA and Health Department standards, isn't a privilege -- pardon me, isn't a right, it's a privilege and that you should have to pay for such a privilege.

JUDY UHERBELAU: How are permit fees arrived at?

STEPHANIE HALLOCK: Members of the commission, first of all, there is -- in water and in air -- well, in all of our programs practically, there are proposals for fee increases this session, and when we do our legislative update for you tomorrow we'll go over that. So we are, in fact, as you know, 66% fee funded in DEQ's entire budget right now, as the amount of general fund and federal fund that we've had has declined over the years. So we do have almost every legislative session proposed fee increases. The way that those fee increases are calculated, very program by program. In the waste water program, which is the program that she's alluding to, there is a relatively complex fee schedule for different kinds of pollution, different kinds of discharges. And in the air program, for example, Title 5, is mandated by congress by the clean air act. It's an institute fee on tons of emission. And so there is a lot of variability in how

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those fee schedules are arrived at. They are done so with advisory committees in conversation with anyone who wants to be involved in them. And in terms of whether or not the fees could be increased, I think it's a given the fees will be increased, because our funding declines from other sources and we are forced, as I said, to increase them every session as we are proposing this session to do as well.

LYNN HAMPTON: Other comments?

BILL BLOSSER: You have a statement here on it that maybe you could flush it out a little bit more. You say DEQ continues to permit toxic mixing zones in spite of the clean water act. What were you specifically referring to there?

NANCY HATCH: I haven't really thoroughly studied either the statutes of the clean water act or DEQ's regulations that interpret and administer those, but my understanding from talking to lawyers and those who are well versed in the clean water act that there is considerable concern with allowing -- the whole concept of mixing zones of essentially -- well, depending how you kind of saying -- whether it's saying that the levels established by the EPA and the clean water act or by congress actually in the clean water act, only apply to a

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river system as a whole, not to individual parts, that that's not necessarily a viable, legitimate interpretation of those. You know, you have to refer to someone who's an expert, but that's the way it's been explained to me that there has been --

BILL BLOSSER: Okay. I was just wondering what you were referring to there.

LYNN HAMPTON: Any questions or comments.

BILL BLOSSER: Just commenting on this fee thing. The fee increases we're proposing basically just bring us back to an even place. They're not to start anything really new like monitoring. She's suggesting where the monitoring ought to be -- we ought to charge those people in order to do good monitoring. Really the fee increases isn't proposing anything like that. We've got the monitoring in a general fund package.

LYNN HAMPTON: That's correct this session.

BILL BLOSSER: So if you wanted us, instead of asking the general fund, which means the people of Oregon, to pay for this monitoring, then you certainly should go to legislature and say, "No, that's not fair. These people ought to pay for

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it and it ought to go into a fee increase." And the fee increase shouldn't be what we're proposing. It should be double that or whatever it would have to be.

NANCY HATCH: Well, I would hope that there would be a possibility of a combination of funding sources for that.

BILL BLOSSER: so that would be your argument you could make to the legislature. And now is the right time cuz they're having hearings on these things now.

STEPHANIE HALLOCK: And if I may make one point of clarification, particularly with regards to earlier testimony on this issue of funding, that we often in this conversation talk about the fees paid by the point sources. And I think the earlier commenter made a very important distinction about municipal sources, because municipal sources are of concern in this debate, as well as industrial sources. And I don't have to tell you all that when we talk about who pays for the increased cost of additional controls on municipal waste water plants we're all sitting in this room.

LYNN HAMPTON: But the point being that as well as being the people who pay in municipal

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systems we are the people who pollute.

STEPHANIE HALLOCK: That is correct as well, which engenders a whole new avenue of conversation.

JUDY UHERBELAU: But you also have to consider and we here seem to have problems doing -- and I mean, here in our country, in our state, or whatever, that for example, if our water is dirty and people are drinking it then there's health problems. And that in itself is very, very expensive and given our health system, so it's like a vicious circle. So somewhere we have to stop, address it, and you know, stop the circle from just getting worse.

LYNN HAMPTON: Thank you and we appreciate all public comments. Thank you. And on the issue of health, Carol D. Johnston, whose affiliation is physicians for social responsibility, Oregon Chapter. Welcome Mr. Johnston?

CAROL D. JOHNSTON: Thank you. And good morning, commissioners. I apologize, I only brought one extra copy and I'll leave this one later. I have a number of concerns that are related and the first relates to the connection between health issues and the permitting issues. Public health and environmental damage should have a much greater weight

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when the Department of Environmental Quality sets permit limits on toxic emissions. The current limits for toxins such as mercury or dioxins from the incinerator in Brooks, for example, rely on best available control technology and do not appear to take into account actual amounts getting into our food and water, nor the actual health effects. Much more attention should be paid to actual measurement of toxins in the air, water and food when deciding what amount of a given toxic emission should -- is to be permitted from a particular source. DEQ staff have told us that measuring health and environmental effects is not their responsibility. It would be helpful if there was much greater cooperating between DEQ and other agencies, such as state and local public health agencies, to identify health trends down wind from toxic pollution sources such as the Covanta Waste Incinerator. The most vulnerable members of the public, such as babies that are still forming neurological structure, should especially be considered when assessing the health defects. Many of the toxic pollutants are bio-cumulative, so the actual harmful effects can build up over a period of years, even though emissions within a specific year might seem to be at acceptable levels. Toxins can also have

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cumulative effects across types and sources so that atmospheric mercury from Chinese coal powered electricity plants, benzene from Oregon gasoline and pesticides from local farms need to all be part of the equation when deciding how much mercury and dioxins to allow from the Covanta Waste Incinerator, for example. Toxins don't want to attack us one at a time, so they should be regulated collectively. Some toxins that are emitted by waste incinerators, such as polychlorinated bifinals [phonetic] - (End of Tape 1 Side 3A)

CAROL D. JOHNSTON: -- are not included in the permit limits at all. Even though levels might be relatively low they can still be part of the cumulative effect on health and need to be considered during the permitting process. Another issue has to do with the way the permits are written. It would be very helpful if the Environmental Quality Commission would initiate a policy that requires the Oregon Department of Environmental Quality to include in (inaudible) permits a plain English statement and a common English measurements, such as pounds and ounces, that specifies the actual upper limit of each pollutant that the permit would allow within a specified period of time, such as per year. These

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should be understandable by an average high school graduate. The plant -- the PSEL table that is given, sometimes in tongues, does not do this adequately since there are other annual measures included in the permit. The whole thing is confusing to the average reader, I believe. In this plain English statement the use of scientific notations should be avoided for the benefit of those who do not understand it. Just using decimal points and zeros would probably get across better to many people. The actual amounts of emissions and the permit limits for the preceding year or for multiple preceding years should also be presented for comparison to the new limits. The same plain English presentation should be used for these figures. As an example of why this policy is needed I want to point out that it is literally impossible to calculate the annual number of pounds of mercury allowed by the new Covanta Incinerator air quality permit using only the information contained in the permit. In addition to requiring knowledge about mathematical calculations and conversion factors to and from the metric system it also omits required information about the amount of exhaust gases that escaped through the incinerator smoke stack and the specific number of bays that the incinerator is

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expected to be shut down for maintenance each year. Without this information a person cannot calculate the pounds of mercury permitted, nor the pounds of actual mercury emissions based on the annual test for mercury. Current reporting methods obfuscated this information for the average citizen. Number three, as I was against (inaudible) the proposed Covanta incinerator air quality permit this morning, I came to the conclusion that the amount of mercury emissions allowed is virtually limitless. The permit has no plant site emission limit for mercury at all, and the only other real limit is at least 85% of the mercury be removed between the control device inlet and outlet. And since this could be at least restrictive in the way it's stated when compared to the alternative way of measuring, which is .08 milligrams per dry standard 2 meter [phonetic] located on Page 8 of the draft permit. You really -- that leaves 15% of an unspecified amount that can be emitted from the smokestack without violating the permit. That kind of regulation, in my opinion, accommodates the facility owners and does not adequately protect the health of our citizens. And you'd have to look into the mathematics of that to understand what I'm talking about, but if you read the permit carefully that's

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the conclusion I had to draw. Number four; many of us in the Willamette Valley are frankly concerned that when Marion County's contract with Covanta expires in 2014 the waste incinerator will be converted into an even more lucrative enterprise by becoming a regional or national medical waste incinerator. Because the PVC plastic and heavy metals and medical waste create so much dioxins heavy metal's emissions and other toxic pollution, we oppose this and would like to see regulatory polices that would help prevent this eventuality. And finally I want to refer you to a specific document that I am giving to you today. I've given it to Miss Lottridge here. It is entitled, "Waste Incineration, a dying technology." I hope you will find time to at least scan the pages relating to the many undesirable outcomes from waste incineration. And I especially would like to have you read the section about alternatives to waste incineration that begins on Page 39. The recommended alternatives do not rely on land fills, which can pollute ground water and produce methane gas. I would like to see the Environmental Quality Commission's future rules and policies direct our communities toward the zero waste principles and practices that are described in those pages. In general, those principles direct us toward

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waste reduction, recycling, holding manufacturers responsible for the life cycle of their products, for example, reclaiming and recycling TV sets and cars and so forth. And outright banning toxin producing products that cannot be disposed of safely. Thank you.

LYNN HAMPTON: Discussions or questions? We do have a few minutes left in Mr. Johnston's presentation. Thank you very much.

CAROL D. JOHNSTON: Thank you.

STEPHANIE HALLOCK: Madam Chair, I could -- if could just comment on two things.

LYNN HAMPTON: Yes, why don't you have a seat.

STEPHANIE HALLOCK: Well, I was just gonna say, I totally agree on the better links with the health folks and Gayle Shibbly heads up the -- I think it's now called the division -- either Division or Department of the Environmental Health within Health and Human Services. It's its own division. And she actually was over last week meeting with our senior management team for the expressed purpose of having a discussion of how we can have a better nexus. In some states these are all in one place. They're not in ours, so you have to put a little extra effort into that. And then secondly,

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amen on the plain English. As a matter of fact, Nina -- what's the name of the -- do you remember the name of the plain English for bureaucrats things that I've asked you to try and --

UNIDENTIFIED SPEAKER: Plain language (inaudible).

STEPHANIE HALLOCK: Yeah, it's an initiative. It was written up in the paper, I clipped it, I gave it to Nina and she's been talking statewide to her public information counterparts on how we can do this. So we will strive mightily to get it.

CAROL D. JOHNSTON: Excellent. Thank you.

LYNN HAMPTON: Thank you very much.

STEPHANIE HALLOCK: And we will get copies of all of his materials to you as well.

LYNN HAMPTON: Great. Yes, I'd like to see them. And the final person who signed up is Ellen Twist and her affiliation is individual. Thank you. And welcome, Miss Twist.

ELLEN TWIST: Thank you. And thank you for the time to listen to the public. My name is Ellen Twist. I live here in Salem and I love it. I too am interested and concerned about the

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application of Covanta for extending their permit and raising emission levels. What bothers me the most -- this is air quality. I began to look around to try and find who did soil and water testing or humans, animals in the vicinity of Covanta, although we all know this goes around the world. I was astonished to find not DEQ, not EPA, not Marion County commissioners, not the Heath Department, nobody is responsible for testing any of those four; people, animals, soil, or water, regarding the emissions from Covanta. There have been countless people writing and testifying to the solid waste management advisory counsel of Marion county urging testing for the land and some of those subjects I mentioned, and yet nobody is stepping up to the plate to do it. I think before anything -- any of these permits are raised, the levels are raised, that there should be a base and we don't have it. I testified before DEQ a number of times and I just happened to come across a December of '97 testimony. In that I said, "Looking at the first page of the September 5th, '96 DEQ memorandum the department recommends that it acts as a facilitator between Marion County and one of the affected sources, which at that time was Ogden Martin, is currently Covanta. To initiate discussions or the

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possibility of a waste separation plan to segregate coroneted plastics from Ogden's waste (inaudible) to minimize dioxin formation from this facility."

Further on, "It is also acknowledged that some of the types of waste could be removed before incineration. There would be a net environmental gain. This activity would involve a concerted effort by both the solid waste and air quality divisions within the department. It should be noted that the new source performance standards that are included in the proposed rule making for new sources do include provisions for developing and evaluation material separation plans. I've been watching activities regarding dioxin, PVC, in particular, and this Covanta plant, and other than one freight pickup a year and some education, Marion County really is not making a consorted effort to divert PVC from the way stream incinerated. As far as DEQ's part in this, I'm aware of nothing. I would like to be on a list and informed if indeed there is anything. I listened to commissioner Uherbelau? You know who I'm talking about, comment about every monitoring costs money. It wouldn't cost you anything not to grant that permit, but get a base and go from there. Thank you for listening to me.

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LYNN HAMPTON: Questions?
BILL BLOSSER: As we do permits can we require monitoring?
UNIDENTIFIED SPEAKER: Yes.
BILL BLOSSER: Other than emissions monitoring, but the kind of monitoring she's talking about of where those emissions go and where they get absorbed in animals, people, water, whatever?
STEPHANIE HALLOCK: Commissioner Blosser, I'd have to double check on the limits, but air monitoring, obviously we can, but in terms of additional monitoring I don't know. I mean, the theory behind the regulations is the goal is what's coming out of the stack is in compliance with standards, and the theory is, ergo, that you are not causing the type of contamination that -- about what she's concerned. So arguably do you really need to do that monitoring? I can certainly appreciate the concern of why one would need to do it, but I can get you more specific information about the parameters of our authority to do the monitoring beyond the monitoring of the facility.
ELLEN TWIST: Well, underlying my concern too is this is now -- what it started in '88 so we're that many years into accumulation. This

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stuff isn't going away and our bodies are in the land. Thank you for listening. You really did.
LYNN HAMPTON: Commissioner Uherbelau?
JUDY UHERBELAU: I have a comment, I guess to Stephanie. If it's assumed that what they're allowed to do under the permit is safe, so to speak, but we're not monitoring the things that she discussed like the soil, the water, people and animals, and so forth. We haven't established a base and then we don't continue to monitor. Isn't our assumption based on false premises?
STEPHANIE HALLOCK: Well commissioner, is Andy still here? Andy Ginsberg is the air quality administrator and I think it would be helpful, if you don't mind taking a couple minutes, for him to just talk a little bit about how monitoring is supposed to work under the regulatory scheme rather than have me give you misinformation.
LYNN HAMPTON: Thank you, Miss Twist. Hello, Andy.
ANDY GINSBERG: Commissioners, for the record, Andy Ginsberg, air quality administrator. I guess I would start by saying that standards are set sometimes in two different ways. One are what we

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call technology-based standards where we look at what can be achieved in that particular type of operation. And typically those are set nationally by EPA, but we set some ourselves. And you look at the best performing sources that are out there and you establish a standard that says, "We know technology can get you this far, everybody should come up to this level." Typically they're more stringent for new sources than existing sources, because it's possible to build it into the design for new sources. Not always though. Sometimes existing sources have to meet the same standards. So that's a technology-based standard. Then we have what we call health based standards, and those would be more like, for example, when we were talking earlier today about ozone, we have to meet the ambient ozone concentration for Portland even though that means some or many sources have to reduce emissions beyond what would be required by national technology-based standards. And so that's when we go and adopt specific requirements to protect air quality in a particular area. So we can have health-based standards or risk-based standards versus technology-based standards. In the case of the Covanta permit we're talking about technology-based standards. These are set based on what can be

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achieved by this particular type of facility. When we talk about something like mercury we're -- we know that we've got many contaminated streams in Oregon, we've got fish concentrations of mercury that have led to health advisories, and look at what are all the sources of mercury? And we find that air deposition is a significant contributor to mercury concentrations and fish. A lot of it's coming from global sources. We can't eliminate it by regulating local sources, but we can reduce it as much as possible, for example, in the rule you adopted recently to look at the mercury emissions from the (inaudible) power plant and the discussions we've been having about mercury emissions from the ash -- Ash Grove cement plant. Covanta, as an example though, is a very well controlled source. Meaning the types of limits that we've just recently set for other facilities. They have very good technology in place. There probably isn't a lot more that can be done, in terms of end of pipe type controls. The waste separation is a potential avenue, but that facility does operate at a high level of technology. If we go and look at mercury concentrations in the area we'll find that lot of it is from global sources. It won't be really possible to pin it down to a specific, local source. So we

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need to a more global and comprehensive solution. When we're talking about mercury, as an example, then just focusing on one specific point source. Having said that though, it's important that our permits be understandable and that our permits require the best that can be done at that facility. I don't know if that answers the question fully.

JUDY UHERBELAU: I can understand the distinctions between the technology. If you're using the best technology available that's known, that's one thing. But at the same time that should not stop us from monitoring and testing starting, you know, from the day you start the technology to, you know, periodically every two years, every three years, or whatever. Again, I know there's the global issue but you ought to be able to divine something from that continuous -- an I'm talking about not just the air, but what was mentioned, the water, the land that's around that area that's discharging the waste, but we're not doing that, right?

ANDY GINSBERG: Commissioner Uherbelau, that's correct. They don't have resources to do that type of monitoring on a routine basis. We do that though if we are, for example, developing a new regulation for a particular emission source.

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We do have the ability to do first stack testing that identifies what the emissions are, dispersing modeling to figure out where those emissions go and potentially, exposure modeling to figure out how people are expulsed to the emissions once they disperse, all the way to the point of epidemiology work to see if there are health affects in the area. As you move down that path it gets harder and harder to associate it back to an individual, specific point source when you are dealing with emissions that come from many, many types of sources. And it gets increasingly expensive and the science becomes less certain. So it's done, we don't have a lot of resources to do that here. We rely a lot on EPS does, what California does, but we have done it and we can do it in specific cases, but we have extremely limited funding.

BILL BLOSSER: Do we have any way in a permit -- or any other way -- to try and reduce the problem by the separation -- using the separation mechanism rather than, you know, technology? Maybe they're at the best you can be, but clearly if you don't burn mercury or dioxin you don't have to control it. Do we have any way of encouraging -- more than encouraging, a better degree of separation

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so it doesn't even have a chance to go out the smokestack?

ANDY GINSBERG: I'm not really an expert on that whole area. I'll turn to Larry a little bit, but I would think that you have the authority to require that probably by rule. I don't know whether we have rule authority to require it in a specific permit at this point in time. It sounds like the (inaudible) performance standard does.

MARY ANNE FITZGERALD: Well, the other thing is they probably have a solid waste permit too. I haven't looked at this for a while and I don't know if any of our solid waste people are her. But through that solid waste permit this business of source separation is probably more likely addressed than through the air permit. But I'll get back to you on what's in the solid waste permit.

LARRY KNUDSEN: Well, we certainly do that on the water side. I mean, we limit -- people have to have a toxic reduction program and present for these municipal facilities so they're going back and trying to find the sources, you know, which is trying to keep it out of the water stream. I think on the sampling thing we have to realize that when you get that data -- I mean, even if you had

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the data, it's very hard to interpret. And one of the factors that's in there is just how much of this is available. And so for most of these things -- most of the mass is in the soil, okay, for most toxins. And for the soil you just don't know how available that material is in there. So you got the numbers, but trying to interpret them is really difficult. Now, when we set these standards about how much we're gonna allow discharge we try to deal with that by putting in, essentially, safety factors. So we throw a safety factor of 10 in there, because we think some people are more sensitive than others. And we throw a safety factor of 10 in there, because the toxicity data we have is typically not on human beings, but it's on rats. And then we throw a safety factor of 10 in there, because we know -- we don't understand this as well as we hoped to. So when you add all those up you got to realize that we take the concentration that we think is going to impact you, the environment or humans, and then we step back from that by at least a factor of 1,000. And for carcinogens we try to step back by a factor of a million. So from, you know, we could make our best guess at, we do try to put a safety factor in this thing that protects people's health. That's sort of

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the state of the art of how people do this. And there's people who spend a lot of time and a lot of money and a lot of effort trying to set these standards that we allow people to discharge to. But again, it's a very, very difficult issue. And certainly anything we can take out of the waste stream is our future. I mean, that's how we can best deal with this and I think it's a great suggestion of trying to separate these things as much as possible, both on the air and the water and the solid waste side.

LYNN HAMPTON: (inaudible) might be interested in hearing maybe from Al or his (inaudible) about how that's handled at that point.

STEPHANIE HALLOCK: Sure, we can do that and the other thing I would just offer, cuz I don't know if you know this or not. There used to be two -- we old folks refer to them as garbage burners, but I guess municipal waste incinerators is the proper term. There used to be two. There was one in Coos Bay and this one, and I don't even know if the Coos Bay one is still there. And as you know from dealing with the Umatilla chemical weapons incineration facility, incineration facilities of any kind are highly controversial. They use garbage

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burners, if you will, in the east way way more than we do here. They're relatively common, or they have been historically. And to the comment that was made earlier -- if I were in the business of predication I would find it very difficult to believe that we would ever expand the Marion facility to be some kind of regional facility. And I will also predict that you will never see another incineration facility sited in this state. I mean, they're just -- through the land use process and the environmental permitting process they're highly controversial people get very, very passionate about them and that's just sort of the state of the situation. And we'll give you more background on the source separation, but we are not a big state in this issue, whereas if you go by -- if you've ever been in the northeastern United States you'd be amazed at the different --

JUDY UHERBELAU: So, Stephanie, if we -- if you don't envision us building any more or enlarging it, do we send it to someone else and then they have to live with it?

STEPHANIE HALLOCK: As the point was just made, we have a lot of opportunity in terms of how we manage waste. For a, not generating so much of it in the first place, and b, figuring out

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how to source separate, reuse, reduce, recycle, all of those things that we strive to do in the entire waste system. That's of course the most beneficial. There are -- on the hazardous waste side of the equation it -- you're absolutely correct. For example, if there are hazardous waste that can't go to the Arlington land fill facility they are in fact shipped to other states that have hazardous waste incineration capacity. That's one of the reasons that under the commerce clause you can't restrict the flow of waste across borders, because you have to deal with it somehow. But the bottom line is for us, as a society, to figure out how not to generate so much of it in the first place.

BILL BLOSSER: And the fatal flaw here is really of a society where we have polyvinyl chloride that gets into the waste stream. That's really the fatal flaw, and nobody really sorted that out a long time ago when we started using all this PVC. But that's the thing that's being just really drawn into question is -- and there are plastics that work as good as PVC for most uses. And then on top of that we have mercury in these waste streams, and so we have mercury and we spread it all through our society and used it for (inaudible) and things. And

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we're trying to move back from that. So it's like people understand this thing, but then you have these incinerator plants that were built a long time ago. So it just goes on and on. I mean, we do make some stupid decisions along the line and, you know, incinerating PVC is not a good idea. I mean, clearly we know that and using mercury and thermostats and thermostats and amalgam teeth and a whole lot of other thing. Those weren't good ideas either, but we did them and now we have to try and back away from them as fast as we can. It's challenging, yes.

LYNN HAMPTON: My favorite words.

ANDY GINSBERG: I'll mention one other thing to remind you that back in 2003 you adopted the Oregon air toxics program. And one of the concepts of that was to look at air toxics more comprehensively than just one source at a time like we've been doing into the federal program. Unfortunately right after you did that most of our budget to implement it got cut. But we are --

LYNN HAMPTON: Hopefully there was no relation.

ANDY GINSBERG: -- but we are asking for -- in the governor's budget we're asking for resources to implement that program, including

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doing the monitoring on their technical work involved. And that really is the way we want to look at air toxics to the extent possible, because there is the cumulative effect of multiple sources within an area and multiple pollutants within an area. And if we can look at it comprehensively you can possibly even get some synergy with what you're doing to reduce ozone, as Mary Anne mentioned. So we'd like to get back to looking at it that way if we can get that budget approved.

LYNN HAMPTON: That's an echo of Mr. Johnston's comment. He was talking about that. Well, thank you. I think we are ready to recess for lunch. Any -- seeing that the consensus is reached we'll recess for lunch. We'll take up back in this room at 1:00 p.m.

(Break for lunch)

LYNN HAMPTON: And we are now proceeding to Informational Item Agenda Number -- Letter F, Fish Consumption Update. And Helen, should I give these public speaker slips to you?

HELEN LOTTRIDGE: Yes.

LYNN HAMPTON: I'll give those to you while they're coming up then.

JUDY UHERBELAU: Helen, do you have

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copies from that material, the guild (inaudible)?

LAURIE AUNEN: Good afternoon, chair Hampton, members of the commission. For the record, I am Laruie Aunen, administrator of the Water Quality Division. With me today is Jordan Palmere, who is leading DEQ's work on the Oregon Fish Consumption Rate project, and Donna Silverberg, who's a workshop consultant. And both of them will be talking a little bit more after my overview here. Before I get started, I wanted to actually put on the record thanking the Environmental Protection Agency for providing the resources to support the workshop. And thank the confederated tribes of Umatilla. Indian reservation bears a support and partnership in this effort. As you'll hear and as you're material is showed, the project planning team are working very hard and they're making good progress. One change I wanted to make you aware of -- and you may know this already, but Bob Boundgardner, who has been DEQ's water quality deputy administrator and was working with Jordan on this project, left DEQ for another job. So he's now gone, but I'm very grateful to Jean Foster who's providing technical support for the effort. And also Keith Anderson, who has stepped into the interim deputy administrator through the end

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of the legislative session. And I'm gonna apologize, I'm gonna have to be drinking water and clearing my voice, because I have some vocal chord issues. So if you can't hear me tell me to repeat myself. So before I turn it over to Jordan I want to emphasize that the fish consumption rate is an important health and water quality standards issue. And the scale, scope and effect of this issue are an indication of why the water quality standards work is so difficult, resource intensive and controversial. We do have only two staff budgeted to do this work and we have a large back log of standards work that we cannot get to right now. I bring this up because whenever I talk about standards, I want to talk about the resource needs. We did ask for additional funding for standards work, it's not included in the governor's recommended budget. Director Hallock has stressed its importance if the governor desires to add additional funding for DEQ as part of what's called a possible add back process during ways and mains. But the fish consumption rate is our top priority in standards work right now, even without additional funding. But if standards funding is not added back to DEQ's budget during the session we're going to be talking with you and EPA and the stake holders about what that means

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to whether we can do really any other standards work. So with that, I'll turn it over to Jordan.

JORDAN PALMERE: Hello, chair Hampton and members of the commission. Again, my name is Jordan Palmere and I work in the water quality division in DEQ. So on October 6th, DEQ, EPA, and the confederated tribes of the Umatilla Indian Reservation presented a plan to the EQC to begin a collaborative review of Oregon's fish consumption rate. At the time EQC expressed support of the plan that was presented and instructed us to move forward in the planning process. As a result of that October 6 meeting, there were two major follow up items that were asked by the commission or the department to follow up on. The first one was that Chair Hampton and Director Hallock write a letter to the confederated tribes of the Umatilla Indian Reservation expressing DEQ and EQC's commitment to this process that this is in fact the process that DEQ and EQC has chosen to address the fish consumption rate issue. That letter has been written and it is Attachment A in your packet. The second follow-up item was that the commission asked the DEQ to take a hard look at the timeline. We've -- the timeline is laid out about over a year and a half

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for the public workshop process that we outlined, and it was thought that that was a long time. As a planning team, DEQ, EPA, and Umatilla tribes have looked at the timeline and have determined that we are just unable to speed up the timeline at this point without sacrificing the quality of the project. Simply there's a lot of information to gather and a lot of information to present to you as a commission or you all to make a good decision at the end. So that's where we basically ended up on the timeline decision. We have identified a couple opportunities to speed up the timeline, should this process move towards a rule making once we make recommendations to you in the end. And some of those opportunities to expedite the rule making would be developing a fiscal impact statement prior to rule making, seeking significant stakeholder involvement, which is exactly what we're doing through the facilitated public workshops, forming an internal review team within DEQ, keeping the EQC involved, which is what we're doing now, and forming, potentially, rule making advisory team prior to a rule making. Again, these are all just ideas and we're not at the point in the process where we're ready to execute any of them, but they are just options for speeding up the timeframe on the

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rule making end of things. So now I just want to start talking about our first workshop. So our first public facilitated workshop will happen on March 15 in Portland. It's going to be from 10:00 to 4:00 in the Oregon Department of Transportation building, and we're gonna repeat the content of that workshop the next day in Coos Bay at the Coos Bay Public Library. And we've decided to repeat the first workshop to really gain as much public involvement as possible in the process. Geographically we chose Portland and Coos Bay to space it out and just to literally get as much people involved as possible. We have received some feedback about future meetings that people would like to see those meetings also around the state. At the time right now, all the future workshops, and there are eight workshops planned, are planned to happen in Portland, and because of the funding issues we're really not able at this point to have them travel around the state. But we are exploring possibilities of looking into web casting and video conferencing so people in other areas of the state are able to participate in these workshops. Let's see, so the first workshop agenda, which is Attachment B in your packet, we're very luck to have Chair Hampton participating in both the workshops in

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Portland and Coos Bay. Director Hallock will be there, as well as Laurie Aunen, and including EPA leadership and CTUIR leadership as well. So I think that speaks very well for the importance of this project. Overall the first workshop is going to be covering the background and scope of the project as a whole. The structure of this first meeting, in particular, will be primarily a presentation style with plenty of time for people to ask questions and express their opinions. That's just grounding people and the background and the scope of the project. I know there's a lot of opinions out there about fish consumption rates and there will certainly be opportunity for them to be expressed at these meetings. So again, we're just going to discuss the role of water quality standards, the roles of people involved in the process, the history of the topic of which many of you know much about, the scope of the future workshops, and most important is how the participants can become involved and why their participation is so critical to the process. So invitations for this meeting have been sent out and they've been sent out to two different groups of people. One is what we've identified as a core team of participants, and the other one as just a general

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group of participants. And this point talking about public participation and these different teams I'm gonna turn it over to Donna Silverberg, who's consulting with us on this project. Thank you.

DONNA SILVERBERG: Chair Hampton and members of the commission, my name is Donna Silverberg and I am the principal of DS Consulting, which is a conflict management mediation and facilitation firm out of Portland, Oregon. It's a pleasure to be here with you today and really a pleasure to be working with DEQ, with the tribe, and with the EPA on a project that is hopefully going to be a three sovereign discussion about what's going on with a great deal of involvement from the public and interested folks. We were hired to do this work through the EPA's program that brings in third party neutrals and impartial facilitators of potentially contentious types of issues, and this is when one that the identified would need some outside assistance. While we have a contact with EPA, we're not working for EPA, we're working for the three sovereigns and when we get to the workshops we'll be working for everybody who's at the workshop. I say that because in conversations that we've had with folks whoa re interested in this topic that has been something that has come up, you

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know, that - - are you working for EPA? Are you working for everybody? What's going on here? So I just want to have that shown on your record, as it were. Our role in this process is three fold. One is to help with the planning process right now, to help the three sovereigns have conversations about what they want and need to come out of these workshops. The second is to be facilitating the public workshops once they occur, and third, is to serve as a bridge between the agencies and the public and this core team that we've identified of affected groups that have a real significant interest in this issue, and that the three sovereigns have identified as people -- people or groups who are critical to making any kind of legitimate decision at the end of this process. So that's who we've identified as core team folks. We've spoken with nearly everybody who is on the list that you have as Attachment D at this point, and we're getting information from them about the topics that ought to be on the agendas and the future kind of needs and questions that they have, and trying to identify if there are any other people who really ought to be reached out to, other than the 600 members of the public who've received some notification of this already. But is there other

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people that we really need to be bringing into the fold on this? The goal of the workshops is on Attachment B in your packet. And the goal that the three sovereigns have discussed is to engage the public and interested stake holders and tribal governments in an exchange of information and ideas about fish consumption rate and use in developing Oregon's human health criteria for water quality standards, the reasons to review those standards, and the potential effects of a higher rate statewide. These workshops will help to inform your staff and their recommendation to you, as well as the EPA and Umatilla tribe staff as well in their recommendations to their governments. So I think that those are important things, but of course at the end of the day the decision is yours and that is something that we will be making very clear throughout these workshops, that the goal is to be having this fair and balanced conversation to get as much input from people out there that you may or may not have access to, and to make sure that the public and the interested groups have an opportunity to be educated by and to educate the three sovereigns that are part of this process. I do think it's important to stress that what the -- the project that we're doing with these workshops is

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not a decision making process, but is one that's intended to help you all gather information and data that wasn't available the last time you addressed the fish consumption rate issue. So fact finding, data gap analysis, that sort of thing is what we're hoping to facilitate here. Now regarding the attachments that you have here, there will and already are being changes to the information that's there. So the workshop agendas -- as I said, we've been doing these interviews with folks that are on the core group list. They've been giving us ideas about what the future workshop should look like, so you will be seeing changes to those along the way. The first workshop, primarily, that one is set there. It's to get people grounded in what this whole process is about, make sure everybody is starting from the same playing field with that information, but then we will be changing some things. So I just thought you ought to know about that. We've been getting feedback from the core group at this point about the process, about the topics that should be addressed, and their desire for participation. So some of the folks that are listed on your core group list have chosen to have a person represent maybe three different people. There's been some shifting there. I just want to let you

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know that right now, okay? So if you have any questions specific to the workshops I'll be happy to answer that after Jordan and Laurie have finished their presentation. Thank you very much.

JORDAN PALMERE: Thanks, Donna. So we just have a couple more updates and then we'll open it up for any questions you may have. So still in the realm of public participation, we do have a DEQ website that is currently up and running, and on this website we have the agendas for these workshops, a general Q and A document that's very informative, background information, all the information that went in front of the commission in 2004, and all the reports and attachments. We're gonna post the meeting minutes from all of the facilitated workshops up there and potentially the presentations that are given as well. So far we've gotten a lot of feedback on the website and it's been very useful for people to learn about the process, what we're doing, rather than calling individual people all the time. And we've got about 65 to 70 people already to sign up for an email list that will send out emails, giving updates about the workshop schedules. So real quick on other updates we, we meaning DEQ, have been meeting with other people -- like we just had an EPA tribal

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conference call the other day to reach out to the tribes, and just another avenue to inform them what's going on, what are we doing, what sort of involvement do we want from the tribes. We've been doing the same thing, meeting with ACWA, The Association of Clean Water Agencies. We've been to a couple of their monthly meetings, walking them through the process, what we're trying to achieve, and how we'd like to see their involvement as well, and similarly, done something with the pulp and paper industry recently. I now want to turn yore attention to Attachment E, which is a funding letter that jointly DEQ and the confederate tribes of the Umatilla Indian Reservation sent to EPA. Basically we needed more funding for this project. A lot of that funding -

(End of Tape 2 Side 4A)

JORDAN PALMERE: -- we haven't heard a response yet from EPA on that letter and we're just kind of in the waiting process right now, hoping in the next couple weeks. And then finally is Attachment C, and Attachment C is the themes for the future workshops. As a planning team we needed to think about all the possible science and policy questions that need to be answers so we can give the commission as much information as possible to have you

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guys make an informed decision. The themes for these workshops are very much in draft mode and we are seeking input from both the core team, interested parties, you yourselves as the commission, really anybody who wants to comment on these draft themes for the workshops. We did our best job to organize them into topics that make sense and right now we are looking for feedback, because this isn't -- this isn't in stone about how we're carrying on for the future eight workshops. So without going on too much about this I think at this point we want to open it up to any questions that any of the commission may have.

JUDY UHERBELAU: Do you have the future workshop dates worked out yet or is that something that will happen in the future? Did I miss it? (inaudible).

JORDAN PALMERE: If you look on Page 2 of your memo there's a -- under Current Timeline it has a little chart there --

JUDY UHERBELAU: But it doesn't have other workshops. It has these two, the one for -- the Portland one and the Coos Bay one, but it's my understanding -- oh, I see, Human Health -- you're not -- you didn't put workshops after it, so I didn't catch that as a --

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JORDAN PALMERE: Right. So in the last memo we sent you we actually labeled them as workshop one, two, three, four, five, and six, but now that we have themes and topics for them we're just putting the themes there instead.

JUDY UHERBELAU: Okay, got it.

BILL BLOSSER: What if you don't get money from EPA?

JORDAN PALMERE: I think that's a good question. Personally I don't know if DEQ has the expertise to do specifically an economic analysis of what the potential impacts are statewide. We may be able to call the expertise for an engineering analysis, meaning from an engineering perspective, what -- let's say waste water treatment plants or industries have to do to control pollution at the end of the pipe? But from an economic standpoint, I really am not too sure what we would end up doing if we didn't get the funding. The last time around in 2004 when the toxics criteria were in front of the commission there was a fiscal impact statement that was filled out, and a large majority of that fiscal impact statement was pulled from the California toxics rule. Virtually the same people who wrote the economic impact statement for the California toxics

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rule are those that we are seeking to write our economic analysis as well. So I imagine that if we did not get the funding we would pull from other economic analysis again, such as the California Toxics Rule and the Great Lakes initiative.

BILL BLOSSER: When we had the meeting with the tribes down in Coos Bay, I mean, Astoria, this issue came up and everybody of course says ask the feds for the money, and maybe they have it and maybe they don't. But off to the side we discussed the fact that, gee, the people pushing this are the tribes, why don't we send them a letter also asking for the money. Now, I can see why we would ask the feds first, but it seems to me that would be something that we keep in reserve that if they care that much about this we ought to -- your list there of core people, there's 12 tribes or 10 tribes, if they each threw in $15,000 they'd have it. And most of them all have casinos and they have sources of funding. You'd think that it would be important enough to them that they could look at their own economic development funding that they already have from the casinos and they could cover $125,000 pretty easily. So I just think you ought to keep that in mind -- to go to directly -- rather than EPA -- you

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get the letter from EPA and they say, "We can't do it," and then we spend three months going around in circles. I would have the letter ready the next day to go to the tribes, "Well, how about you guys," and let them say no. My comments and my advice.

JORDAN PALMERE: Thank you for the comment and I'll certainly follow up on that and, you know, the tribes are one of our partners in this process and they were co-author for the funding request. But thank you for the suggestion and we will certainly follow through with that.

LYNN HAMPTON: So if EPA says no I presume then that these co-authors will get together and look at Plan B?

JORDAN PALMERE: Yes.

LYNN HAMPTON: Whatever Plan B they come up with.

JORDAN PALMERE: So again, I think Plan B -- Commissioner Blosser just gave us a Plan B, partially, and I think the Plan C would probably be looking towards economic analysis that have been done in other areas of the country, which there are many. And that's how we, again, pulled together the fiscal impact statement of the 2004 rule making.

LYNN HAMPTON: Commissioner

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Uherbelau?

JUDY UHERBELAU: Are any grants available for this type of thing that you can do a grant proposal? I don't know.

LAURIE AUNEN: Chair Hampton and Commissioner Uherbelau, I don't know if you're referring to private foundation grants. Most of our grants come from EPA and so --

JUDY UHERBELAU: How about private grants from --

LAURIE AUNEN: -- Private foundations really aren't very thrilled about giving, say, government's funding, so it's not usually a fertile area to try to get funding. I used to work in the non- profit sector and grants were our non-profit, but that's where those types of dollars tend to go.

JUDY UHERBELAU: Cuz I mean, I can understand where Bill is coming from, but I have a little problem with it. The tribes are our constituent, so to speak, because they are the ones who are suffering or may suffer from if the load is too high. And so to make them pay for something that, I don't know, I just have trouble with that.

LAURIE AUNEN: if I could speak, I

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think we'll take that suggestion and if there is to be a Plan B I think the partners will have to talk about what the partnership does and whether that is something that together they choose to do or not.

BILL BLOSSER: (inaudible) choice. I have another question. Do you have one?

LYNN HAMPTON: No. No, go ahead.

BILL BLOSSER: I'm puzzling over the two initial workshops and then thereafter there's a single workshop in a single location. I'm just wondering. It seems like a waste of time to do two -- one clear down in Coos Bay and then everything happens in Portland thereafter. The other part of my confusion is if you get all these people to these workshops at first and you get them within -- the first workshop kind of sets the stage and gives background and gets everybody oriented. If you don't have that same group of people follow through at the subsequent workshops you'll be repeating that over and over again, it seems to me. And so I'm wondering a little bit why you haven't just created an advisory group that moves through all of the workshops, or at least a core advisory group that stays with you all the way so you don't have to keep retraining people that come in at the last workshop and ask -- haven't

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gotten any of the previous stuff, ask a whole lot of questions, and frustrate everybody. I mean, you obviously had a reason for not choosing the advisory group model and I'm wondering why. And then also what good is the one in Coos Bay if those people are now -- they're not repeating it -- they're -- are they gonna be kind of disenfranchised? And they're gonna be pissed because now they're all in Portland or anywhere.

DONNA SILVERBERG: Chair Hampton, commissioner Blosser, we did have a lot of conversation about that, about how can we -- with the limited funds for travel and the sort of things that are going on, what is the best model for this? And first, the core group that I was speaking about, that's your Attachment D, that's the group that we're hoping will be there throughout the entirety of the process.

BILL BLOSSER: For all the workshops?

DONNA SILVERBERG: For all the workshops, and we've spoken with nearly all of those folks. I would say 85% of the folks on your list we've had good conversations with and they are committed to coming to as much as they possibly can

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of this. Many of them are also working legislative issues, so may not be able to attend them all during the legislative process. We chose to do the first workshop twice with the intention of getting folks at least oriented to what it is we're going to be doing, and then on an as needed basis, or interest basis with the workshops coming, they could then self select which ones they want to come to. But the core group was the one that we -- we asked the three sovereign entities to say, "Which do you -- who do you think are the people that will have the biggest interest in attending these? Who will have the most information to provide to you all? Who can really help engage and chew on this information with you?" And that was that core group list that we've got there. As I've said, when we talked to those core group members they then gave us a few other folks that we've added to the list now that I don't believe you have in front of you yet. So that -- I imagine it will be a -- the whole process will be evolving as we move along, but I think we're trying to work with a limited amount of funds and get the information out to as many people as possible. And the folks that we spoke to said either Bend or Coos Bay would be better. As we talked more to folks we realized there are more

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fisher people who live on the coast in that region down there that would be most interested in coming and most affected by what's going on with fish consumption issues. So --

LYNN HAMPTON: And also have the longest drive if they wanted to come to Portland.

DONNA SILVERBERG: And would have the longest drive, right.

BILL BLOSSER: But your core group is almost 50 people, and it doesn't seem realistic to think that you're gonna get 50 people to six workshops.

DONNA SILVERBERG: Or eight.

BILL BLOSSER: So is there a core, core group? Is there even a -- or are you not -- I'm just worried about the continuity and making sure you don't have to keep repeating and going over -- you actually end up being able to tell the staff and commission something. It really won't be a consensus but will be a sense of the group that would --

DONNA SILVERBERG: I think that's a very important distinction. We're not looking for a consensus through these workshops. It really is an education process of your staff educating folks about what they know and them educating your staff and the

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tribes and EPA about other things that ought to be known. So -- I mean, we're really looking at trying to educate the citizenry that's gonna be giving you all information through your staff and through their testifying to you that will allow you to make some change to public policy. But I think the equation process is the one that the three sovereigns in conversation at determined was the most important part of this, not reaching consensus with the group. So we're approaching it differently than we would if this were a consensus building process and hopefully that answers your question on that.

LYNN HAMPTON: The only comment that I might add, as you'll recall from earlier discussions, is when we went through this for the first round we used the traditional advisory committee model and did not really come out the other end of that process with the outcome we'd hope for. So I think we are consciously trying a slightly different model. If it is helpful in your deliberation for them to keep track of which participants are there most of the time so you can get a sense of which organizations have continuity through all the workshops I'm sure they can do that.

DONNA SILVERBERG: We already have

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the excel spreadsheet set up and ready to get that exact information for you, so you will know which topics, who attended, what were the issues, and at the end of this process we will have a report for you on what the issues were that came through this process.

BILL BLOSSER: So -- this is (inaudible). We seem to be missing Page 2 of the letter.

DONNA SILVERBERG: You're actually missing Page 2 and 4. I apologize. There was a copying error and so we will get a full --

BILL BLOSSER: Can we get those? Yeah, that would help to fill in exactly what you're trying to do here. I just had a -- I mean, you're going to this big educational, opinion gathering exercise, and I'm just trying to just check out some assumptions I have about how this system works, okay? So when we're looking at impacts on human beings, this system is driven by some hard chemicals that don't degrade, they concentrate in fish, people eat the fish, and the concentration of the fish is driven by the concentration on the water. And that's an entirely linear model, okay, so that if we increase the fish consumption rate from 17.5 to 175 then the

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water quality standard has to be divided by 10. Does that -- is that how you see this? I mean, is there any way out of that just hard, brutal fact?

JORDAN PALMERE: Well, there's a certain way that -- following the clean water act we have to develop our human health water criteria. And you're right, and it's very linear in a sense that there is an equation and part of that equation is a fish consumption rate. And if you raise the rate it's basically -- the water quality criteria will be decreased or become more stringent. That's the function of the equation and a function of the other variables that are in the equation. There's a lot of exposure factors that are also in the equation for calculating our human health criteria. The fish consumption rate isn't the only one. In this process we've proposed to just review the fish consumption rate, because that was a large topic of debate in 2004. And in Oregon we're in a very unique position where we do have a study that demonstrates that there are populations that do, in fact, eat more fish than our rate currently represents.

BILL BLOSSER: I understand that, but we're talking about chemicals that are driven by the exposure rate being greater than 90% coming out

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of food. I mean, that's the ones that we were arguing about before, so we've got this linear model. And so this is the hard, brutal fact and it's not gonna make any different what anybody's opinion is or whatever, that's just how the system works and it's building a wall. Then you step back from that, this thing is driven by the water quality concentration of these chemicals. But if you look at, for the Columbia system, that water quality value is driven by the sediments in the upper basin. And we're not changing those sediments. So I mean, it's not a matter -- I mean, you look at your economic analysis, it's not a matter of changing somebody's NPDS permit or whatever. That's stuff that sits in the upper reservoirs and is driving the concentration of PCBs and DDD and DDE in the lower Columbia, and there's no way to change that. So we got a system that is absolutely fixed, the way I see it. I mean, am I confused here?

LAURIE AUNEN: Commissioner, I think what you just said is the reason that this issue is going to be difficult, contentious, because at the same time we're looking at the fish consumption rate, which we've committed to do, there's also an effort going on, led by EPA, to look at a lower Columbia -- the Columbia River toxics issue, which in large, part

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of you are correct. There are a lot of issues of legacy, chemicals and non point source pollution, and the core of that effort is to try and get your arms around what can be done to reduce toxics. I believe that topic is going to come up as part of these workshops and as a part of these issues, and the reason -- Jordan is absolutely correct about what our equation is, what the policy choices that you are gonna face are looking at all these variables and saying, "What do we want to do for it?" And so all this stuff is going to come up and I think that's why we're gonna need the time to get the workshops, to get the debate going, to really say, "What's the recommendation that we bring to you looking at all these different factors?" So that's how I see it.

KEN WILLIAMSON: It's not clear to me what the debate is.

DONNA SILVERBERG: The debate is going to be about permit limits, is what the debate is going to be about.

KEN WILLIAMSON: Right, but this system isn't driven by anything that's coming out of the pipe.

DONNA SILVERBERG: I understand. I understand that's what the debate is going to be

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about.

KEN WILLIAMSON: I understand that that's really confusing and there's -- you know, it's hard to get your arms around that, but I'm just checking to see --

DONNA SILVERBERG: And not only about permit limits, let me restate that, about the appropriateness of permit limits for all the reasons that were just discussed. Because what we're trying to ascertain is to, in fact, empirically defend or not the statement you just made about where the pollutants are coming from. And then once you figure it out, and as you also correctly stated, changing the fish consumption rate potentially drives certain decision. Are those decisions equitable or not, given what you have figured out about where the pollutants are coming from? That's why you have various people in the audience representing various constituencies who obviously have great concerns about what that outcome is.

KEN WILLIAMSON: But, I mean, there's sort of the scientific part, which is links -- the allowable water concentration to the fish consumption level, and those are linear linked. You double one you have the other, okay? That's how I

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see it. And then there's this hard, brutal fact that these chemicals are in the system and they're not controlled by permit, and they're not going away very fast, because they're degradation rates are so low. So you sort of have this capacitor in this system of these pollutants that are just there. And you know, so -- I mean --

BILL BLOSSER: Ken, you're reaching the -- a conclusion that I happen to think is correct, but what they're setting up is a process to see if everybody else comes to the same conclusion.

KEN WILLIAMSON: So -- and that may be the goal of these workshops, okay? And the goal of the workshop is like, you know, getting people to understand the complexity of the system in a way that they just realize how constrained this thing is. But I think clouding it -- putting it forward as some sort of a debate or an opinion or whatever, I mean, I don't know what the debate is gonna be about. I don't know what makes any different what somebody's opinion is. I mean, the policy thing is, yeah, if somebody eats a 175 grams of fish a day, we would like to protect them, you know? I mean, we would like to protect everybody, but even if you decide, well, we really need to

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protect all the people that are eating 175 grams. I'm not sure that that option is available to anybody, even with the system that we got. That's a pretty -- and that's a pretty harsh place to end up here after six workshops. It's -- so is there some wiggle room here that I don't see?

BILL BLOSSER: No. No, there isn't.

KEN WILLIAMSON: Okay, so I'm glad to be reassured that -- where this is going, but I wish you luck.

STEPHANIE HALLOCK: Well, you also heard part -- you also heard part of the debate in the public forum earlier today. This issue gets focused on point source discharges. That's where it gets focused. And one can argue about whether or not that's appropriate but that's what happens in this debate.

KEN WILLIAMSON: Well, I can understand that, but in the debate this morning, you know, you have a system, you have mixing zones. You can cut back on the concentration you're gonna allow in a mixing zone, so you go back to the treatment plant and you either build a bigger one or you get some better technology, but you pour some money into that thing so it works better. You don't have that

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option here. There's not knob to turn. That stuff is sitting in Roosevelt Reservoir.

STEPHANIE HALLOCK: I don't disagree with you, but there will be people who still want to have that conversation in this debate about the value it gets to the -- the discussion you've had, whether it's about PGE Boardman or whatever, that shouldn't we be doing whatever we can to control these thing? If you want to get into a mega debate there you have it.

BILL BLOSSER: It's not unlike the argument we had over mercury or PGE, you know? Cranking down on their mercury didn't materially change the risk that Oregonians are facing from Mercury, cuz most of it is not coming from a PGE plant. But we cranked it down anyway because that was the knob we could turn.

KEN WILLIAMSON: Right.

BILL BLOSSER: And that's what people are worried -- and we have several sitting in the audience that are worried that we're gonna crank the knob on that once again and it won't materially -- it will cost a lot of money, won't materially change the risk factor.

KEN WILLIAMSON: Won't change it at

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all.

STEPHANIE HALLOCK: And it won't affect, at all, the fish that people are buying out of the supermarket that come from Wisconsin or wherever it comes from. So framing what it is we're debating about, I think, is going to be very important out of this process.

KEN WILLIAMSON: So there's gonna be a really, complex, educational exercise that you have.

DONNA SILVERBERG: Commissioner Williamson, Chair Hampton, I would even like to suggest that we not frame it as a debate. The way we've been framing it right now is an exchange of ideas and information. And I think that it's really important to try and pull back from focusing on a single point. It's a big, complex issue. And so if we get into just debating on a particular point, then we might lose the opportunity for some sort of innovative solution that can come out of this group of 50 people and others who are interested, really putting their heads together and chewing on these things together, looking at the data, looking at the analysis, looking to see if there's some other way then just the one that we've talked about in the past

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of turning one dial? Is there something else that might work in those places where those people who eat a lot of fish live? I mean, that might be one thing that they talk about, but we're gonna really try and raise it up to a level where we can have a good, public policy conversation and exchange of ideas and information.

KEN WILLIAMSON: Well, I guess my suggestion is if you're gonna try and frame it that way, you're offering a hope that's not there, okay? And it's very similar to the debate that's not turning around global warning. There's a whole group of people that are saying were not turning this global warming thing around, okay? Now, I'm not in that camp, but I'm just saying there's a whole bunch of people. And then the question then basically becomes not the whole global warming system, how much heat is going to the ocean, and all that sort of stuff? People are just saying let's not argue about that anymore. Let's just figure out how we're gonna mitigate this thing, you know? There's gonna get some people who are gonna get hammered by excess heat. Let's figure out how we're gonna mitigate it. There's a whole group of people who are moving that way, okay? That's a whole different approach and I

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would suggest you should think a little bit about maybe that's where you ought to direct this thing, cuz I don't see any way out of this thing except mitigation. That's just my opinion on it, okay? There is no technological genie you pull out of the bottle here that's gonna solve this thing.

LYNN HAMPTON: In light of Ken's comments, I have a question and maybe I'm just missing the appropriate initials, but where's the person from the Army Corp of Engineers on the list? Do we have a person? Do we have a people? I suspect that they need to be on this list.

BILL BLOSSER: Cuz they own all the sediment.

LYNN HAMPTON: They own all the sediment.

KEN WILLIAMSON: That's frankly the only person who has a knob turned is the (inaudible) dredge Roosevelt Reservoir. That is the only knob. That's not a knob that's likely to get turned.

LYNN HAMPTON: So that would be my only concrete suggestion, in so far as that's concerned. And that idea was (inaudible). Is there a practical chance of getting them to come? Okay.

BILL BLOSSER: Is the focus of

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this on fish consumption in general or just fish consumption from caught fish out of rivers? Cuz Stephanie raised the thing about buying fish from Wisconsin or Sri Lanka. Are we looking at wherever it comes from and the amount of toxics in it, or are we just looking at stuff that people catch in rivers in Oregon and eat?

JORDAN PALMERE: Our fish consumption rate is meant to represent fresh water and estuarine fish in Oregon waters.

BILL BLOSSER: Caught?

JORDAN PALMERE: Caught in Oregon waters. DEQ is not responsible for what people buy in the supermarket, but if you are fishing in Oregon waters then we are. So that is --

KEN WILLIAMSON: That's certainly what the tribe is interested in. I mean, that's absolutely what the tribe is interested in.

BILL BLOSSER: Right.

JORDAN PALMERE: Correct.

KEN WILLIAMSON: So you're right on that one.

BILL BLOSSER: But -- I understand -- thank you for clarifying it. I thought that was the case, but Stephanie raised a really wonderful

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question about we're supposed to be worried about human health risk, and you've got a whole workshop on human health. Maybe we should be trying to gather information on the other factor and maybe we kick that one over to the health division.

STEPHANIE HALLOCK: They're already doing it. They're already doing it.

BILL BLOSSER: All right. All right.

JORDAN PALMERE: And we do have DHS Department of Human Services involved in this workshop process. We've met with them a couple times and they will be present at the second workshop, which we'll discuss fish consumption rates and human health. And --

LYNN HAMPTON: They can share with us what they've got at that point.

DONNA SILVERBERG: There's also -- there may be others, but -- I think it's in Washington State is piloting a sort of green labeling program of fish in supermarkets. I don't know what the criteria are for how you get green labeled, but the health people have been looking at that. So, yeah, they --

BILL BLOSSER: Okay.

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LYNN HAMPTON: Well, we're a little bit over our scheduled time. Is there anything else you need from us or any decision you need us to make?

LAURIE AUNENE: No, Chair Hampton, I think that would be it.

LYNN HAMPTON: Thank you very much.

JORDAN PALMERE: I guess the other thing is that -- just the last thing. I just really welcome all of you individually. You obviously have a lot of interest and it's a very complex issue, and so please contact us individually, me, someone, anybody involved in the team, because it is a big issue and we're trying to keep the scope pretty focused on this, and as you can tell, it gets bigger and bigger every time we talk about it. So please feel free to contact any of us with any questions you may have.

LYNN HAMPTON: I think commissioner Uherbelau is planning to come to the Portland meeting also, so there will be --

JORDAN PALMERE: Great. Thank you very much.

LYNN HAMPTON: Thank you. All right, we'll now proceed to Action Item G, Agenda

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Item G, Rule Making, Water Quality Standards Revision to align with EPA action. And we have Laurie, no Bob Baungartener, and Deb Sturdavin.

LAURIE AUNEN: Good afternoon again. For the record, Laurie Aunen, administrator to the water quality division and with me is Deborah Sturdavin, DEQ's water quality standards coordinator. And we're here today to recommend your adoption of Agenda Items G and H, which are revisions to our water quality standard's rules. I'm gonna do a little bit of a framework before I turn it over to Deborah. First of all, the rule changes before you are routine for the world of water quality standards, unlike what we just discussed several seconds ago. These changes are not controversial and they are not significant policy changes. Agenda Item G revises the Oregon temperature and mixing zone rules to align with actions recently taken by the Environmental Protection Agency. And Agenda Item H correct errors and clarifies language in water quality standard's rules adopted in 2003 and 2004. Just a brief overview of water quality standards; under the federal clean water act they are set by states, not by the EPA. They are set to protect human health, fish and aquatic life and other beneficial uses. They are, though,

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review and signed off or not by EPA. If EPA disapproves a standard the state is given an opportunity to do it over. If the state does not revise the standard then EPA must adopt it for the state. We use water quality standards in setting permit limits, in assessing the quality of our waters across the state, which is called the 303D list of impaired waters that don't meet standards. We use them in developing the total maximum daily loads and we certify certain activities, such as drudge and fill, are done to meet water quality standards. I think you'll get a little bit more direction from this from Deborah and Larry. But G and H were originally in one rule making package, but we split them up to reduce confusion. G and H deals with the same set of rules, but they're not the same issue. So you have one set of attachments attached to Item G. What we're gonna recommend is that each item be addressed separately so they will cover G and then you'll take a vote, and then we'll go to H and you would take a vote. And for Agenda Item G the rule revisions are shown in blue color on Attachment A2. And with that I'll turn it over to Deborah.

DEBORAH STURDAVIN: Chair Hampton and members of the commission, good afternoon. I'm

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gonna begin with an overview of Agenda Item G, which is a revision of the Oregon temperature in mixing zone rule to align with EPA action. And then, as Laurie said, we both pause for your questions and action and the move onto Item H. So the purpose of these rule revisions is to respond to EPA disapproval of several of the temperature criteria and the alternate mixing zone provisions. In 2003 EQC adopted major revisions to the water quality standards for temperature. And although salmon and trout species and endangered species' concerns were the focus of that rule making, the standards did include criteria for oceans and bay, natural lakes, four (inaudible) and cool water species. These criteria were more narrative in nature, allowing a limited increase above ambient conditions, is the way we worded it. Then in November of just this last year, EPA disapproved the criteria for those water bodies over concerns with the term ambient and suggested we use natural condition as the basis for the allowed increase. So the department is recommending that we revise the criteria for natural lakes, (inaudible) and oceans and bays to allow a limited increase from the natural condition, rather than the ambient. We are also adding language to the rule criteria, however, that articulates our

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intent to presume that the ambient and natural conditions for these water bodies are pretty much the same, unless there's been a discharge or human modification to the water body that would reasonably be expected to have altered the temperature. And the reason for that is an implementation concern of embarking on an expensive and complex modeling program to determine natural conditions in lakes or bays, unless there's some reason to expect that that has been altered. Then for the cool water criteria -- cool water species used for recommending a criteria that's a general narrative that basically just says we're prohibiting an increase in temperature that would impair cool water species. And then also a site specific criterion for the Klamath River, the cool water region of the Klamath River, which limits the increase above a natural background, but defines the natural background for that reach as the temperature of the water exiting Klamath Lake. So DEQ has shared our proposed revisions and EPA gave us suggestions in their disapproval letter and we feel like these are consistent with their expectations and we believe they should be approvable. For the alternate mixing zone requirements we are recommending that the EQC repeal these alternate mixing zone provisions that are in

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section H of the mixing zone rule. If you're following along that, it would be on Page 36 of the Red Line Strikeout Attachment of the rules. The alternate mixing zone requirements were adopted in 1997 to allow larger mixing zones in certain circumstances. One example would be if the city was discharging to a small stream that had very low summer flows and didn't have enough dilution, but they could make a finding that the environmental benefit by leaving the treated effluent in the stream and providing more flow outweighed the disadvantage of the larger mixing zone. In October of 2004 DEPA -- excuse me, EPA disapproved those provisions and DEQ has not been using them at that time, so repealing this rule will align the ruling which with our current policy in practice. So I'd be happy to take any questions on this and then we would recommend that you adopt these amendments at this time.

KEN WILLIAMSON: So I got a couple of site specific questions. What do you do on the Klamath with the temperature increase that occurs in the three reservoirs down below the lake? I mean, how do you factor that in?

DEBORAH STURDAVIN: The hydro project is actually on the section of the Klamath

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River that has Red Dan and Lahotten cut throat trout, for the most part, so they're working on -- and that has different criteria. We're not recommending changes to that at this time, and that's .3 degree human use allowance above the 20 degree biologically based numeric criteria. There's a 401 certification that's going along with the relicensing.

KEN WILLIAMSON: Right, but you said you based it on the temperature coming out of the lake?

DEBORAH STURDAVIN: For the cool water reach, which is from the lake down to Kino Dam, we're recommending --

KEN WILLIAMSON: Oh, so it's just that reach, okay?

DEBORAH STURDAVIN: Yeah.

KEN WILLIAMSON: I guess I didn't understand what the cool water reach was.

DEBORAH STURDAVIN: So for the Klamath River the cool water species reach is from the lake down to Kino Dam and then from Kino Dam downstream to the border of California is designated for Lahatten, cutthroat and red bin trout.

KEN WILLIAMSON: Okay, and that's a biological standard that's different? Okay, so that

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was a piece I didn't --

DEBORAH STURDAVIN: The part of the project that will overlap with this reach is the reservoir that backs up above the first dam. So we'll have to be looking at that and how that's affecting temperature.

KEN WILLIAMSON: And so then on this mixing zone thing what happens in Pendleton? I mean, weren't they one of the primary users of this dilution thing?

LYNN HAMPTON: They had a temperature problem.

DEBORAH STURDAVIN: They did not -- they have not had this alternate requirement provision used in the Pendleton permit.

KEN WILLIAMSON: It was never used in the permit, but they dominated the flow in the river in the summer, right?

DEBORAH STURDAVIN: I'm not familiar enough to talk that specific, I guess.

LARRY KNUDSEN: There is a distinction between effluent dominated, dominated streams and this alternative mixing zone. So that you do have effluent dominated streams that aren't in the alternate mixing zone.

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KEN WILLIAMSON: They don't have a mixing zone?
LARRY KNUDSEN: So I think that may be the source of.
KEN WILLIAMSON: Okay. I didn't understand that, so you have a confused commissioner. So can you tell me an example where you would have applied this if you ever would have?
LARRY KNUDSEN: We did. We actually had -- the main alternative mixing zone was used primarily for Oak Creek, which was where the warm met titanium facility discharged into that stream.
KEN WILLIAMSON: Okay. So that little (inaudible) creek that -- yeah, okay.
LARRY KNUDSEN: And that was kind of the concept case for the -- for the development. It was used in a few other minor instances. And then there was another component, which was the constructed conveyance, which was sort of the ditch. And we used that, in some cases, for irrigation districts.
KEN WILLIAMSON: Okay, so the only place this was actually applied was Wa Chang, right?
LARRY KNUDSEN: Right, we had to revoke coverage for like three or -- three -- two regular permits and some irrigation districts after

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the rule was invalidated.
KEN WILLIAMSON: But then they moved their outfall to the main river, right?
LARRY KNUDSEN: No, that's -- Wa Chang is thinking about doing that, but what they had to do -- what Ormet actually did is reduce its effluent to the point where it no longer needed the mixing zone.
KEN WILLIAMSON: Okay.
LYNN HAMPTON: Other questions or comments?
BILL BLOSSER: I have one -- one of the major comments in here was EPA and I was particularly surprised just at their -- well, Comment 23 where they say, "The state should provide supporting documentation in this section that includes A through F." What confused me about it is we don't normally put supporting documentation in a rule, and they seem to be asking for you to revise the rule to put all that documentation in the rule, and I'm assuming you didn't do that --
DEBORAH STURDAVIN: yeah. Commissioner Blosser, I don't think they wanted us, necessarily, to put it in the rule, but I think they wanted us to put it in the response to comment so

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that we had it on record and it could be part of their record when they go to approve the criteria.
BILL BLOSSER: And in this section it seems like they're going to OAR -- the one right next to it, 3-40040289 that they wanted something right in the rule. It just seemed odd. That's fine.
DEBORAH STURDAVIN: They seem to be okay with what we provided them.
BILL BLOSSER: And the Borax Lake Chug gets a lot of --
DEBORAH STURDAVIN: Would you excuse a very brief aside, because I thought this was interesting. The very week after I turned this in Oregon Field Guide had a story on Borax Lake Chug
BILL BLOSSER: It appears to me, the (inaudible) influence thing there is that that lake has been greatly augmented, the dimensions and size of it by human beings. It's much -- I mean there's a burm all the way around it that I don't think was there -- Mother Nature didn't put there, so it seems like there may be, eventually, an issue there. But it goes back to the 20 mil team borax people.
DEBORAH STURDAVIN: And that criterion --

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BILL BLOSSER: Go find those people, those (inaudible), and make them fix it.
(Inaudible discussion)
DEBORAH STURDAVIN: That criterion is different from the others in that it's -- we're limiting the decrease rather than the increase.
BILL BLOSSER: It's a very pretty place, but --
LYNN HAMPTON: I have a question and it's related to Item Number 2 on Page 4, which is your report. Does revising the temperature criterion -- do you just say it there -- what is the practical effect of that? It says, "From a limited human cost increase above the ambient temperature to a general narrative that prohibits an increase in temperature that would impair cool water species."
DEBORAH STURDAVIN: Right. Okay, the practical difference -
(End of Tape 3 Side 5A)
DEBORAH STURDAVIN: -- is that if it's an increase above ambient than you can go out and measure right now what ambient is and calculate the allowed increase above that, which would make it a little easier to implement. And that's why basically we had written it that way. A general narrative that

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prohibits an increase that would impair the species means that we have to make a case by case judgment as we apply this in a permit, but we can use some screening tools to help us with that. But for example, if they can meet the red -- the 20 -- an increase above the 20 for Lahatten and Red Bin that we'd be confident that it would be protective of cool water species. If they can't then we need to look at, well, what are they -- depending on the reach of the proposed activity, we need to look at what are the local species and what are the temperature requirements of those species and make a judgment.

LYNN HAMPTON: Is there an argument? Is the argument seriously made that any increase in temperature impairs cool water species and what effect is that gonna have on the implementation of this change?

DEBORAH STURDAVIN: I think that some -- I guess that argument could be made, but that's why we would have to look at what the thermal requirements of the species present are and where the current temperature is at and make that judgment. And that does -- that's part of what makes it more difficult to make a case by case judgment as you apply a standard like that is because you have to

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make a judgment about how much the change is going to impact the local use. One of the reasons we felt like we could go ahead and make this change was that there are very few permits -- there are relatively few cool water reaches in this state and there are very few permits that discharge into those reaches.

LYNN HAMPTON: And then -- and I think what I'm doing is just reflecting the comments that Bill was making about -- Okay, what's the natural condition of the lake, you know, when it's been altered from practically (inaudible) memorial? What are you difficulties going to be in determining what is the natural condition of a stream or creek or -- well, lakes, oceans and bays, natural condition, does the -- will the -- will that apply to streams and rivers also, and how do you determine what the natural condition is?

DEBORAH STURDAVIN: Right. This -- in this criteria we're only addressing the oceans and bays and lakes, except for the cool water, but we didn't put the natural condition piece in the cool water. So for oceans, bays and lakes, what we're trying to get at with the way we've written the languages, if we see that there has been discharges we gather some amount of information and see that

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there have been discharges to the water body or a modification of the water body that would reasonably be expected to effect temperature. Then we would look into it with in more detail. And there's, I guess, different levels of complex -- complexity you could get into for doing that. And right now, for rivers and streams we do pretty intensive modeling when we want to determine what the natural condition is. We don't want to do that for lakes and bays if we can avoid it or unless we think there's a good reason to do it, because it is complex and expensive. But lakes, for example, the temperature would be driven largely by the morphology or the shape, the ratio of the surface area to the volume of water. So I guess we'd look at, you know, have we done anything to alter that and it's much less likely in the case of lakes than streams that the things we have done have altered that significantly in a way that would effect temperature.

LAURIE AUNEN: In one addition to that is if you look on Page 6 of the staff report you'll notice that for lakes there is one permit discharging. So we don't think lakes is really an issue. Oceans and bays there are 29, excuse me, permits. But I think that's a little bit of a

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different situation. It is -- I remember when we did an informational update to the commission on this back in December and Commission Blosser was saying isn't this a case of terminology? In a large part, it is because it's a question of when EPA looked at the language we had submitted back in 2003 they said we cannot read the word ambient on its face and feel like we understand what you mean by that, as it were. So the way we've tried to define it -- they wanted us to use the word, "natural conditions," because that's what they believe the clean water act requires, but the way we have written the language is more similar to the 2003 rules. It's just clarifying for EPA how we are actually going to use this language in our standards. So hopefully that's understandable.

LYNN HAMPTON: Commissioner Blosser, thank you.

BILL BLOSSER: I was gonna move adoption of the staff recommendation on Agenda Item G.

LYNN HAMPTON: Is there a second?

UNIDENTIFIED SPEAKER: Second.

BILL BLOSSER: Is that all I need to say?

LARRY KNUDSEN: Well, again, this is a bit of an oddball one, because we've combined it

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to --
BILL BLOSSER: Well, but I mean -- I'm just doing the G and we do H next, right?
LARRY KNUDSEN: -- That's right, but because we usually refer to an attachment and the attachment is both rules, so I think what we really proposing is to adopt the amendments that are set out in blue in Attachment A2 and those are the attachments to rules 20 -- I mean, the amendments to rules 0028, 0058, 0180, and 0195, if you'll accept that as a description.
BILL BLOSSER: Okay, I will. In the future, the staff recommendation will say these clearly so all we have to do is move the staff recommendation.
STEPHANIE HALLOCK: Yes, we are going to add that to our staff reports from now on. Helen has that written down.
LYNN HAMPTON: Commissioner Uherbelau, are you ready to second that refined motion?
JUDY UHERBELAU: Whatever.
LYNN HAMPTON: Is that a yes? All those in favor of Commissioner Blosser's motion, as further explained by Mr. Knudsen, signify by saying,

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"I."
IN UNISON: I.
LYNN HAMPTON: Okay, that staff recommendation is approved. Let's go on to Section H.
DEBORAH STURDAVIN: Agenda Item H is a set of error corrections and clarifications to rule makings adopted in 2003 and 2004. As a follow up rule making to correct a number of errors and clarify some meaning in the rules. These revisions are shown in Attachment A2 now in red, and they're pretty much scatter throughout the division. In December 2003 EQC adopted a rule making package that included major revisions to the temperature standard, a major reformatting of division 41, and several other standards rule revisions. The reformatting condensed the rules by one count, reducing them about 170 pages and made the rules easier for the public and DEQ's staff to use by putting definitions and basin rules in alphabetical order. But the large scope of this rule making, combined with the fact that we ended up doing the final stage of the rule making on a pretty short time frame under a court order related to the lawsuit on the temperature and mapping beneficial uses, led to a large number of errors and a need for

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this follow-up. In addition, the other piece this addresses is then in May 2004 the commission adopted major revisions to the toxics criteria. In those rules we identified effective dates and because the rules haven't been approved by EPA yet, we're making changes that correct those dates. Attachment A1 describes in more detail that types of recommendations, categorized first by error and then by clarifications, that the errors on Page 1 to 4 on Attachment A1. And examples are things like replacing some language that inadvertently got left out or moving language that was misplaced during the reformatting, correcting some cross references, correcting the effective dates for some of the toxic criteria, as I mentioned, and correcting several mapping errors. And then on the clarification side there are six revisions being recommended that clarify language. They are described on Page 4 to 6 of A1, and rather than walking through each one I'm just gonna open it up to questions. I'd be happy to explain any of those that you want to get into in more detail.
BILL BLOSSER: I move we adopt the staff recommendation to adopt the red changes on A2 -- anything else that Steve was to say.

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LYNN HAMPTON: Is there a second for this motion? Okay, so just for the record, we're referring to Agenda Item H, which is identified on our schedule as Rule Adoption Error Corrections and Clarifications to 2003, 2004 water quality standard rules. There's an attachment to Item G, which is Attachment A2, the language in red in that attachment is what we are -- have moved for adoption and seconded. And so will all those in favor signify by saying, "I."
IN UNISON: I.
LYNN HAMPTON: All right, those changes are adopted.
LAURIE AUNEN: Thank you very much.
DEBORAH STURDAVIN: Thank you.
BILL BLOSSER: (inaudible).
LYNN HAMPTON: Now, our schedule now calls for a break. We're a little bit ahead of schedule. Fifteen minutes.
(Break)
LYNN HAMPTON: And we will take up informational Item I. Due to the dispatch with which Laurie and Deb took care of G and H we were able to have a longer break. So we're back on schedule. Informational Item I, Director's Financial Review, Judy

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Hatton, Renae Mark Mangin. Welcome.
RENAE MARK MANGIN: Thank you. Good afternoon, Chair Hampton and members of the commission. For the record, my name is Renae Mark Mangin and I am the management services division administrator. Oregon accounting policy and DEQ policy require that the commission review and approve the DEQ director's financial transactions annually. And I'm here to recommend the review and approval of a summary of certain financial transactions by Director Hallock from January 1, 2006 to December 2006.
JUDY UHERBELAU: I have a question -- thank you. Everybody seems to do their financial reports in a different way, so I just want to ask you if my -- the way I'm looking at this is correct. All these things are listed, the reason for travel, the total cost amount reimbursed, net cost -- the net cost of DEQ, of course, is less than the total cost. This reimbursement, is that the reimbursement by another party, for example -- I see the reimbursements happened when she's going to ECOS meetings and that, so somebody else has paid for that, that's what that means, right?
RENAE MARK MANGIN: (inaudible) states, yes.

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JUDY UHERBELAU: Okay, I just wanted to make sure.
LYNN HAMPTON: Okay, continue.
RENAE MARK MANGIN: There isn't much more to say. You know, the overall cost to DEQ was about $4,500 but the $8,108 was actually spent and then we were reimbursed for about $3,600 for that.
STEPHANIE HALLOCK: I'm a great deal.
JUDY UHERBELAU: You're cheap director (inaudible).
LYNN HAMPTON: And just for the record, we're looking at the report on Agenda Item I and the questions that Commissioner Uherbelau and Mr. Mangin were referring to arose out of Pages 6 and 7, which is the two page summary of director's financial transactions. And this -- is there anything else you wanted to tell us about this? It's pretty straightforward, I think, cuz we had it ahead of time. And I'm presuming that this last -- these last attachments are just the documentations of that summary sheet, which you've prepared as the two page report? Yeah, took a look through it. Commissioners Williamson and Blosser, do you have any questions?

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BILL BLOSSER: Nope.
LYNN HAMPTON: All right. Now what do we need in this context? Do you need an approval of the financial transactions?
UNIDENTIFIED SPEAKER: You need to move and approve if you choose to do that.
LYNN HAMPTON: And it would be a matter of approving summary, which is Pages 6 and 7 or something else in this --
STEPHANIE HALLOCK: I would recommend (inaudible) that you approve Agenda Item I, the director's trans -- the Director's Transactions, as presented in Agenda I.
LYNN HAMPTON: All right, I'll entertain a motion if anyone has one.
UNIDENTIFIED SPEAKER: So.
LYNN HAMPTON: All right, it's been moved. Is there a second?
UNIDENTIFIED SPEAKER: Second.
LYNN HAMPTON: To approve the transaction, the director's transactions as set for in Agenda Item I. All in favor, "I."
IN UNISON: I.
LYNN HAMPTON: It is moved and carried. Thank you. That was a remarkably short

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presentation Mr. Mangin.
BILL BLOSSER: Does this ever -- and this is a piddly little thing, but half of these are approving Stephanie Hallock and the other ones were approving Stephanie Cummings.
STEPHANIE HALLOCK: I have to sign that my name is Stephanie Hallock-Cummings is my legal name. And I'm in the state system as Stephanie Hallock-Cummings for purposes of the timesheets that are in here. That's probably what you're seeing.
BILL BLOSSER: Stephanie H. Cummings is the timesheets.
STEPHANIE HALLOCK: Yeah, but everything else, I do business under Stephanie Hallock. And I'm in the email system as Stephanie Hallock. They knew how I am.
BILL BLOSSER: Yeah, but the system obviously handles that confusion.
LYNN HAMPTON: Yes, even though it is highly refined and quite expert, the Washington (inaudible) --
STEPHANIE HALLOCK: The Washington D Mill facility does not, as do others and I won't get started on my Hillary Rodham Clinton argument. Why people can't handle three names is beyond me.

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LYNN HAMPTON: Okay, all right. So now we go along to Agenda Item J, Informational Item, Annual Performance Measures Report to the Legislature. And we still have Mr. Mangin and Karen Whissler?

UNIDENTIFIED SPEAKER: Yes.

RENAE MARK MANGIN: Yes. The name, Mark Mangin again, and this is about performance measures. You may recall that last year our strategic planning discussion at the planning strategic discussions we agreed to report semi-annually on our performance results. This the first of our planned semi-annual progress reports to you. And today we will share with you DEQ's key performance measures, as reported in the 2005 annual performance progress report. Karen Whissler, who will be doing the presentation primarily, is DEQ's internal organization improvement consultant and our measures coordinator, and so she'll present the 2005 results.

KAREN WHISSLER: Good afternoon, commissioners.

LYNN HAMPTON: Good afternoon.

KAREN WHISSLER: So you have before you three documents. One is the staff report, which provides the context for this agenda item. The second

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is the actual 2005 annual performance progress report, and then the third thing that Helen just handed out to you is our proposed change to the 2005 key performance measures. So what I'd like to do is go over, briefly, our performance measurement system, which can be a little confusing for those who don't work with this every day, and for those who do. And then I will go through the annual report highlighting some of our -- highlighting our accomplishments for 2006. I won't, probably, have time to go through each of the performance measures, but if you have questions I will have an opportunity to go -- to let you ask me questions about them. And then finally I would like to go through our list of proposed changes that we'll be taking to the legislative ways and means committee for approval for the 2007/09 biennium. So if you look first to the staff report I'm gonna just talk about the performance measurement system. At the highest level of our performance measurement system we have the Oregon benchmarks, which are the high level environmental indicators of Oregon's air, land and water. And the benchmarks support Oregon Shines, which is the state's strategic plan for improving the quality of life in Oregon. DEQ has responsibility for several of these benchmarks. In

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the third document the list of 2007/09 performance measures you'll see listed a number of those benchmarks, which include things like the percent of air contaminate discharge permits that are issued on a timely basis, the percent of monitored stream sites with increasing and decreasing trends, and good to excellent condition, the amount of solid waste that's land filled or incinerated, a variety of other ones. Those are abbreviated OBM in the left hand column of that third document.

JUDY UHERBELAU: Is this what you're looking at?

KAREN WHISSLER: That would be it. Those are the 2007/09 key performance measures that we're proposing. So that's the highest level of our performance measures, and at the next level we have our executive measures. The executive measures reflect the agencies highest priorities and they are designed to measure the achievement of our strategic directions, as well as to provide public accountability for our performance. The executive measures themselves include both the key performance measures that are included in the 2005 report before you, as well as a set of internal, largely programmatic or administrative measures that we use to

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track our performance with our strategic directions. So that is kind of the overall framework of our measures system. Does anyone have any questions about that before I go into the results? So turning to the 2005 annual performance progress report on Page 1, you'll find that in 2005 we had 15 key performance measures. Again, these are the measures that we report to the legislatures and these are the measures that we'll be using when we talk to the ways and means committee about our budget. Five of the measures track deficiency and internal management results. Seven track --

UNIDENTIFIED SPEAKER: Seven and eight.

STEPHANIE HALLOCK: It's bate stamped seven and eight.

LYNN HAMPTON: yeah, bate stamped seven and eight.

KAREN WHISSLER: Oh, I'm sorry.

LYNN HAMPTON: It's -- your own internal numeration on the document is a little different than our overall one for the --

KAREN WHISSLER: Okay, well, I'm gonna be throughout referring to the page numbers on the original document. Sorry about that. Seven of

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the measures track environmental results and six track customer service results. And as you'll see, some of the measures fit into more than one of these categories. On Page 3 of the report you'll find a summary of our results. DEQ successfully met or substantially made equivalent progress considered meeting the target for 11 of our 14 performance measures. And that's a 78% success rate, so we consider that to be really good performance for 2005. One of the measures on the page in that table was not implemented in this time frame. That was the ERT performance measure, so I'm basically relaying the measures of -- the results of 14 measures.

LYNN HAMPTON: Is URT set in -- Economic Revitalization?

KAREN WHISSLER: That's correct. And during that year DEQ worked with several state agencies that also are involved in the ERT process to develop a statewide measure. The three measures that we did not achieve targets for were key performance measure number two, which is air quality permit timeliness, key performance measure number 5, which is our water quality TMDL issuance, and KPM number 6, which is the issuance of water shed based permits. So I'm gonna briefly go over what fed into why we

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didn't meet those targets and then I'd like to highlight some of the performance results for each of our programs; air, water, and land. If you look in Page 9 it has the results for key performance measure number 2, which tracks the timeliness in issuing air contaminate discharge permits. This key performance measure is one of the measures that's also an Oregon benchmark. And during the past three years our performance has dropped slightly and in 2005 it dipped below the target of 90%, which was actually a pretty aggressive target for us. There are several reasons for this. One is program avenues including general fund cuts and anticipated federal fund cuts, combined with the increased cost of running the program and the fact that we have not had a fee increase since 2001, meant that we were taking a pretty cautious approach to hiring of staff to support that program. So the ACDB program has been operating below budgeted staffing levels and that impacted our ability to issue timely permits. DEQ's 2007/09 budget request includes a restoration policy package and fee increase, which will fully fund the FTE needed to support timely process of our ACDP permits. Turning to Page 15, key performance measure number 5 is actually one of two measures that track our performance in completely

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clean water plans, also call TMDLs, for impaired water bodies in Oregon. This measure tracks the percent of TMDLs completed from the federal 303D list of impaired water bodies, and that list is actually updated every few years, which results in an ever changing base line. We didn't meet the target for KPM5 during this year, and in fact, the rate of TMDL completion has slowed in recent years for a couple of reasons. One is we've had a reduction in staff in the TMDL monitoring and development program. But we've also had a number of highly complex, very large TMDL projects that we've been working on that have extended the anticipated completion dates. One of those was actually for the Willamette Basin, which we completed in 2006. We now have achieved 872 completed TMDLs. The Willamette Basin was actually the largest and most complex TMDL, and the watershed covers 11,000 miles and has the largest number of industrial and municipal dischargers in the state. As I mentioned, we do have a second measure on TMDLs, which is key performance measure number 4 on Page 13. And this -- on Page 13 -- and this measure tracks a smaller universe of impaired water bodies, specifically those that are specified in a federal court order that mandates that we complete a certain number of TMDLs by 2008 and

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2010. We are currently on track to meet these milestones and we anticipate continuing to meet these targets. This is a high priority for the water quality program. This second measure is one of the ones I will be talking to you at the end of this presentation about that we're proposing to delete in the 2007/09 biennium, which although we consistently good performance with the measure, it is actually duplicative of key performance measure number 5, as it's a subset of that measure.

LYNN HAMPTON: Wait. I --you lost me, I'm sorry.

KAREN WHISSLER: That's okay. That was rather confusing. So key performance measure number 5 is the total -- we base our results on the current 303D list, which is all of the impaired water bodies listed in the state. The second measure is a subset of those water bodies.

LYNN HAMPTON: You mean measure 4 is a subset of 5?

KAREN WHISSLER: Measure 4 and it consists of a list of TMDLs that we're required to complete according to a consenter issued by EPA.

LYNN HAMPTON: Okay.

STEPHANIE HALLOCK: Karen, I don't

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want to interrupt your flow, but I want to make an important point of clarification here that I think you need to know. We met, oh, I don't know, a couple months ago with Paul Sebert with the legislative fiscal office. We will be going through -- and I think because she's doing such a great job today, Karen will probably be going through in front of ways and means. The performance measures would be supporting her. But both of us together will be reporting to the ways and means committee on these performance measures. We met with Paul to talk about what the legislature wants. He was very clear in saying they want agencies to start paring down their number of performance measures, that they have, in general, too many. And we went through with him -- this was one that came up where the subject really was this is duplicative. Why are you having both of these measures? And Karen will talk more in a bit about the decision process on the ones that we are choosing, which she will go over. In this last piece of paper you'll see there's more than one. We started out with, I don't know, 18, 20 measures and we're getting down to 13, 15, something like that. But that was the genesis of that is we're trying to, of course, have the best measures we can for

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ourselves but we're also responding to the legislature. I'm sorry?

LYNN HAMPTON: In this context it's probably helpful for us to know which ones are getting done that the federal government is wanting us to do or demanding that we do too.

BILL BLOSSER: Yeah, similar to what I was gonna say -- between the two of them, I'd give it a five and keep four, because four is a (inaudible) and four shows more progress. Five doesn't look like we're getting anywhere at all. And if I'm going in front of the legislature I'd rather be showing them four than five.

STEPHANIE HALLOCK: Well, I would be certainly happy to convey that on behalf of the commission when we go through our conversation with the legislature, because if the other agencies experience that they're having right now -- Parks is in there right now -- is any indication we will be having extensive dialogues about the performance measures with the ways and means subcommittee. And I think everything is fair game. To me, this whole thing is iterative. We are learning every time we've gone through this we've made improvements, we've learned more, we've changed things and I think it

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will evermore be like that on performance measures. So that's a very legitimate comment.

BILL BLOSSER: Well, five also appears -- not only are we way behind, but it doesn't appear like we're going to ever make any progress toward 100%. I mean, it stays -- it levels off at 80%.

KAREN WHISSLER: It's a measure that --

BILL BLOSSER: (inaudible) to the indefinite future, so it's sort of discouraging.

KAREN WHISSLER: Commissioner Blosser, it's a measure that's very challenging, because the baseline list of sites changes constantly as well, so it is something that we are continuing to look at and we do hope to come up with a better way of tracking and reporting on our performance, but we haven't -- we haven't requested a change, specifically, to that one for this.

LYNN HAMPTON: Commissioner Uherbelau?

JUDY UHERBELAU: Yes, in response, I'd like to say that I think Commissioner Blosser's comments are a little short sided. If you look at -- we're looking at five and it says how we are

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doing and it says, "We've slowed due to staffing cuts." This is something that helps, I think, when you got to testify to show we're not doing any better because they're not giving us enough money. If you're showing that we're progressing this much more smaller subset, we're progressing, you're gonna have a hard time saying, "You know, we're short of staff."

STEPHANIE HALLOCK: And I think that's a good point. The other thing is as Larry just pointed out, when the consent acre measure has an end date of '09 or '10 or whatever, I mean, and the other debate is around process measures. I mean, it's a process measure. Are we getting them done? And then we get into these conversations, which you particularly get into with performance measure 10, which Karen will be covering at some point, or not depending on how much time we have. That's talking about the condition of the water and when you drill down into the measure, what we've learned is we've leveled out. You know we have about 14% of the water bodies that are improving and about 14% that are declining in water quality. So what does that tell us? And then Greg Petit who's sitting here -- see, I'm doing it (inaudible) remembering it. He gives you a very eloquent, thorough description of why

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we have leveled out. And so you get into these -- what I try and argue the point that you need both. You need measures of the conditions that are actually changing in the environment and you need process, for lack of a better term, process measures like these TMDLs that show how you're getting there. But we have those debates as well.

JUDY UHERBELAU: My comments, Bill, weren't that we shouldn't cut back on the number of things we're looking at, cuz I think it's possible we can, but in that particular instance I thought we might be doing ourselves some harm --

KAREN WHISSLER: Okay, I just had one more measure where we didn't meet the target, and briefly it's key performance measure number 6, which is on Page 17. And this is the measure that tracks how we're doing in terms to shifting to a watershed-based permitting program. And in 2005 we developed permit issuance plans based on the watersheds, which we believe will enhance our ability to consider the cumulative impacts of permits on local watershed, and also to work with watershed-based stakeholders to better protect Oregon waters. Our goal is to issue 95% of our permits on a watershed basis by 2010. This is another one of the measures

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that we -- when we talked with our LFO analyst, decided that we would remove from the 2007/09 biennium, mostly because it's an administrative measure that's about how we do our permitting, as opposed to an environmental result. So with that, I'd like to just briefly go over a couple of things in the report for each of the programs. Turning to water quality on page 19, this is one of our success stories and it's about our ability to address our permit backlog, which in 2001 was at an all time high of about 65% of our NPDES permits awaiting renewal. And in fact, was the highest back log in the nation. The back log resulted from increasingly permit standards and an increase in the number of sources that were actually needing permits. In 1994 DEQ permitted 2,700 sources and the number had increased to 4,000 in 2001. So in 2002 we convened a blue ribbon committee, which included industry, environmental and local stakeholders, and they worked with us to identify program improvements. As a result of that we targeted the issue of reducing the back log. We put staff resources on that and we achieved a reduction of the back log to 30% by the end of 2006 for NPDES permits. And also we are at 12% of a backlog for individual and general water pollution control facility

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permits and NPDES permits. Looking at land quality, I'd like to talk to you a little bit about the situation with municipal solid waste, which is on Page 40. So Oregon benchmark 83, which we reported on in the 2005 report, monitors the pounds of municipal sold waste that are land filled or incinerated per capita. This is a benchmark that we propose to add as a key performance measure in 2007. If you look at the graph you can se that there has been a steady increase in solid waste disposal since 2001, although we've also had an increase in recycling. What we know is that recycling programs or traditional materials are fairly well developed, and there's not much room for better capture of materials that are currently going into curbside programs. And to have the biggest effect on decreasing disposal we need new programs to pursue the waste streams that are currently growing at the fastest rate, which includes construction and demolition debris, and durable and non-durable goods that are being purchased and disposed of more rapidly than they were before. Recycling alone can't keep pace with the growing amount of waste disposal, and so programs like our waste prevention strategy and electronic waste recovery and reuse are aimed at not only reducing waste

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generated, but also increasing the reuse of materials. On Page 35 I'd like to talk to you about air quality, specifically key performance measure number 12, which is an Oregon benchmark, which has been DEQ's primary measure of air quality conditions for many years. We are proposing to adopt this benchmark as a key performance measure. The 2005 results show that Oregon's air was healthy to breathe 100% of the time, however the benchmark as originally written was based on a legal definition of the violation of national air quality standards and the associated designation of non-attainment areas, and it didn't adequately capture the healthiness of the air. It was also not comparable to other states. Because of new science and the fact that we have an increased understanding of exposure to chemicals in our air, it's clear that we need to look at many more pollutants. So during the last year DEQ worked with the Oregon Progress Board to develop a new benchmark for air quality that will reflect air quality challenges that we face today as well as that we anticipate tomorrow, and that will be comparable to other states. The results is that this benchmark will continue to reflect the criteria pollutants associated with the national air quality standards,

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but it will be based on the air quality index, which is a national index that allows us to compare to other states. The new measure was also refined to distinguish between air quality that impacts the whole population versus air quality that impacts sensitive populations, such as children, elderly and those that have heart or lung disease. If you turn to your third handout --

BILL BLOSSER: Are we -- are you done with that one?

KAREN WHISSLER: -- I'm sort of -- I'm adding to the other thing that we did with air quality measures, but I'd be happy to answer a question about that.

BILL BLOSSER: Just one quick one. It says -- it shows 100% compliance in 2005?

KAREN WHISSLER: Correct.

BILL BLOSSER: But the text says in 2005 we experience 33 days of unhealthy air in 6 different cities. That would sound like we couldn't have gone to 100%?

STEPHANIE HALLOCK: That is probably -- Andy is here -- that's probably 100% in air quality (inaudible), right? 100% doesn't mean 100% perfect? I think that -- now, I'm guessing.

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BILL BLOSSER: I was comparing the text under how we compare says, "We had 33 days of unhealthy air."

KAREN WHISSLER: Even though we're 100%.

BILL BLOSSER: That would be like 99 or 99.9% or some --

ANDY GINSBERG: So commissioner Bloominhour -- Blosser -- Mr. Blosser, Andy Ginsberg -- (inaudible) suffering from a cold. The -- that's the reason that we're actually changing that benchmark. It's a technical definition of violation of an air quality standard. You have to have so many excedences over a three year period, average the 99th percentile to actually count as a violation. What we want to count now is time from the air quality index was showing unhealthy, which would look at individual days, not ones that technically violate the federal standard.

BILL BLOSSER: So this thing over here -- the graph is your technical thing that no violations -- the title of it says, "Percent of time is healthy to breath." It doesn't say, "Percent of time we didn't violate the air quality standard."

ANDY GINSBERG: Right. You'd have

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to look at the footnotes, but it was defined as a violation of federal air quality standard. That title was put on to make it more understandable, but it actually makes it less understandable.

LYNN HAMPTON: So it's likely that when you change this benchmark next year will show not meeting 100%, because you'll be actually taking into account specific days of unhealthy air in various locations in Oregon.

ANDY GINSBERG: The other different, commissioner Hampton, is that the -- this -- the benchmark that you're looking at is when EPA had the old PM 2.5 standard, and we were actually -- the index -- we had already been looking at the new standard and showing unhealthy days, even though the federal standard hadn't change yet, and so you're seeing that difference as well. Even under the old formula we would show unhealthy air now that we have Klamath Falls in Oakridge violating the new federal standard. But this new benchmark will give it more crispness, because we'll be able to see each city, how many times they're over the -- over unhealthy levels.

LYNN HAMPTON: Thank you. Go ahead, Karen.

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KAREN WHISSLER: So I wanted to mention another result of our work with the Oregon Progress Board to try to better characterize the quality of Oregon's air and its impact on health, and that is that we're also proposing to add another benchmark, benchmark number 76. So if you do look at the list of --

UNIDENTIFIED SPEAKER: Benchmark number what?

KAREN WHISSLER: 76. If you do look at the third handout, which lists the proposed key performance measures, you'll see that we have a new benchmark to track toxic air pollutant reductions. These are pollutants of concern in Oregon and are greatly influenced by individual actions. So together these two measures will better characterize the quality of Oregon's air and its impact on health. We actually are proposing a third air quality measure, more specifically related to diesel particulate emissions, and this will be a key performance measure. And diesel particulate emissions are associated with respiratory diseases such as asthma, heart disease and cancer.

LYNN HAMPTON: That's number 11 on the other side?

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KAREN WHISSLER: Right.
LYNN HAMPTON: Okay.
KAREN WHISSLER: So I wanted to -- I'm not sure how much time I still have.
LYNN HAMPTON: You're fine. You have 17 minutes.
KAREN WHISSLER: Okay, if I can take a minute I'd like to highlight our customer service results, which are also in the 2005 report on Page 33. Just -- it's -- we are continuing to be very successful in achieving good to excellent customer service in the eyes of several of our key stakeholder groups, which include our air quality and water quality permits, as well as onsite septic system owners. We've been conducting biennial surveys of these customers for the last -- well, since 2002, and we met our target -- actually, it's a 2006 target because it's a biennial measure, but we met it in 2006 with 85% of our customers rating our customer service as good to excellent. We do have plans to also include in this measure vehicle inspection customers and hazardous waste technical assistance customers. So I just wanted to highlight that for you. And if you're ready I would like to go through our proposed changes for the 2007/2009 biennium, but I

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would like to offer the opportunity to answer any questions you have about the 2005 annual performance progress report, if you have them at this time.
LYNN HAMPTON: Questions? All right, I think we asked them. Go ahead.
KAREN WHISSLER: All righty. So, yes, as Stephanie has said we are continuously trying t improve on our performance measurement system to ensure that we are providing public accountability and that our measures are really giving us the data that we need to make appropriate management decisions. So with that in mind, we're actually proposing to delete six of our key performance measures, and those are on the back page of that there handout. We are proposing to add seven key performance measures, many of which are existing Oregon benchmarks, and we're modifying two of our key performance measures. What's gonna happen is this is part of our presentation to ways and means where we link all of our policy option packages to our performance measures, and at that time we will be requesting these modifications to the list of key performance measures. I didn't have any further speaking points, but I'd be happy to answer any questions.
BILL BLOSSER: One clarification

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question, on the Umatilla one it shows that as of -- we've only -- it was -- I know this is 2005 where you have data, but it was like 1% or 2% have been eliminated, and today we got a report that we're 50% of the items. Does that translate, roughly, to 50% of the total (inaudible) gotten ride of, because the performance measure doesn't show us getting the 50% for quite a while? I can't remember which one it is.
KAREN WHISSLER: For the destruction of chemical weapons at the Umatilla Depot?
BILL BLOSSER: Yeah, which one is it? (inaudible) -
(End of Tape 4 Side 6A)
BILL BLOSSER: -- I don't know. I'm just confused. It seemed like we should be about 50% now. Maybe the number of items is different than the percent of total pounds.
STEPHANIE HALLOCK: That's true. That is true.
BILL BLOSSER: So even -- so at the end of 2006 we will have destroyed -- even though we (inaudible) 50% of the items, that's only 20% of the quantity that's there, huh?
UNIDENTIFIED SPEAKER: I think

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that's because they've been destroying the hard to destroy, small bombs with small amounts of materials. And they got all those ton containers of mustard gas.
STEPHANIE HALLOCK: Right, it's quantity of agent.
BILL BLOSSER: Okay. So -- I just thought there would be closer together, but now they're getting the big barrels of stuff and --
JEFF MURRAY: Right.
LYNN HAMPTON: Maybe at the end they'll do the mustard, which is the (inaudible).
UNIDENTIFIED SPEAKER: (inaudible).
KAREN WHISSLER: I'm not sure where the 50 came from, but I was working on the ways and means presentation and the data that I had was that at the end of 2006 we had destroyed 26% of the stockpile, which is a big jump and actually exceeds our target. And that, you know, the reason that we didn't meet the target in 2005 was because of a fire and a lot of investigation related to that.
BILL BLOSSER: Well, 50% is in our report from today.
KAREN WHISSLER: Well, you're more informed than I am.
BILL BLOSSER: Well, 50% of the

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total items, so it's different.
KAREN WHISSLER: Items, yes, it's different.
LYNN HAMPTON: The total agent.
STEPHANIE HALLOCK: If I could just make a process comment that occurs to me during this conversation. As I said, this is iterative and I think that -- Karen can help me. I can't even remember now how involved you all got to be in this -- the kind of development of the measures initially and in this iteration. But obviously we have a lot of interface with the legislature on it, so probably like -- of course if they go to annual sessions, god only knows when we'll do this. But theoretically in the summer -- whenever we start the conversation about what is this gonna look like for the next cycle we should be starting that with you, so like some of these things that you're reacting to now we can somehow figure out how to bring you into the process earlier, because in a way we and LFO were sort of driving you right now. And I think we want to, ideally, turn that around. And the -- by the way, the benchmark people -- I mean, everybody and his brother gets a dog in this fight sooner or later about what we should be measuring. But you are our

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commission and you know you're the big dog, as far as I'm concerned.
KEN WILLIAMSON: So what does the legislature say about this?
STEPHANIE HALLOCK: I'm glad you asked this question. The other reason that this is iterate -- first of all, I think it's very important, and I certainly intend to do this, to be absolutely non- defensive about these measures. It is a learning process. It is iterative. It isn't always to -- your earlier point, commissioner Blosser, say that we're doing a great job. The idea is really to be looking at what matters and measuring what matters and making sure we're doing the right work. And so we have not always, as an agency, nor has the legislature, always really been focused on this. The current legislature notably driven by Senator Kurt Trader, who's one of the co-chairs of ways and means, and also representing Mary Nolan, who historically is very interested in this, is putting in enormous emphasis on performance measures in the entire budget process, to the point where we have to, in our presentation, show how all of the policy option packages in all of our bills relate to our performance measures in some way. And then there

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are, you know, things that kick out -- we'll have to explain why there's not a relationship. I mean, they're taking this increasingly seriously. And I don't expect to see that change, nor do I think it should change. I mean, I think it's a good thing but we will have to grow all together to be sure we're really getting it -- measuring the right things and be open to change and suggestion and criticism and whatever.
KEN WILLIAMSON: so the one that I would suggest that you should look at, ultimately when we get down the road here, is how many miles of streams that were impaired are now not impaired. That's the number that we need, not how many TMDLs you've written or whatever. That's ultimately the impact number and those numbers will start accumulating here sometime down the road right as these TMDLs kick in.
STEPHANIE HALLOCK: That is our hope and we actually have some evidence and Greg can certainly speak to this that that is happening. The other key variable in there, however, is this measure relates -- is only from data collected at monitoring sites, and so statewide we have 144 monitoring sites. That is by no means a full monitoring network for the

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entire state. So these are the trends where we monitor, but obviously we are not able to speak to the trends where we don't monitor. Does -- do you want to add anything? Those water people are conferring there and making sure I get it right.
GREG PETTIT: Chair Hampton, members of the commissions, I am Greg Pettit, the interim administrator of the laboratory division in DEQ. At one time we had a performance measure that was basically the miles of streams on the 303D list and whether that was going down or not. We found that that was misleading -- in terms of the environmental outcomes, because the 303D list is not an accurate representation of water quality across the state. It's only a list of streams where we have data. As we do more monitoring effort or as we change standards the 303D list can change dramatically. So that's why we went to the water quality index, which we thought was a much more objective measure of water quality. It didn't change as a result of changes in standards, and it was based upon a set network of sites across the state. Ideally what we'd like to have, and it's in our monitoring strategy that we've developed, is a probabilistic network of sampling sites across the state that would give statistically

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accurate data that would represent all the stream miles within the state. If we had that then we could give a very accurate accounting of whether or not the water quality across the state was improving or declining. Right now the best substitute we have for that is our ambient river monitoring network.

STEPHANIE HALLOCK: Are you done?

LYNN HAMPTON: So at this point -- this is an informational item, all right. So -- all right, thank you very much.

KAREN WHISSLER: Is this the kind of thing you were hoping to have, in terms of reports and discussions on this issue, cuz we want to be responsive to what you hoped to do as a commission on our performance measures?

JUDY UHERBELAU: It's helpful.

LYNN HAMPTON: Yes. I'm interested in hearing what changes you propose and why, so I enjoyed that. Thank you. All right --

STEPHANIE HALLOCK: it is the director's dialogue?

LYNN HAMPTON: -- Agenda Item K.

STEPHANIE HALLOCK: Yes.

LYNN HAMPTON: Director's dialogue, Stephanie, do you want to come over here closer to us

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or do you want to speak from there?

STEPHANIE HALLOCK: Well, I could come over there. That would be a nice change of pace for everybody.

LYNN HAMPTON: Because there -- we're usually a closer quarters. We're in rather grand chambers today.

STEPHANIE HALLOCK: Thank you very much. The first item is just an update on our efforts to build stronger relationships with the tribes. As you may recall, I sent out letters offering to come and visit with all the tribes. We've made one visit with the Siletz that went very, very well. I had planned another visit to the Qaquille [phonetic] in March, but I've sat down and looked at the ways and means preparation calendar, and then you have an upcoming meeting in April in Bend, so I've just decided to postpone all my tribal visits until after that April commission meeting, we'll be through ways and means and I can focus more attention on it. But I think it's gonna be great. We were very well received at the first one. The second item in my dialogue has to do with the several petitions for reconsideration of the Willamette Basin TMDL, which we did deny within the timeframes, but we made it very

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explicit both, in our conversations with the petitioners and in our letter, that we want to work with them through the implementation process on these TMDLs to address their issues of concern. We've even talked with them about the TMDL in itself is an order, writing clarifying orders for implementation that will help address their issues. So we are hopeful that there won't by any lawsuits as a result of this, but we aren't sure yet whether or not. Several of these were municipalities and then there was also pulp and paper as well. But that process is still moving along and I wanted to make you aware of that. The third item is our Bend office. Actually this reflects -- they were in the process of getting relocated. They have successfully relocated to what are temporary quarters, although we -- I think are 99.9% sure they won't be going back to where they had been, whether they stay in these temporary quarters, which are on Reed Market Road, which is sort of the south end of Bend, if you're familiar with Bend. How long they'll be there, we're not sure, but they are relocated and open for business now, as I understand. Yes.

BILL BLOSSER: I wanted to ask you something about that TMDL thing.

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STEPHANIE HALLOCK: Sure.

BILL BLOSSER: You're asking people to look at these innovative strategies, keep recovery, trading, so forth -- these seem like they could end up being pretty darn expensive for some of these people, is that true?

STEPHANIE HALLOCK: It's possible. You know, we're obviously trying to help people find solutions that are doable, and that means costs as well. TMDLs are -- we use the term, "Adaptive management," for water quality standards. We use that in the TMDL business as well. I mean, we want to try and find ways to do things that are reality-based, and in part, we're learning as we go along as well. When it's not -- means that we may change some of our directives, as well, as we work through this with folks. The Willamette -- our rational on the Willamette TMDL is that it was the first, maybe in the nation, basin wide TMDL that was ever done. It was extremely complex. We had all of these issues that, ultimately, were petitioned. Many, if not all, were debated during the process, we made decisions, we made technical choices, we made policy choices. We submitted the TMDL to EPA and they approved it. The petition wanted us to do all that

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again and we said, "No." We said, "We want to work out these issues through the implementation process." And that's still our intent, whether it means we have to change some things or we ask other people to change some things that will play out in the implementation. But we did not see any overall gain by starting over, sort of along the fish consumption lines, on the TMDL.

BILL BLOSSER: Do we project when the Willamette will ever get down to what is -- or it meets the TMDL targets?

STEPHANIE HALLOCK: Oh boy. I don't --

BILL BLOSSER: Is it 100 years?

STEPHANIE HALLOCK: -- unless there's somebody in water who knows -- I don't know the answer to that.

BILL BLOSSER: I mean, is it a long, long time? 100 years or 1,500 years?

LAURIE AUNEN: Chair Hampton, Commissioner Blosser, for the record, Laurie Aunen, water quality division administrator. I don't have the exact numbers in my head, but if you look at the mercury -- I believe it was on (inaudible) 50 years for temperature. It was, if not that, more. These

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are long terms issues and the reason being, a lot of them are driven by very complex and non-point source issues. So they are long timelines. Some of the things in the TMDL aren't on those long timelines, but it is a very --

BILL BLOSSER: Do we have enough of a handle -- a regulatory handle in any agencies to take care of the non-point source stuff?

LAURIE AUNEN: The structure for non-point source stuff right now is that we deal with the local governments that address storm water control, and then the Department of Forestry regulates under the forest practices act and Department of Agriculture has its water quality management plans. That is the current legal structure in Oregon. There aren't -- if we wanted different regulatory handles that structure would have to change.

BILL BLOSSER: But I'm just wondering whether you're -- I guess what you're saying to me is with the existing implementation of those three sets of regulatory hammers temperature, for example, is 50 or more years away.

LAURIE AUNEN: That's correct, commissioner Blosser. The one thing I would say is the way the TMDL is designed and the way we want to

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see it implemented is we believe that there are -- in the Willamette partnership, which you may have heard is one area, but looking at water quality trading for temperature where you can actually make local actions that do benefit temperature on a shorter time frame where you've got the worst problems. Now that -- so you're looking at both local actions to make improvements in the short term, but if you're talking about the entire system and the 11,000 miles that we're talking about, that is -- that is the time -- it's got a much longer timeframe.

BILL BLOSSER: Are there interim benchmarks, like measuring every five years of remaking it, and then some kind of promise that if we're not staying on the trajectory that we will do something? Or are we just gonna measure it at 50 years and say, "Oops, missed it by 50%"?

LAURIE AUNEN: Chair Hampton, commissioner Blosser, the intent of TMDLs is that we're supposed to be checking back and seeing how we're doing. Resource wise, most of our resources today are going into meeting the consent decree of developing the TMDLs. We certainly have conversations in the water quality program about how you -- and this gets back to Greg Pettit's comment about the

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monitoring strategy. This has been identified as something we want to do more and better on. Ideally, if we're successful this session getting additional resources for the program we're not gonna stop there, but continue to build and ask for more to do the things that we really think we need to be doing for the state. So we are now where we want to be in terms of being able to measure as frequently as we want, but it's a goal.

STEPHANIE HALLOCK: And just -- we are doing some. I mean, the very first TMDL that we've done was in the Tualatin and we have seen improvements in water quality. We've also identified some other problems that have surfaced that we can address. So we are checking -- not just doing them and going away forever, and we're learning from them. And we can -- we've already - - and Greg probably can provide you more of a summary, it's not just in the Tualatin. I mean, we're really starting to see that where you do a TMDL it makes a difference.

LYNN HAMPTON: Am I misremembering or did somebody today say that the agency's request for additional monitoring funds was not in the governor's proposed budget?

STEPHANIE HALLOCK: No, it's a term

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of art, with regards to monitoring. What is in the governor's budget is water quality toxics monitoring. The ambient monitoring is -- there is no additional request for ambient monitoring.

LYNN HAMPTON: All right, thank you for clarifying that for me.

STEPHANIE HALLOCK: Moving on quickly. Just a heads up that as you know the septic program we can delegate to counties, if they choose to take it on. Douglas County has actually gone back and forth, historically. They have now stepped in and they want to administer the onsite program themselves. And this is just a summary of how that transition will occur. We -- just as a side note, this is potentially a program that somehow can get impacted by this county payment problem, and we're not exactly sure yet how that is going to play out, if it does. This program is required to use -- the counties are required, regulatory, to use the fees that they get for this program just to pay for this program. So whether or not they come to us and to you, because it would be a rule action to ask for some loosening of that remains to be seen, depending on what happens with county payments. The next is a good news update on a federal grant. A combination

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of a federal grant and business energy tax credits that are gonna help tied water and shaver to upgrade three diesel tug boats, and reduce air pollution from tub boats going up the -- up river, up the Columbia. The next is there is actually a letter attached to my report for you having to do with fish recovery planning. The governor asked the effected agencies that you see listed there to make sure that we are fully engaged in this fish recovery planning effort. I'm sure you've heard of the conservation plan for the coastal Coho. There are a number of other conservation plans that are being worked on. They specifically ask that we make our boards and commissions aware that this is an important effort for the governor. It started under the Oregon Plan for Salmon and Watershed. And that's really what I'm doing for you is advising you that we continue to be invested in this effort. The Fish and Wildlife Department is in the lead. Their commission will take the action on adopting these conservation plans. Every now and then they may come and ask for some statement of support from other boards and commissions and they just wanted you to have a heads up. The next item is also, as was anticipated nationwide, there is starting to be some litigation around the

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low vehicle emissions standards. There has been litigation in Massachusetts and California. The short version is we're not changing anything at this point, we're proceeding ahead with our -- nothing has happened on the litigation front that will change what we've done in Oregon. What we've called out here is that the one potential area is if you remember in Pavli Coulev, the Pavli portion was for these very efficient autos and like electric cars and that sort of thing. That is the part that apparently may ultimately be at risk. These are the CO2 regulation, but so far we're moving ahead. The next item, if you saw the Oregonian -- I think we have a -- in your packet also from the Oregonian the story on the environmental lawsuit that has been filed against EPA for failing to regulate the cement kilns. And as you know, we have Ash Grove. We are in the process of getting data to provide some kind of a recommendation and/or information for you to have a discussion about whether or not you as a commission want to move forward, or direct us to move forward with regulations.

LYNN HAMPTON: Question, commissioner Uherbelau?

JUDY UHERBELAU: Two questions.

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First of all, it says in the first paragraph that DEQ and Department of Justice, I imagine Larry, are evaluating whether to join this suit. When do you anticipate making the decision?

STEPHANIE HALLOCK: Do you know, Larry? I don't know. I'll find out when the timeframe is, unless you know, Andy. Do you know?

JUDY UHERBELAU: Okay, and the second question is that it looks like the company is doing its own sampling. Would it not be better to have an independent evaluation?

STEPHANIE HALLOCK: So, Andy, do you want to comment on how that works and who we make sure that we're getting good data?

ANDY GINSBERG: Okay, Andy Ginsberg, air quality administrator. The company has filed a source test plan with us, which we've reviewed and approved and are hiring an independent contractor to do that work, and then our source test coordinator will review the results. So we'll be monitoring more carefully what happens there.

JUDY UHERBELAU: You have confidence?

ANDY GINSBERG: Okay.

STEPHANIE HALLOCK: So that's all I

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intended to say on that, but I do want Andy to stay here cuz you may have questions on the next one. This has to do with the mercury rule that you recently adopted on an -- in an unintended consequence of that rule that Andy is going to (inaudible) to you, because I am not 100% sure I can fully do it articulately.

ANDY GINSBERG: The rule limits -- the total -- since we're not going to be participating in interstate trading starting in 2018, Oregon has 60 pounds of credits, mercury credits, starting in 2018. 35 of those will be used by the Boardman -- the existing coal fire power plan in Boardman. That leaves 25 credits for possible new sources. The federal law set up a process where those remaining pounds would be divided among all new sources that might come into a state. That scheme only makes sense if you allow trading. If you think of it this way. Let's say we had a new source that came in and used 15 of the 25 pounds, leaving 10 left. And another new source comes in and need 15 more. They would divide up what was left and the original plant that got built would lose some of the credits that it had and wouldn't be able to buy any from another state and be forced out of business. So

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we created, unintentionally, we created an uncertain situation where no -- really no new power plant could be built in Oregon. No coal fired power plant, even a super clean coal gas vacation plant, because they can't rely on the fact, once we give them the mercury credits, that they'd be able to keep them. We have a potential new coal classification plan evaluating the Port West fort site and they let us know that their bank will not even give them a loan to investigate the situation further if they can't even be assured that -- once they were permitted that they would be allowed to continue to operate. So what we're considering doing is proposing revisions to the rule that would give those credits out on a first come, first serve basis. So it wouldn't increase the amount of mercury used in Oregon, but it would say the first company that comes in for the remaining 25 could get them and be assured they could keep them.

BILL BLOSSER: I remember this came up in the hearing. We had a bunch of letters and stuff about this, and I had this vague recollection that one of the reasons we didn't try to fix it then was that we thought the legislature was gonna do something?

ANDY GINSBERG: I think the issue

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was raised after the close of the comment period, so we couldn't really address it.

BILL BLOSSER: Oh, maybe that's what it was. Okay.

ANDY GINSBERG: So our plan is to -- since it's a really small technical correction, we'll just roll it in with the next rule making that comes up. We have a rule making we're looking at streamlining industrial permitting, so it kind of fits within that and we'll bring that before you as soon as we can.

STEPHANIE HALLOCK: The next item is just a heads up on the smoke management planning. When you go to bend in April I think we're trying to have a field trip where you can actually see some smoke management type of activities. Commissioner Williamson has been helpful as a link with the board of Forestry. We have had some challenges on coming to agreement with the Department of Forestry and where we ought to be in smoke management. So far we continue to move forward on that and I will keep you apprised, as will commissioner Williamson, on whether or not we need any further assistance from our commission perhaps in any kind of joint conversation with the board of forestry.

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LYNN HAMPTON: Did I hear some reference today, is it proposed legislation to take control of the air quality smoke issues to this agency and would it cover this? Did I misunderstand?

(Inaudible comment)

LYNN HAMPTON: Just field burning?

STEPHANIE HALLOCK: Yeah, this is not covered by that. The legislation that was referred to -- there's a field burning bill that representative Holvy has probably dropped, and then there is a bill, a joint bill, that ODA, Department of Ag, and DEQ has that would bring some agricultural practices into regulation under the clean air act.

LYNN HAMPTON: But not this issue?

STEPHANIE HALLOCK: Not this issue.

LYNN HAMPTON: Sorry, if I'm confusing things.

STEPHANIE HALLOCK: No problem. It's understandable. The lower Columbia meetings. This is just an FYI and Commissioner Hampton has been involved in this as a follow on to your Astoria meeting. We have continued to have town hall informational meetings with that community. It's been very good to do that and this is just a summary of those meetings. There continues to be a lot of

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interest in that community, and we certainly appreciate Commissioner Hampton making the long journey down there. I think that the folks really appreciated it as well. And we're still -- this is just gonna be ongoing, as long as there is all that activity along the Columbia.

LYNN HAMPTON: Now, Stephanie, when those answers to the questions that the community raised there are developed, are you gonna distribute those to all the commissioners?

STEPHANIE HALLOCK: we certainly will. Absolutely. And I think that's Dick Peterson who's probably on point for that. The last item in my report -- there is also -- you will see a memo in here that came from Chip Terhune, who's the chief of staff. The governor's office has requested from each agency the information outlined in those three points that we're working on right now, and that they want to have by the end of March, the first draft. And obviously we will be providing that to you as well. I wanted to tell you how we are framing what we are going to provide. The first is they want us to go over the major accomplishments for '05 and '07. At the end of every year I sort of do a summary email to all staff and I think I CC you on that. I think

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we're gonna use that to glean the accomplishments from -- and probably our performance measures as well. And then the second thing, the strategic plan for '07/'09, we're gonna use our strategic direction. We've developed our strategic plan with you. Probably the most challenging one is they want the longer termed strategic challenges and recommendations. We have, in part, begun that discussion with you at the end of last year when we talked about emerging issues and things that are of concern. So we will frame those -- what we think we want to say here, and I'll probably have to communicate to you by email on what we're intending to send in. It sounds from Chip's memo like it's gonna be fairly iterative. They want a first draft by the end of March, but then there will be opportunities to make some changes, but I definitely wanted you to be aware that they have requested that from all the state agencies. And that concludes my director's dialogue.

BILL BLOSSER: So are we going to spend some time on that in the April meeting?

STEPHANIE HALLOCK: I think we should. You know this is -- their timeframe is somewhat of a dilemma, and it's also a dilemma because it's right in the middle of getting ready for

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ways and means. But their -- his memo -- he says, "Draft due March 30th to the Governor's office. Drafts will be reviewed and returned with comments by May 15th." I think what I would like to do is get it out to you electronically as soon as we get it done, even if it's before the end of March, and incorporate any input you have electronically before the end of March. And also have it as a discussion item for the April meeting, so I can always -- I'm sure they will accept any addenda that we want to give so it includes your input. Helen is writing that all down, right?

JUDY UHERBELAU: In your dialogue you talk about the possibility of a summer retreat (inaudible), I mean, is that something you're developing, thinking about, whatever, or is just kind of out there?

STEPHANIE HALLOCK: I absolutely think that we should have a retreat with you after the legislative session. And I'm not sure, Helen -- and maybe Helen can speak to this if we are thinking of using one of our already scheduled EQC meetings for this, or if this would be in addition, or if you want some input. You need a microphone.

HELEN LOTTRIDGE: Our meetings are

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not decided yet. It would be helpful to have some input. The June meeting is in Portland and so that might be a good opportunity.

STEPHANIE HALLOCK: It might be. It might be a little early if the legislature isn't finished, because part of our goal was to take a picture of what we received and what we didn't receive and factor that in. So would you be amenable -- somewhere of course is difficult because people have vacations. We may just have to figure it out logistically. Are you amenable to an overnight somewhere at Silver Falls or someplace like that? Okay.

JUDY UHERBELAU: Where is our August meeting? Is that set?

STEPHANIE HALLOCK: Helen, do you know where the August meeting is?

HELEN LOTTRIDGE: That isn't set yet. We don't know the exact location yet.

STEPHANIE HALLOCK: That might be a good one. If you've already penciled out the August dates, so you know you're committed to them, that might be a good one to use, timing wise, for this. That's it from me, unless you have other questions.

LYNN HAMPTON: Other questions.

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Thank you, Stephanie.
STEPHANIE HALLOCK: You're most welcome.
LYNN HAMPTON: Okay, that has brought us to the end of our agenda for today. We are ten minutes early. Thank you, Stephanie. I'm looking at tomorrow. I don't have a -- oh, maybe it's in my folder -- the informational item on budget and legislative update. Will we be getting something in writing on that today or is that gonna come to us tomorrow?
STEPHANIE HALLOCK: There should be Agenda Item L in your -- you don't have an Agenda Item L in your binder?
LYNN HAMPTON: It is not in my binder and if it came to me separately I no doubt --

(Inaudible discussion)
LYNN HAMPTON: Well, there was also a memo from Greg as Agenda Item L that had a DEQ legislative update, so we'll be sure --
(Inaudible discussion)
LYNN HAMPTON: We have the green and white sheet, but I don't see another memo.
UNIDENTIFIED SPEAKER: And nothing

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under Tab L in your binder, so it didn't get in there? Okay, we'll be sure and bring copies and he'll be talking through those as well.
LYNN HAMPTON: Great.
STEPHANIE HALLOCK: And also I think Tanesha had provided some -- those of you who are staying the night, some restaurants that are near the hotel.
(Inaudible discussion)
STEPHANIE HALLOCK: Yes, and we start at -- the plan tomorrow, by the way just so you know, is we are hoping that Representative Jackie Dingfelder and perhaps Senator Brad Hovakian can stop by and just -- and the reason we have invited both of them is they are the chairs of the substantive committees on each side who are looking at our legislations. And we thought they would be good people for you to ask questions or hear from. And then we would combine that, depending on if and when they arrive, with our -- Greg's and my legislative update to you. And we do not have executive session tomorrow and we are not staying for lunch. When we're done with the plastics --
JUDY UHERBELAU: (inaudible) we're out.

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STEPHANIE HALLOCK: Right.
LYNN HAMPTON: No, it's executive session, but that's not going to prove necessary?
STEPHANIE HALLOCK: That's correct.
LYNN HAMPTON: Okay, we are done for the day.
(End of Tape 3 Side 7A)
LYNN HAMPTON: Having waited patiently for me to arrive, which I appreciate. Thank you very much everyone. I think that we'll -- if Representative Dingfelder can join us later that's great and --
STEPHANIE HALLOCK: He'll be here at about 8:45 so whenever she comes in we'll --
LYNN HAMPTON: Okay, we'll just suspend operations and take her. So here we are at Agenda Item L. Mr. Greg Aldridge.
GREG ALDRIDGE: Good morning, Madam Chair, members of the commission. I'm Greg Aldridge, government relations manager and I'm here today to provide an update about legislative issues before us at the session. We'll start with -- overall the session seems to be off on a very fast pace compared to other sessions. There is a very positive, upbeat attitude and so far most activity has been very

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favorable to DEQ. Now I'd like to get into some details on the major activities that affect DEQ. You have two handouts in your package. One is the status update report that looks like this, and the second is the green and white sheet, which is a -- it combines both our legislative proposals and our governor's recommended policy packages into one two pager. And where applicable I will note for each bill the corresponding budget policy package number, since we talked about those so many times in the past year. This reference sheet also provides more detail on funding and staffing for each policy package and it lists all the agency bills, including our budget bills.
STEPHANIE HALLOCK: Excuse me, for just a minute, Greg. Helen, do you have another copy of L that we could bring for (inaudible)? Thank you. Sorry to interrupt you. Go ahead.
GREG ALDRIDGE: Okay. First I'd like to start with the bills related to the air quality program, and first is Title 5, which is Senate Bill 107 and relates to policy package 112. This increases fees for major industrial permittees to equal the cost of the permitting program as required by federal law. About two weeks before the first

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hearing on February 8th, industries "no" position on the proposed 24% fee increase changed to opposition. Industry was interested in concessions on regulations that exceed federal requirements. And to give you some examples of recent activities that exceed federal requirements would be the mercury decision and green house gas decision. Negotiations between stakeholders and DEQ continued up until the hearing, but no consensus was reached. The bill passed out of the senate environment and natural resource committee on a 3/2 vote along party lines. DEQ is meeting with members of the senate in anticipation of the floor vote, and at this point in time a vote has not been scheduled. The larger issue for us to consider is not so much on the senate side, it's really gonna be on the house side where there's a 31/29 margin. And we know a number of members just (inaudible) like to vote for fee increases. Moving on to clean diesel, which is house bill 2172, package 119, provides grants, loans, and tax credits to retrofit, rebuild or replace older diesel engines and to reduce diesel idling. This bill still has broad support and no known opposition. The first hearing is scheduled for next Monday in the house energy and environment committee. The governor's recommended budget funds this

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work at $3 million in general fund, and $1.5 million dollars in federal funds. And of course this is a governor's priority bill. Moving on, Heath Smart for Clean Air, this is Senate Bill 338. This was originally drafted for DEQ but is now under the (inaudible) of the Senate, Environment and Natural Resources Committee, partly because the package itself, the policy package, was not funded in the governor's recommended budget. It provides funding to help home owners replace old, uncertified wood stoves with cleaner options and includes the requirement for removal of uncertified wood stoves upon sale of the home. The bill would also fund the grant program by redirecting asbestos and open burning penalties from the general fund to the grant fund. While the cost of the grant program is not included in the governor's recommended budget, the governor's staff supports the bill and hope it can be added back if there is more money available through the next revenue forecast. After an initial hearing DEQ is working on some clarifying amendments with the Hearth Products Association and the Realtors Association. AOI had expressed strong opposition to the funding mechanism, which is the diversion of the penalty dollars from the general fund to a specific grant fund, however we

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were able to work out a solution with them that preserves the funding and basically that agreement places a cap on how much money can go into the penalty fund. A work session will be scheduled once the amended bill is available for ledge counsel. And there's a little history here. There's a big backlog in ledge counsel and bills coming out, so there has been some delays in bills moving forward because we're waiting for amendments. So you'll hear that again later on. Low emission vehicle registration. This is House bill 2272, not 2172, as noted, and relates to policy package 118. And this would require proof of compliance with California emission standards when a new vehicle is registered in Oregon. The bill passed the house transportation committee. Sorry that it said, "Energy Environment." It was actually in transportation, because it was a DMV bill. And it passed unanimously and it passed on the floor vote with 48/8 as the vote. The bill has no fiscal impacts, so it will move directly to the senate for consideration. We don't have any schedule yet for future hearings. Next is agriculture air quality. Senate bill 235, which was introduce jointly with the Oregon Department of Agriculture to allow regulation of agriculture to the extent necessary to comply with

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the federal clean air act. If you remember, there's a petition before EPA that could actually take away our authority to run the air quality program in the state and this bill would address that and settle the issue with EPA. Environmental groups are not satisfied with the bill and plan to push for amendments that go beyond the clean air requirements. The agricultural industry is equally determined to maintain the requirements of the bill as proposed. And at this point in time we expect a hearing sometime in early March.

LYNN HAMPTON: Question, Commissioner Uherbelau?

JUDY UHERBELAU: Can you give us an idea of what these amendments that are being pushed that are over and above the clean air act by the environmental groups?

GREG ALDRIDGE: There's nothing specific in -- Chair -- sorry. Chair Hampton and commissioner Uherbelau, there's nothing specific in writing yet. We understand that ammonia emissions is a major concern and if you think of in the gorge are the three mile canyon with the large dairy herd there, ammonia emissions is something they're very interested in. Right now we don't have authority to

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regulate ammonia in the state as something's been regulated in other states. There's also just opposition to large dairy farms, such as the three mile canyon. So there's some groups that are interested in trying to limit that, but I don't know if you'd see that in legislation. Moving on to field burning. Burning is used to dispose of leftover straw and stubble on fields after grass seed harvesting. Already Oregon statute limits the number of acres that may be burned in the Willamette Valley and the Department of Agriculture actually operates this program. However, consistently many residences in the -- particularly the southern part of the Willamette Valley have concerns about smoke impacts. Representative Holvy from the Eugene area is introducing a bill that would eliminate field burning statewide. We as an agency have no position on the bill, but we, with the Department of Agriculture and the Department of Human Services, the public health division, have been providing technical support on issues related to burning. Also there's likely to be an impact on the Department of Forestry because we understand that the issue isn't just field burning, it's also smoke coming in from forestry burning. No hearing has been set for this state and we just found

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out that the governor is very interested in this bill, because I believe he was in the south valley for a long time and was also inundated with a lot of concerns about field burning. Now moving on to the land quality program; the four land quality fee bills passed out of the Senate Environment and Natural Resource Committee on February 8th, three of these bills actually had a 5/0 vote, which is very positive. First the Senate Bill 108, which relates to policy package 131 and helps maintain adequate funding for hazardous waste work by increasing hazardous waste generation fees. Senate Bill 104 relates to policy package 130, maintains adequate funding for our underground storage tank program. This is the one that did not have a 5/0 vote. It was a 3/2 vote, and the reason two people voted against it was, one, there's already a provision for a sunset date in the statute and Senator Atkinson did not want to see that eliminated. And the other was from Senator Byers. He had a concern that their penalty dollars are going directly to DEQ instead of to the general fund, and of course that brings up the concept of bounty hunting. For Senate Bill 105, Policy Package 134, maintains adequate funding for our work related to marine spill prevention and response

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and also addresses the new liquefied natural gas impacts. And then finally, Senate Bill 106, Policy Package 132, which provides funding to pay for auditing, heating, oil tank decommission, and cleanup work. The next consideration of these bills will be by the full senate on the floor. We do not have a day yet for when that will occur. We expect probably in the next couple weeks.

LYNN HAMPTON: Commissioner Uherbelau?

JUDY UHERBELAU: Thank you. Going back to Senate Bill 104, did I hear correctly that you were talking about the 3/2 vote and that Senator Atkinson voted against it because it already had a clause -- the existing law has a clause in it wherein it will no longer be in existence, that law, is that what you're talking?

GREG ALDRIDGE: Chair Hampton and commission Uherbelau, that's correct. There's already a sunset day in the current statute and that sunset date is for, I believe, January of 2008. I think what he would prefer is maintain a sunset date, but obviously extending out farther than January 1st of 2008. But I think he likes having the fact that there's some closure or check in date in the future.

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JUDY UHERBELAU: So when you were proposing this new bill, you didn't take that into consideration and also ask for them to extend the sunset date?

GREG ALDRIDGE: The proposal we had, commissioner Uherbelau, was to actually remove the sunset date.

JUDY UHERBELAU: You did. Okay. That's what I wanted to know.

GREG ALDRIDGE: Oh sorry. Yeah. The next two topics, obtronic [phonetic] waste and bottle bill changes. There are no DEQ bills, but obviously both of them are likely to affect us. So starting with electronic waste, there are there comprehensive electronic waste management bills that have been introduced. The house committee on energy and the environment held an initial information session on electronic waste on February 7th. Committee Chair Dingfelder formed a work group of interested parties, which includes DEQ, to reach a consensus on bill language. And she appointed vice chair Cannon as chair of that group, and hopefully the goal is to come up with a consensus by the end of February. The three bills focus on the recycling of personal computer, monitors, laptops, and televisions through a

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system managed or financed by product manufacturers. And then bottle bill changes --
LYNN HAMPTON: Greg?
GREG ALDRIDGE: Yes.
LYNN HAMPTON: Excuse me for interrupting you, but can you give us just a short summary of what the primary issues are that are gonna have to be worked out?
GREG ALDRIDGE: If I could ask Bob Danko to come up who's actually working on it. Thank you, Bob.
BOB DANKO: Madam Chair, commission members, I'm Bob Danko, land quality division and point person for electronic waste. There are several different issues that need to be worked out. I call them details at this point. There seems to be pretty good consensus among the manufacturers, the retailers, the environmental community, local governments and others on this manufacturer responsibility bill. It's just the details. For instance, if we start with a list of devices that are covered, like Greg said, do we build in a process in the future that, say, the commission, you or some other body maybe add to that list as technology changes? So we're really working on the details, but the general shell I think is a

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pretty good consensus on.
LYNN HAMPTON: Great. Other questions? Thank you.
GREG ALDRIDGE: Next is bottle bill changes. There are at least three bills addressing Oregon's bottle bill statute. Senator Verger has introduced a bill that expands the bottle bill to include all beverage containers other than milk, raises the deposit to 13 cents with a refund of 10 cents back to the purchaser, captures the unredeemed deposits and establish redemption centers as an alternative to returning containers to stores. There will be a second bill focusing on sort of the same issues, and then a third, less comprehensive bill, that will just focus on adding water bottles to the existing statute. The senate environment and natural resource committee had two hearings this week and we understand the outcome of that will be a working committee, again, DEQ is likely to be part of that working committee, trying to reach consensus on one bill that will go forward.
LYNN HAMPTON: Who from your department would be likely then to participate?
GREG ALDRIDGE: Again, be Bob --
STEPHANIE HALLOCK: Greg, could I

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just add one thing?
GREG ALDRIDGE: Sure.
STEPHANIE HALLOCK: On the hearing this last week it was interesting, they had legislative leadership come and testify when Senator Verger presented her bill and Senator Courtney was Representative Mercury, the speaker of the house. So there is a lot of interest in this and I think a lot of folks really would like to see the bill expanded. So I have not been in the hearing to see all that so it was kind of interesting.
LYNN HAMPTON: I just have one more brief question. What's the situation nationwide with expansion of the other bottle bills that we're aware of in the country as -- have any of the other ones been similarly expanded.
STEPHANIE HALLOCK: I suspect Bob is gonna have to come back and talk to us about that, if you known the answer to that.
LYNN HAMPTON: I really only need the ten second version, so I don't want to hold us up.
STEPHANIE HALLOCK: Okay, Peter Scandalo is our staff person in solid waste who supports (inaudible) the technical side.

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PETER SCANDALO: Chair and members of the commission, there -- at this point, nothing has moved forward, as far as expanding existing bills. We did have Hawaii add a new deposit legislation that went into effect in 2005, so there are now 11 state with bottle bills. There are very active campaigns in New York and Massachusetts and a couple other states to expand, but they haven't actually done that yet.
LYNN HAMPTON: all right, thank you.
GREG ALDRIDGE: Next, moving on to the water quality program. This first bill relates to mixing zone, buoy or signage bill, and it's Senate Bill 317. This would apply to water quality permit holders who discharge persistent bio-cumulative toxins into Oregon's waters and concentrations that cause waters to fail to meet water quality standards. It's important to link that all together, because in one way you look at that, if they're in conformance with their permit no one would be exceeding those standards, other people interpret it different, so the way it's written is a part of the discussion that's out there. The bill would require these permitees to pay DEQ to install and maintain a mixing zone marker system that could include buoy, signs, or other

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markers. The bill was drafted by the senate interim committee on natural resources and alternative energy during the interim between the two sessions, and it is an outgrove of the mixing zone debate that occurred in 2005. It seems like one of the issues that we're wrestling with is public access to information, and with that, DEQ is trying to consider alternatives that may provide better access to the information to the public so they can make informed choices. We're not sure that just marking buoys or putting signs along the river actually will benefit very many people. So we're thinking of other options that could include outreach to users, such as when people get their fishing license provide them more information, or at boat ramps, information on the internet and like that. DEQ still thinks that our water quality toxics monitoring proposal, which is Policy Package 121, is the best way to proceed, the best way to truly understand toxics in our waters. And we understand now that some of the municipal waste water treatment facilities or operators are looking at toxics reduction options that could become part of a future bill, and these would be looking at programs that would keep toxins or toxic compounds out of the way stream so they don't end up in the water.

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So there is some discussion going on in (inaudible) about that.

STEPHANIE HALLOCK: So, Greg, just if I could add, we heard yesterday and I don't know if we see anything that perhaps Monday there might be a bill dropped that would ban mixing zones for persistent bio-cumulative toxins. So I think there will be a lot of discussion about this. And I also wanted to alert you that Representative Dingfelder has arrived and so when Greg finishes up -- he's just got another item. Perhaps we could invite her up.

GREG ALDRIDGE: And the last one for water is the underground injection control, and that is House Bill 2118 and relates to Policy Package 160. And of course this is a result of a joint stakeholder and DEQ efforts to secure statutory authority to keep this program at DEQ. If you remember, we were in the process of giving the program back. Stakeholders came and asked you to reverse that decision; you instructed us and the stakeholders to go to the legislature to seek funding. We had the first public hearing on the bill February 16th in the House Energy and the Environment Committee. We had a lot of good supporters there, including a number of cities, counties, Homebuilders

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Association, AOY, environmental organizations and EPA. So far we're not aware of unknown opposition. And if we are able to get an amended bill out from legislative counsel the next work session would be on March 2nd. And should I take a pause and then come back to ways and means later?

STEPHANIE HALLOCK: Sure, let's do that. All right. And Madam Chair, members of the commission, as I mentioned yesterday, in terms of all of these things that Greg has been discussion, on the house side Representative Dingfelder is the Chair of the House Energy and Environment Committee that will hear most of the issues related to DEQ, and she's graciously agree to take some time to be here today. On the Senate side, it's Senator Brad Havokian, and he was unable to be here today. But we thought you might appreciate the opportunity to talk to Representative Dingfelder and hear from her directly on some of these issues.

LYNN HAMPTON: Great. I'll invite her to come forward. Good morning and thank you for joining us.

REPRESENTATIVE DINGFELDER: Good morning. Thanks for inviting me here today. And for the record, I'm State Representative Jackie Dingfelder,

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House District 45. And I just wanted to come and give a little update about what's going on, and you heard already from Greg about some of the bills that are in my committee. Most of the water related bills are going through the Energy and Environment Committee, so many of DEQ's bills have been heard or will be heard in this committee, along with, as you've heard, the Senate Environment committee. First of all, I wanted to thank you for all that you do and your hard work and especially your leadership on the clean car program. I know that was quite controversial last session, and I'm very pleased to see that that's moved forward. So I wanted to thank you for your leadership on that. I also wanted to just provide a brief update on some of the bills related to DEQ that are in my committee and then talk about some of the issues that are still yet to be heard in the legislature, and I think you might be interested in those. As you heard, the UIC bill, we had a hearing on that and we had a lot of testimony. We're just waiting for the amendments, so we're hoping -- right now everything is sort of jammed up in legislative counsel, because Monday is the last day to introduce bills so we have hundreds of bills waiting to come out. And we've sort of held off on pushing

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the amendments until legislative counsel has some of these bills through, and unfortunately we are way understaffed and there's too much work load. Unfortunately I just heard that three people quite because of that, so it may take even longer than we expected. It's really unfortunate, because we had a huge turn over of staff session, so we have a lot of bill drafters, and it's a tough job. And we're not making it easier for them by giving them hundreds of new bills to write. So that's the challenge right now is getting the amendments out for our existing bills where we've had public hearings. So we're waiting to get the amendments on the UIC bill. And then also you probably heard we had an information meeting on computer recycling and electronic waste that went quite well, and then we formed a workgroup and that's an issue I've been working on for five years. In three sessions there's been three different bills. We had a workgroup bill, I think, in the 2003 session and then last session we had a bill that did not pass. And this session I feel pretty confident that we will have a bill. We have very strong support from the manufacturers and I have to say that I really want to thank the manufacturers for stepping up to the plate and showing leadership. So far the

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workgroup is going very well and Representative Ben Cannon, who's my Vice Chair is heading that up. And we really appreciate DEQ's support because your staff people have been valuable members of that workgroup and I've worked with them over the past five years in getting data, and especially the solid waste folks, so they've been really very helpful. On Monday we are scheduled to have a hearing no the clean diesel program. I've been working very closely with Andy Ginsberg to make sure that we have adequate information for that hearing and make sure that all of my members are briefed. I think it's really important because -- especially the issues that DEQ works on tend to be very technical in nature, as you know, and I encourage the staff to spend time, ahead of time, with my committee members because it's a lot of new information for folks that aren't familiar with the program. So we're looking forward to that hearing on Monday. And also I do serve, in addition to chairing the energy and environment committee, I also serve as vice chair for the ways and means natural resources sub-committee, so the few bills that go through my policy committee then move on to the ways and means sub-committee in natural resources. So I remind folks I get two bites out of the apple,

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but basically I think it's actually good policy to have that connection between both the policy and the budgeting committee. And certainly helpful for those of us that get to hear the policy behind these bills before making a decision on setting the budget. I know you're budget will be up in a couple of weeks or --

STEPHANIE HALLOCK: April 9th.

REPRESENTATIVE DINGFELDER: -- so in a month and a half. So we hope to have these few bills out of the substantive committees and then we'll be working on those in ways and means. Regarding energy, I know this is not necessarily directly your purview, but my committee is also obviously the energy committee, so we've spent a bit of time of bio-fuels. It does have an affect, because we're also one of the positive side effects that we're hoping for is to reduce air admissions. So the bio fuels bill passed out of my committee a few weeks ago, it passed out of revenue last week, and it will be on the house floor next week. And I will be occurring that with the chair of the revenue committee. And we're really positive about that. That's been an issue that I've been working on for a couple years. My committee will also be looking at renewable energy and climate

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change. We'll have a whole series of hearings. We're gonna try to do it jointly with the Senate Committee, and we have several climate change bills that, of course, have great effect on air quality. Just a quick update on the e waste workgroup; we are in the process right now of ironing out some details. We have general agreement that the manufacturer responsibility approach is the approach we're gonna take here in Oregon, and basically that says that if you're a manufacturer of a computer, computer equipment, electronic equipment that's covered in the bill, then you're responsible for either setting up a program to recycle your equipment or paying into a state funded program. We've been pretty clear that, one; we don't intend the state to get into the recycling business. So the intent of the bill is to augment existing private and non-profit recycling programs in the state and also the public sector provides quite a bit of that. Many of the counties are providing that without compensation right now. But the intent of the bill is to offset the costs for these non-profits, public entities. And then the other is that we want to make sure that your costs are covered, so there will be a registration fee that will offset the costs of any -- to DEQ for any

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staffing or rule making that may be coming down the pike. So we want to make sure that has a zero impact on your budget. I've already talked to the co-chairs about that, and they said, "As long as the fees cover it they're fine." So I will be working very closely with the ways and means folks to make sure that that can move forward. We hope to have a re-write of the bill in a few weeks, and then we'll have a public hearing on that as well. I again, want to say that we really appreciate the fact that DEQ staff has been instrumental in helping us get information and working with the stakeholders. Finally, I just want to -- I know today you're gonna be hearing some really important information about plastic recycling, although that's not something that my committee is dealing with right now. You've probably heard that the Senate has been holding hearings on bottle bill. I am a chief co-sponsor on the bill. That will be coming through my committee. I will be a member of the workgroup. And I just want to say that I've been really impressed with the manufacturers that have stepped up to the plate for computer recycling and I do hope that we can see that same type of responsibility with the plastics manufacturers stepping up to the plate with the bottle bill. And I do think that this is a

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wake up call. When I saw the information about the plastics recycling rate dropping below the 25% I'm hoping that everybody will be willing to work together to respond to that in the way the computer manufacturers will. I really believe that there's a reasonable fix to this issue. I think the bottle bill is one approach that can be looked at to deal with this situation. And I think that the legislature is very engaged. There's is a lot of talk about recycling this session that I haven't seen in the previous three sessions I've been there. The E waste recycling legislation is bipartisan. I'm co-sponsoring the bill with Representative Brune and Senator Frank Morse and there's support in both side of the aisles, urban, rural. I think it's really exciting and I'm hopeful that we can get that same type of support for the bottle bill. So that's sort of an update. I really appreciate you inviting me here today and want to thank you again for all the heard work you do. And I'd be happy to answer any questions.

LYNN HAMPTON: Thank you very much. We really appreciate your time and I'm sure we've got questions. Commissioner Blosser?

BILL BLOSSER: Just picking up on

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this what I call P waste, the plastic waste, since you talked about e waste. You're sending this hopeful note that the manufacturers will come to the table. I know you've been working for several sessions on the e waste side and the manufacturers have been at the table all the time. So when you get to this session you kind of have a history or working together and trying to find a solution. Is that same thing true of the plastic waste side. I mean, have the manufacturers and others been engaged in trying to develop a solution over several sessions so that now it's down to the details? Or are you just kind of hoping that maybe they will come to the table for the first time?

REPRESENTATIVE DINGFELDER: Madam Chair and Mr. Vice Chair, I have not been working directly with the plastic bottle manufacturers, although I'm very familiar with the issue having followed it for over a decade. I will say that with the legislature engaged the way it is with the bottle bill, I think that they will be more engaged, because that is a big part of what we're looking at with the bottle bill, which is potentially expanding to include plastic water bottles. And since that's a big part of the plastic waste stream -- I mean, it's a component

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of it. It's not gonna cover all of the containers, obviously, but I think that that coordination is a real possibility. I haven't been working directly with the plastic manufacturers. Certainly I'm very involved with the plastic element on the e waste recycling, but I do think that there's a real opportunity with the bottle bill in front of us to address this issue. And I know that there's several other ways that have been laid out to address the plastic recycling issue, and the bottle bill is one of those, and I think it's a real possibility this session.

LYNN HAMPTON: Other questions? Comments? Judy?

JUDY UHERBELAU: Madam Chair, if I could just follow up on that last -- I mean, I think that there are staff in the department who have been talking more with the plastics manufacturers about the rate over time and would probably be happy to come forward and share some of that with you, if you'd like. And that will probably come out in the couple hours that are coming up as well.

REPRESENTATIVE DINGFELDER: And if I could just clarify in that, there hasn't really been a venue for interaction with the manufacturers because

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there hasn't been a nexus there on an issue that the legislatures been working in a way that there has been with the e waste. But this obviously is a time now where I think there is an opportunity to have discussion, both in the legislative arena and obviously here through this decision making body. And for the first time I think there's an opportunity through -- with the legislature seriously looking at a re-write or possibly expansion or redevelopment of the bottle bill, I think there's a real opportunity for us to work together on that.

LYNN HAMPTON: Good. Other questions, comments.

KEN WILLIAMSON: I think the interesting point here is that for so long on the plastic side you have this potpourri of different containers, and it was just hard to get arms around it because that stream had five different kinds of plastic and a number of different manufacturers. But the situation we're dealing with now, we know what it is that's driving this situation and it's this thing. I mean, that's it. So we know where to go, we know where to focus, so I think there's hope this time, much more than we've had in the past of actually getting some cooperation with this particular industry.

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And plus, I mean, this whole industry is driven by an environmental ethic, right? So it seems like to me that we can tap into that, so to speak.

REPRESENTATIVE DINGFELDER: well, thank you and I look forward to working with you.

LYNN HAMPTON: Thank you very much.

STEPHANIE HALLOCK: If I could just say that sort of over the years, regardless of politics, Representative Dingfelder has been an unfailing champion for DEQ within the session and we really appreciate her support.

LYNN HAMPTON: And we appreciate your time today. You sound busy.

REPRESENTATIVE DINGFELDER: Well, I'm actually gonna stay for a little bit and listen to the testimony.

LYNN HAMPTON: Great.

REPRESENTATIVE DINGFELDER: You know, one quick note on the air quality, because I know that's a big part of your budget. And I've been meeting with your staff and I think there's some real opportunity there, so I'm looking forward to working with you on that. And I didn't focus on that because we haven't actually started the hearings yet on the clean diesel, but I think that there's a lot

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of concern about air quality issues. I was very pleased about the decision with the benzene. You probably heard that my committee and Senator Hovakian's committee sent a joint letter to EPA. Senator Wyden was in this past week in the legislature and I personally thanked him for his leadership on that issue. But I want to say that that was an example of where everybody really worked together to make a difference here in the Northwest and I'm really pleased -- I mean, many of us were very distraught about what was being proposed. And so once again I want to thank -- cuz your staff really did a great job at helping respond in an expedient matter, work together with Wyden's staff, with my staff, with Senator Hovakian's staff to provide the information that we needed. So I really appreciate that.

LYNN HAMPTON: Thank you very much. And Greg, are you returning to us?

GREG ALDRIDGE: Madam Chair and members of commission, I'd like to close talking a little bit about the ways and means process and where we are in that and some of the legislative visits. So I'll be very brief. As Stephanie noted a few minutes ago, for DEQ we're scheduled to start our

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committee work on April 9th in the Natural Resources sub-committee. As you've heard, Representative Jackie Dingfelder is one of the co-chairs and then Senator Richard Devalon is the other co-chair. Right now we understand six days are planned for DEQ, which is a pretty long period of time compared to the last couple of sessions. Most of it will be for DEQ presentations, as well as question and answers. There will also be a day or part of day set aside for stakeholder testimony, hopefully testimony in support of our budget. Then there will be a community work session with the discussion and vote and a recommendation to the full ways and means based on what they want. The other thing that's related to ways and means is there's a stakeholder effort that's been coming together in support of the DEQ budget. This coalition has really been assembled by Tom Galliger and the intent is to secure funding for DEQ's budget, including both funding for the governor's recommended budget, because even though it's the recommended budget it's not guaranteed we'll get what's even in that - - and a desire for some of the add backs, and add backs were some of the things that were in our original budget request, but didn't make into the governor's. He's put together a coalition

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that includes some business groups and lobbyists. Tom, obviously himself, Oregon Trucking Association, Oregon Business Association, some others have been there, a number of environmental groups such as Oregon and Environmental Counsel, Osberg, Oregon League Conservation Voters, Sierra Club, American Lung Association, several tribes have been in the meetings, including representative from the Umatilla and Warm Springs. And the purpose is really to influence the co-chairs draft ways and means budget, which we understand is due out next Friday, March 2nd. And the goal of this coalition right now is to have a letter signed by the stakeholders, not by us but the stakeholders, to present to the co-chairs next Tuesday at a meeting. The co-chairs of the full ways and means are Senator Kurt Schrader and Representative Mary Nolan. So meeting would be with them. And then the other thing that's been going on for the last month or so, Stephanie and I have been doing a lot of legislative visits. We've been hitting everyone on the various environmental committees and their members, as well as on the ways and means, both a sub committee that will hear natural resources, as well as the full committee, as well as other members who have great interest or support for DEQ. So obviously

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we're not getting to everyone of the 90, but we're trying to hit most of them. So it's keeping us occupied and we've actually gotten a lot of good feedback about DEQ and DEQ's responsiveness. And how even if sometimes we don't always agree with a decision they feel like we've put a lot of thought into the decision and we act very professional in what we do. So with that, are there any questions and I thank you?

LYNN HAMPTON: Questions? Commissioner Blosser?

BILL BLOSSER: Yeah, just looking through our green cheat sheet I was checking off as you went through all these items, and about two thirds of them I have no check by. Does that mean that they are just in a -- they're all in some type of funding package someplace or will these -- and so they're all just a ways and means issue or will there be bills eventually that come up on those too?

REPRESENTATIVE DINGFELDER: Chair Hampton and Vice Chair Blosser, actually for the policy packages, probably you're right. Two-thirds of them do not have their own bills. They're incorporated in our agency budget bills. So if you go up to the legislative proposals you'll see at the bottom, "HB 22

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-- 50-22," that's actually our budget and that would include those policy packages.

BILL BLOSSER: Okay. That's what I kind of figured but I just wanted to make sure. So the ones that hit it up in bills are because there needed to be some substantive legislative change? It wasn't just a fiscal thing and that's why they ended up in a bill?

REPRESENTATIVE DINGFELDER: Chair Hampton --

BILL BLOSSER: Was that too simple?

REPRESENTATIVE DINGFELDER: -- no. No. A good example are Title 5 and the 4 land quality fees. They're all in statutes so to change the rate of the fees you need a statutory change. A lot of our other fees are not in statute and you don't need to go through statutory change. You need to go through the process, which is the last bill, HB 50-22, which is if you approve a fee increase, say today, then the next session needs to approve that fee increase or else roll it back.

BILL BLOSSER: Okay.

LYNN HAMPTON: Commissioner Uherbelau?

JUDY UHERBELAU: I have a question

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on 126. It says, "Continue" -- it's the coastal beach bacteria monitoring, "Continue Federal funds." Why is it in this packet, because this looks like it's federal funds and not state funds?

REPRESENTATIVE DINGFELDER: Madam Chair and commissioner Uherbelau, everything here is our full package so whether it's state funds, other funds, which are fee funds, or federal funds are all part of our policy packages. So in the case of that one for coastal beach monitoring, it's actually federal money that we're receiving and we need limitation to receive that money and then to spend that money.

JUDY UHERBELAU: Right, but you don't need state involvement to approve, allowing you to receive the federal money?

STEPHANIE HALLOCK: Absolutely.

REPRESENTATIVE DINGFELDER: Definitely.

JUDY UHERBELAU: Okay.

STEPHANIE HALLOCK: We also need state approval to ask for it.

LYNN HAMPTON: I'm sensing that state approval is needed at every stage of the process.

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STEPHANIE HALLOCK: That would be correct, Madam Chair.

LYNN HAMPTON: Other questions or comments for Greg? Thank you, Mr. Aldridge. I appreciate it very much.

STEPHANIE HALLOCK: Madam Chair, on timing, perhaps the next agenda item is for you to do some commissioner reports, if you have them. And then also ensure that people sign up if they want to speak on the next item and then perhaps take a short break before you get into the next item since it will be rather lengthy and to make sure that everyone is here who is gonna want to speak on it.

LYNN HAMPTON: That sounds like a good idea. Having finished Agenda Item L we'll move on, only five minutes early, to Agenda Item M, which are commissioner reports. And does anybody have anything of interest to report since our last meeting.

KEN WILLIAMSON: I have a couple items. As you know I serve on the OAB Board, representing the EQC. The OAB is proposing a little different thing that they're gonna do this year, and part of that is driving by that lottery is doing just fine. And so OAB will actually have more funds to spend this next year then they had in the last, and

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so they're looking at trying to take on a couple of significant basin-wide efforts. So in the past they've had pretty isolated projects by which they would do some stream reach. And now they're looking at a couple of substantial proposals focusing on maybe one, maybe two basins. And I think it's gonna be important for the DEQ to become involved in that process, because whatever basins they choose the DEQ obviously will have something to gather to that. To give you the magnitude of this, they're looking at spending somewhere from $5 to $10 million dollars on each basin. So this is not gonna be a trivial effort. And the idea is to show these as an example of what can be done. So that, I think, is pretty exciting and I think those are gonna be a couple of really neat projects.

STEPHANIE HALLOCK: Are they talking about specific targets at this point?

KEN WILLIAMSON: No. We're just -- the board will meet this summer. We're gonna have a retreat. Much of that discussion is going to be around what two basins we would choose. I also serve on the Federal Forestry Advisory Committee and I want to say at this time that we have staff support on that committee. And Mary Anne Fitzgerald represents

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the staff from DEQ and I have to say she's done a great job of representing the DEQ and providing us with the information. This was a committee that was put together by the Board of Forestry. What they're trying to do is get better buy in from their federal partners, BLM and the forest service, into their move towards sustainable forestry. And that -- so they're looking at a number of issues. Part of it is cut rates in federal forests. If you look at the federal forests they're growing about 10 --

(End of Tape 4 Side 1B)

KEN WILLIAMSON: -- and we're cutting about one billion. So the other one is the amount of forest fuel that exists in these federal forest, and many of them are (inaudible) state forest, which they see that as a risk to them. So there's a variety of different issues that they're trying to look at. So I'm trying to represent the interest of the DEQ. Most of that is focused on water quality. Some of it is around climate change. There's lots of talk about climate change in forests and a lot of confusing issues there. Those were the two items I had.

LYNN HAMPTON: Thank you. Thank you. Commissioner Blosser?

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BILL BLOSSER: Just one little comment. One project I work on is the recovery plan for salmon and steelhead in the Willamette basin. And we heard yesterday about the Willamette TMDL and I asked a few questions to Laurie about that. And the background to that is that from the work that we've done so far on the recovery plan it appears that the big arrow of problem is pointing at the Corp of Engineers. And the 15 dams or so that they operate in the Willamette Water Shed, and part from the blockage -- you know, some of them block salmon passage, so that's a significant issue in itself. But the other one is temperature, that they have a huge temperature impact. And for them to solve the temperature problem is going to probably cost hundreds of millions of dollars. So it's gonna mean, for Oregon to accomplish it's TMDL, we're gonna have to get congress to fix the temperature problems coming out of those dams. It may also require that some of the dams be emptied. At least one of them may have -- need to return to run of the river status with no dam behind it, or no pool behind it during a significant part of the year. It could still be used for flood control. Detroit would probably not be one that would be chosen for that, even though it's

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probably one of the ones that needs to. But -- so these temperature things are -- this whole fish thing is gonna come around to temperature and it's gonna come around to stuff that we care about. So I just wanted to tell you that there is some kind of a train wreck out there with the Corp. And the Corp is not adverse to this. They certainly -- they acknowledge the problem and they just say, "Well, you're gonna have to get congress to give us the money." So we're probably gonna be talking to -- Representative Dingfelder will be talking to senators and trying to get them to face the federal obligation.

LYNN HAMPTON: Okay. Commissioner Uherbelau.

JUDY UHERBELAU: Nothing.

LYNN HAMPTON: Okay, and nothing from me. So we will take a break now and we will take up again at 9:45. It's now precisely -- well, I have two precise figures, 9:30, 9:28. 9:45 by that clock we'll be back in business. Thank you.

(Break for recess)

LYNN HAMPTON: We're back in session, the Environmental Quality Commission. It's Friday, February 23rd. We're about to take up Agenda

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Item N, which is an action item on a petition for rule making. I just wanted to say a couple of words about how we're going to proceed. And first of all, our counsel, Larry Knudsen, will be talking with us for a few minutes about this process, which is a little bit unusual, so that we have a clear understanding of it. That will be followed by the staff report and I have here that it will be Alan Kuphut and Loretta Pickerell. After that we're going to allow the petitioners some time to talk to us, and I have a name of a Mr. Paul Cosgrove. After that we'll have public testimony. And several people have signed up to give us a comment. Would -- we're allowed to do that at this point, because we've held the public comment period open and Larry will probably address that in his remarks. I want to read the names of the people for whom I have requests to speak. If you want to speak at that time and you don't hear your name then contact Helen, or is Tanesha in here? Get a slip and make sure that we get it up here so that we know you want to talk to us. Here are the persons who have requested to speak: a Mr. Jim Craven, Miss Julie Brandis, and pardon me if I mispronounce your name. I'll get it right when you get up here. Denise Graisy, Jeff

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Murray, Jeremiah Bowman, Alex Kuhler and Rob Gutridge. If there's anyone else, please make sure you give us a slip. Larry?

LARRY KNUDSEN: Thank you, Chair Hampton. As you noted, these petitions for rule makings are not really a routine item that you get so we thought it might be a good idea to cover some of the procedures and standards. They were also -- it's a little more complicated because the statute was amended in 2003 to add some things that we didn't previously deal with. There are some procedural issues, there are some factors that you need to consider, and then there are some time requirements. I thought I'd really briefly go over all three of those. As you noted in your introduction, there is a need now, under the new statute, to allow the public to have an opportunity to comment on the proposal for rule making. That was accomplished in two ways. As you'll know from your staff report, the department solicited written comments and then we also invited public comments at this meeting. And so you'll need to allow some time for those. I don't believe the notice that went out set any specific timeframe for that, and I think it's in your discretion, in terms of how much time you want to allow for the public

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comment. In terms of the factors, the statute establishes six things that need to be considered and I gave you a copy of that up there and highlighted that. The relevant factors, I think, certainly have been addressed in the petition, they're addressed in the staff report and we'll probably hear more about them also from the commenters. But just to keep the record clean, when you're ready to move, I will ask that we put on the record that those factors were considered, at least the relevant ones amongst them. And maybe for the benefit of the public I -- shall I really briefly run through those?

LYNN HAMPTON: Please do.

LARRY KNUDSEN: One is the need for the rule, the second is public comments and complaints concerning the rule, third is the complexity of the rule, fourth is the extent to which the rule overlaps, duplicates, or otherwise conflicts with other state rules, federal regulations, or local ordinances. The fifth is a degree to which technology, economics or other factors have changed things relevant to the rule. And the last is the legal basis for the rule. The third item that I wanted to mention is timing. There is a statutory timeframe by which you must make a decision. And

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because of the limited nature of your meetings that means we really do need you to make a decision today, and I will ask that you authorize us to enter a written order for the director to sign, so again, that can be final in the near term. And that's really all I had to say. Commissioner Blosser?

BILL BLOSSER: This same statute says that the attorney general shall prescribe by rule the form for such petitions and the procedure for their submission, consideration of this position. I'm just reading off what you gave us.

LARRY KNUDSEN: Right, and there is --

BILL BLOSSER: I just wanted to -- just checking, did this petition get submitted in accordance with attorney generals and there's no procedural flaw?

LARRY KNUDSEN: -- Procedurally, as far as I'm aware, everything is fine. I didn't include the rule because it lists the factors, more or less, in the same language. So I went right to the source. But yes, there is a model -- a uniform rule that all agencies have to follow and that was done by the petitioners in this case.

BILL BLOSSER: Okay, I just wanted

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to make sure we didn't -- had to stop right at the very beginning.

LYNN HAMPTON: All right then. If there are no other questions or comments by commissioners, and if you're through, Mr. Knudsen, I'll invite the staff to come forward for the staff presentation regarding the petition. Good morning.

ALAN KIPHUT: Chair Hampton, members of the commission, for the record, my name is Alan Kiphut. I'm the land quality administrator for DEQ. I'm just gonna make some brief opening remarks and then Loretta Pickerell, the solid waste manager, will provide you with the some additional information. As you're aware, in January you -- the department released its recycling rate determination. You received a petition for various product manufacturers who use plastic containers, and the petition requests the commission to initiate rule making to amend portions of the existing rigid plastic container rules. You received our staff report last week. And our staff report summarized the law, describes the specific rule changes requested by product manufacturers. After careful evaluation, the department is recommending that you deny the petition for rule making. The basis for the recommendation is also

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summarized in the staff report. And with me here today is my solid waste manager, Loretta Pickerell, who will briefly describe the rigid plastic container law and recycling systems work in Oregon, the changes the petition would make, and why the department believes the petition should be denied. We also have Peter Spindelo, our senior policy analyst, to answer technical questions. And Laurie Ittleman, our Assistant Attorney General, who advises on solid waste matters, is also here to address any legal questions you may have in relation to the rigid plastic -- excuse me, container law. So after the presentation by staff --

JUDY UHERBELAU: Before we begin, I want to clarify something. In a footnote of the staff report, it appears that the petitioners have withdrawn Number 2, is that correct?

ALAN KIPHUT: Chair Hampton, Commissioner Uherbelau, not exactly. There's -- and I'll have Loretta explain it. I'm sure Mr. Cosgrove will also clarify that as well. There was just a word distinction there between product and container manufacturers that I think got clarified. So the whole item number 2 was not being withdrawn.

JUDY UHERBELAU: Okay, and then

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another issue before we start to clarify, the way I'm looking at this and I'm asking as you address this, is that it's not what people put out to be recycled. You know, like we have our recycle bins out in front of our condos, they come and pick them all up, but it's what happens after that that has decreased it to minus 25%. The community may be sending over 25% to be recycled, but they're not actually being recycled once they leave their hands.

LORETTA PICKEREL: I will get to that. I'm Loretta Pickerell, for the record. Commissioner Uherbelau, I will get to that in my presentation and describe --

JUDY UHERBELAU: Yeah, cuz I think that needs to be made very clear, cuz that will bring up way -- I look at this petition.

LYNN HAMPTON: Great. Well, hopefully there will be a good explanation of that and how that determination plays a role in the recycle rate. So we'll look forward to hearing that part.

ALAN KIPHUT: So with that, I'll turn it over to Loretta to do her presentation. Thank you.

LORETTA PICKERELL: Thank you. And

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I might -- because I won't get to this, I might clarify up front that the petitioners have withdrawn their request for corporate averages for container manufacturers, for people that make the containers. They are continuing to request that we amend the rules to allow corporate averaging for the product manufacturers, the people that use and package products. So you'll see in the petition that the rule OAR 3-40 Division 90, Rule 3-60, they are still asking for the amendments in Section 1.

LYNN HAMPTON: You're on Page -- Stamped Page 004, is that correct?

LORETTA PICKERELL: Pardon?

LYNN HAMPTON: 4 of 7 of your report?

LORETTA PICKERELL: Yes, Page 4 of 7, the Item Number 2, the second request. You'll see the petitioners are still requesting that the EQC initiate rule making to amend Section 1 of that rule, of Rule 360. They are not requesting that we amend Section 2, as outlined in the petition.

LYNN HAMPTON: Okay, thank you.

LORETTA PICKERELL: Yes. As Al mentioned, I wanted to focus today on providing more context so that you can hopefully understand the law

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a little bit better and how we are applying and how it's working in Oregon. The Oregon Rigid Plastic Container Law was passed as part of the comprehensive Oregon Recycling Act in 1991. And it established recycling and reuse requirements for rigid plastic containers. Now, rigid plastic container -- rigid plastic container includes beverage bottles, tubs, pails, trays, clam shells in similar containers that are from 8 ounces to 5 gallons in size. It does exempt from compliance with the requirements of the law containers of food, drugs, and medical devices. And Peter has an array here of some of the kinds of (inaudible) we're talking about. Basically personally care items, household and industrial chemicals, motor oil, automotive products, a lot of small electronic products. Those types of plastic containers are covered by this act. Any container that meets the requirements of the act --

LYNN HAMPTON: Excuse me.

LORETTA PICKERELL: Oh, yes.

LYNN HAMPTON: What's a clam shell is our question here?

LORETTA PICKERELL: Clam shells, yes, they are covered.

LYNN HAMPTON: You know, when you

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go and get fast food and they give it to you --

LORETTA PICKERELL: Now, containers of food, they are rigid plastic containers, they're exempt from compliance from the law. So the clam shells -- McDonalds does not have to comply with the law.

LYNN HAMPTON: Right.

LORETTA PICKERELL: And I would invite questions as we go along, if you have any I welcome that. Now, any container meets the requirement of the law of the aggregate recycling rate for all of these rigid plastic containers in Oregon is at least 25%. If the rate falls below 25% then the containers must met one of the other compliance options provided in the law, and there are a number of those. They must be a type of container that's recycled at a rate of 25% or more. And by type, we mean, a type of resin or shape or design, or it must be a product associated packaged recycled to at least 25% or more. And that would be a Brand X detergent bottle or all Brand X products. Or it must contain a minimum of 25% recycled content or it must be reused or refilled at least five times.

LYNN HAMPTON: Now, can you give me an example of what the difference would be between

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a type of container, resin type of shape design, or a product association package, that's being recycled at -- I'm not sure I understand what you're talking about there in those two distinct categories.

LORETTA PICKERELL: Okay. Peter, do you want to -- Peter is our expert and he gives much more colorful explanations than I do.

PETER SCANDALO: You have -- you could have, for instance, a container type, for instance, a detergent bottle that maybe you could put different types of detergent in it. And then you have -- actually, maybe could you repeat the question, so --

LYNN HAMPTON: Well, I'm looking here at the ways -- I'm looking at your staff report on Page 2 of 7, and you have bullet points under "Background." And they're talking about -- if the recycling rate falls below 25% these other criteria that then come into play and need to be met. And under bullet one you have an either/or and I'm not sure I understand the distinction. And I'm sorry, I don't mean to make this too laborious. It says, "Be either a type of container, EG resin type or shape design, or a product associated package, e.g. Brand X detergent or all Brand X products that is being

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recycled at a rate of 25% or more." So let's say I'm using my Tide at home and I empty out the bottle.

PETER SCANDALO: That would be -- if you're talking specifically about Tide bottles, for instance, that would be the product associated packaging, because it deals with --

LYNN HAMPTON: Right. So we keep track of how many Tide bottles are recycled?

PETER SCANDALO: There are options for compliance. Certainly the Department of Environmental Quality doesn't do that, but it allows the product manufacturer to keep track of that. Now, whether that's practical is another story. But that is an option.

LYNN HAMPTON: is it also at the same time a resin type of shape design?

PETER SCANDALO: Resin type would be one of the -- for instance, a milk jug is made out of a type of resin called high density poly ethalyn [phonetic], and I can tell you right now that milk jugs, regardless or whether this is a -- you know, the brand was Safeway or whatever, milk jugs are recycled at probably about 46% in the state of Oregon. So that's a -- you know, a --

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LYNN HAMPTON: Resin type?

PETER SCANDALO: -- resin type -- high density poly ethalyn is -- it's actually very close to 25%. It's right on the bubble. PET is recycled (inaudible) over 40% in the state, regardless of whether it would be something that's -- very high recycled rate like the soft ink bottles or --

LYNN HAMPTON: Okay, so I thought I understand the resin type, but I'm not understanding the distinction between a shape design and -- maybe this will become clear. Let's just go ahead.

JUDY UHERBELAU: On this same issue is now -- it's been determined that we fall below 25%. Who made that determination, DEQ?

UNIDENTIFIED SPEAKER: Yes.

JUDY UHERBELAU: Once that determination was made that we fall below 25% then did DEQ do any -- either any of the bullet point types of looking at it.

LORETTA PICKERELL: Commissioner Uherbelau, we -- what the law provides is that -- we determine the aggregate rate and that can be an easy way for everyone to comply. If we don't meet that rate then the product manufacturers need to choose another way to comply. And as I'll explain later,

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they don't have to do anything this year. But if the rate remains below, they will beginning next year. And they then choose which one of these options they want to pursue. We, the department, don't have anything to do with their choice. They choose. So they can say, "I know my Tide bottle is recycled at this rate, so I'm going to document that and I'll be in compliance." Or they may know that all of my milk jugs of this size and shape, no matter what product brand is on them, I know those are. So they choose which option they want. The department does not specify.

LYNN HAMPTON: Or they can use 25% recycled material. Thank you. That's what I needed.

BILL BLOSSER: Does that help, commissioner Uherbelau?

JUDY UHERBELAU: Yes, but it just makes our whole law much more complicated than I think it needs to be, but that's beside the point.

LORETTA PICKERELL: Yeah, what we're trying to do -- to help understand it -- it is complicated, I agree, but it is a law. In December of each year DEQ determines what the aggregate recycling rate for the following year will be. So that's what I wanted to say about the law, and now I

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wanted to talk a little bit about the recycling rates. The rigid plastic container law in Oregon has worked. It jump started recycling at a time when many of curb side and depot programs collected newspaper, glass and tin, but they did not take plastics. And if you look on Attachment 1 of the handout --oh, okay, thank you, Helen -- Attachment 1 of the handouts you'll see a table and a chart. I think the chart is easier to look at. Those describe what's happened with recycling rates for rigid plastic containers since DEQ first began calculating the rate in 1993. And before we begin I should note that the recycling rate is simply the tons of containers recycled divided by the tons recycled plus the tons disposed. So the rate is that fraction of all containers generated in Oregon that are recycled. And you'll see from 1993 to 1995 that the rate was steadily increasing. Curbside collection and depot programs were beginning to take these containers, education campaigns were kicking in and the public was responding. The increases during this time, in recycling, out paced increases in disposal by 10% to about 2.3%. From 1996 to the year 2000 you can see the rates remained fairly stable. Recycling continued to increase, but not quite as fast as disposal. The curbside collection programs

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continued, but a few of the existing programs disappeared. For example, Thriftway used to take plastics on Saturdays and most of those stores no longer do that. And then between the period of 2001 and 2005 the rate actually began to decline. The tons disposed continued to climb as the tons recycled leveled off. You'll see that a blip in the year 2001 -- that is an error in the data reported to DEQ. It explains that anomaly. In December of 2006, as you know, DEQ did determine that the recycling for compliance purposes, that the rate for 2007 would be below 25%. In making this determination we considered the actual rates for 2005 and 2004, both of which were just under 25%. And we also considered other factors that were likely to affect rates for 2007. For example, trends and sales of containers, the price of recycled plastic. And this is the first time that DEQ has determined that the recycling rate for the following year would be below 25%. What this rate determination means is that by law no action is required in the year 2007. The first year after DEQ determines the rate will be below 25% for the following year we're not, by law, we're not to enforce any alternative compliance methods. In December of this year we will again determine the

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aggregate recycling rate for the following year, for 2008. And again, in determining that rate we'll consider actual recycling rate for 2006/2007. We'll also look at programs that are being initiated in 2007 or will be initiated in 2008 in time to affect the rate for 2008. And with that information we'll again make our determination. However, unless we determine the aggregate rate for 2008 is above 25% beginning in January of 2008, product manufacturers will have to meet one of the other compliance options specified in the law. There are two major factors are pushing the rates down. The first is the rising sale of beverages and containers with low recycling rate. Those are the non-bottle able beverage containers, a couple with the declining sales of beverages with high recycling rates, those are the bottle able beverages. For example, water and juice sale containers are dramatically rising and those are recycled at roughly a 30% rate. At the same time the sales of soft drinks are declining. Those containers are recycled at the 70 to 85% rate. So you can see that these two factors working together are lowering the recycling rate. And the second major factor is the increase of sales of non-bottled plastic containers, the tubs, the pails, the clam shell containers. Most

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curbside programs do not currently accept these so their increased sales is again lowering the recycling rate. A number of proposals are being considered that could significantly increase our -- the aggregate recycling rate for rigid plastic containers. The first of those is changing the Oregon bottle bill to include water, juices, or other beverages. In 2005 alone Oregonians disposed of almost 7,000 tons of water, juice, tea and other beverage containers. So you can see that capturing even a fraction of those would bring our rate above 25%. Adding tubs, pails, and other non-bottled plastics to more curbside programs would also help. A few curbside programs collect these; Beaverton, Eugene, most don't right now.

LYNN HAMPTON: Excuse me. I have a question about that.

LORETTA PICKERELL: Yes.

LYNN HAMPTON: Who's in charge of the regulation of what they have to pick up at the curb?

LORETTA PICKERELL: Commissioner Hampton, local governments are. We have some statewide requirements for certain elements -- we have requirements that allow government some flexibility in

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choosing what kinds of recyclables they want to pick up and what they don't. And so as long as they pick enough elements from our menu of options they comply. In the metro regional government is the local government responsible for metro recycling, and they have similar regional kind of oversight that a local governments within the metro jurisdiction are the ones that also determine what they will pick up curbside.

LYNN HAMPTON: Thank you.

LORETTA PICKERELL: We disposed of over 21,000 tons of these non-bottle plastic containers last year. And typically these containers do have a lower recycling rate than beverages, but nevertheless, if we capture even a fraction of those we would get the rate above 25%. The third proposal is to increase the recovery of the 5 gallon plastic buckets and other containers that aren't collected curbside. And finally improving the sorting at material recovery facilities are murfs. To reduce the loss and disposal of materials collected for recycling would help us get the rate up. I wanted to say a little more about the loss of recyclables. I know you've heard quite a bit about it in the news. By the year 2000 most Oregon residential recycling programs had changed to collecting recyclables together

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or co-mingles, instead of being sorted into separate bins. Those recyclables are taken to a murf where the different materials are sorted out and sent to the appropriate end markets for recycling. The recyclables -- you'll in see in Attachment 3 we have photos of a MIRF operation or a few MIRF operations. And you'll see how materials are brought in and they have different lines they're put on and there's hand sorting and mechanical sorting both going on in these facilities. Now, this shift to co-mingled collection in curbside significantly increased the volumes of containers collected. Unfortunately sorting at some of these MIRFs has not kept pace with that increase in volume. Co-mingling has made it difficult for MIRFs to pull out certain materials, particularly plastics from newspapers. And you can see from this flat milk jug that Peter had how that might get buried in this line of newspapers and not get pulled out. And that's what's happened -- as a result last year -- about 18% of the plastic containers that were collected co-mingled were not properly sorted out from the newspapers at murfs. They were mixed in with the paper bills, sent to the paper mills and destroyed in the pulping process and ultimately had to be disposed of. The loss -- that loss is what accounted for the

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1,700 tons of lost containers that you've heard about in the news. So improving this sorting efficiency at these murfs will help capture lost recyclables. I think it's important to note though that co-mingling isn't causing the rate to decline. This lack -- our inability to sort has kept us from getting the rate up as much as we might have with co-mingling, so better sorting will help. But I don't think we can point the finger at co-mingling as the cause of the problem. And I should also note that if the bottle bill kept these containers -- if these containers -- plastic containers were in the bottle bill, covered by the bottle bill, they wouldn't be mixed in with the newspaper for the most part anyway. So keeping them out of the co-mingled collection curbside would eliminate the need to sort them from newspapers at the murfs and would also help increase that recycling rate. So clearly container and product manufacturers, consumers, collection programs, murfs, recyclers, as well as DEQ all share responsibly in making sure these and other measures to increase recycling happen. All of us need to be working hard and smartly together to expand the bottle bill, improve collection and sorting systems, to educate the public, and to make sure we're designing containers to be readily

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recyclable. If we do work together DEQ thinks that we should be able to get the rate above 25% for 2008 and beyond, and certainly that's our goal.

LYNN HAMPTON: Commissioner Uherbelau?

JUDY UHERBELAU: Thank you. You talked about educating the public, but I also think there's a real need to educate -- this falls back on the municipality or local government as far as how they pick it up and sort it and so forth. If you did some education on that level -- for example, it's very simple and I've seen it done, is you can have a container for newspaper only, then a container for glass bottles that aren't returnable, and then a container for plastics and that makes your sorting issue much easier. But is anybody doing any of that on -- DEQ on the municipal/local government level?

LORETTA PICKERELL: Commissioner, I think Peter wants to address that.

PETER: Chair Hampton, commissioner Uherbelau, the -- up until about 1998 or so that was the way recyclable was collected. Everything was supposed to be source segregated it. At least the public put it out, you know, the separate container for the cans, the glass, and the plastics, and the

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newspaper and the other papers. It was put out that way. It wasn't necessarily collected that way in the trucks, because it was very time consuming for the collectors to have to carry each of these containers around to a different part of their truck and load it in a different place. So what we found - - what happened was -- people found that if they allowed the public to co-mingle the containers into a larger bin that they would actually get more recyclables, that the amount of recycling would go up, because some people just didn't want to deal with the sorting it out separately. So there's this tension between the wanting to keep it nice and pure and clean and wanting to get as much material. We have seen a significant increase in the amount of material collected due to going to co-mingling, and particularly for plastic bottles. The amount of plastic bottles being collected now is significantly higher than we had under the old system, even taking into account that loss of the extra 1700 tons. Just counting what we're actually measuring going off the plastic plants has significantly increases, roughly doubled, over what it was before co-mingling. And some of that is due to increased amount of production of these materials, but a lot of it is due to people

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actually doing a better job putting them out then they did under the separated systems.

JUDY UHERBELAU: You say it's almost double and yet if you look at your statistics what was recycled was higher back in higher years than it is now. We've just gone down hill since 2001.

PETER: The big loss has been in bottle bill material where it's not that people are recycling less, but we've seen a move from people buying soft drinks to buying water.

JUDY UHERBELAU: Right.

PETER: And these are recycled in the state at a rate of roughly 75% or so, the overall recycling rate for beverage containers is 78, plastics a little bit lower. These are recycled at 32%. Juice bottles are at about 28%. And so people have moved from a high recycled rate material to a low recycled rate material. We see in the bottle bill tonnage steady, steady and actually starting to drop. There has been an increase in the recycling of the non-bottle bill materials due to co-mingling. But at the same time there's been that increase, there's been much greater sales of items like these that are not collected in recycling programs that are not particularly wanted. If this happened to be a poly

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vinyl chloride, for instance, that's a really difficult plastic to recycle. And so there's been greater increase in production of these things that are not collected in most recycling programs, and most wouldn't know what to do with them. And as this massive increase in these other plastic packaging that has driven the rate down, even though we're getting more material being collected in the curbside programs.

LYNN HAMPTON: Thank you.

LORETTA PICKERELL: Returning now to the petition. The petition submitted by the product manufactures anticipated the state aggregate rate would be below 25%, and it seeks the commission to change the definition of recycle to include everything intended to be recycled, whether it is recycled or not. And that would likely increase the aggregate rate about 25%. It also would allow product manufacturers to use the average recycled content of all the containers to meet the minimum content requirement. And this would make it easier for some manufacturers to comply using the recycled content option. We did receive public comment, considered that public comment. We received about 66 comments during that two-week period that we took written comment. I think you'll

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hear from folks today. We did consider, in making our recommendations, and as you know we have recommended that the petition be denied. The reasons are set out in the staff report. Basically we are noting that the commission's legal authority to make the changes were (inaudible) as highly questionable, and the issues to be -- subject rule making are currently being discussed in the legislature now. DEQ did present information no rigid plastic containers to the senate Environment and Natural Resource Committees this last Tuesday. We are intricately involved in discussions on the bottle bill and we may see more bills related to rigid plastic containers with the bottle bill before -- in the next month or so. And we will stay involved in those discussion at the legislature. It seems premature now to initiate rule making on these same issues. We will look at what comes out of the legislature and will report back to the commission with any recommended changes after session certainly. Our focus now needs to be getting the rate, working on the bottle bill, our collection programs, and these other programs that we've mentioned. So with that, I'll conclude my remarks and willing to answer any questions. Thank you.

LYNN HAMPTON: Thank you. Does

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anybody have any questions for Al or Loretta or Peter? We did receive your staff report last week and I know we both had a chance to read it and I read it with interest. (inaudible)? Okay. Thank you. Okay, great. Okay. At this time I'm going to invite petitioners to come forward and I'm going to ask that, if possible, that Al and Loretta and Peter remain available, so that if we need a counterpoint or further explanation on any point we'll have you available. Mr. Cosgrove?

PAUL S. COSGROVE: Thank you, Chair Hampton, and members of the commission, my name is Paul Cosgrove. And although I'm here as a representative of the Soap and Detergent Association, which was the first name petitioner. I appreciate the opportunity to sort of step back and discuss why the whole group of people who have petitioned for this change, the concerns they have, the consequences they see, the difficulties they see, and the issues they see in the current system. And just to highlight, there are 11 local and national trade associations who have joined in this petition, in addition to the Soap and Detergent Association, it's the Adhesive -- and these are alphabetical -- Adhesive and Sealant Counsel, American Chemistry counsel,

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Associated Oregon Industries, Consumer Specialty Products Association, Cosmetic, Toiletry and Fragrancy Association, Grocery Manufacturers Association, Fruit Products Association, Northwest Food Processors Association, Oregonians for Food and Shelter, the Plastic Shipping Container Institute, and the Rigid Plastic Packaging Group. And I read that list to show you the breadth of people that are concerned that are also folks who are not petitioners who you will hear from today who also have concerns. And to reflect that this is a very big problem for a very large number of companies, both located here in Oregon and across the country, and in fact, even internationally. The -- the staff just mentioned -- and Miss Pickerell mentioned also in the testimony she gave before the Senate -- Environment of Natural Resource Committee that the recycling system works or doesn't work because of a whole lot of players working together, and those are consumers, the people we are asking to put these products into bins, bags, roll carts or whatever. They are haulers who are picking those up, the collection folks, they are the processors, they are the end use manufacturers who are taking that recycled resin and putting it back into their products, and then they are us who are sometimes

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buying that in-use resin and producing new packages. And the goals of course of this system are to, as we all know, the higher archy is to reduce, reuse and recycle. But it's -- we believe -- and you've already heard about some of the complexity of this law, which is of course one of the legal requirements that you're charged to consider, that the system as it works and as it has changed since it was initially adopted, which is another factor that I think you need to consider, no longer reaches those hierarchical goals very well. And let me try to explain. If our goal is to reduce packaging you would think our law would give credit for source reduce packages, and in fact, essentially it doesn't. There was a one time, one five year source reduction credit. So a manufacturer who has in fact made their bottles -- and I think of a detergent bottle, as has already been mentioned, the Tide bottle, used to be bigger, used to be thicker, used to have fewer doses in it. In other words, the product has now been concentrated. That no longer is a compliance methodology in Oregon. Reuse; the second priority one. I think you can realize that when products now move into an individual consumers home both reuse of those products, or frankly figuring out how many of those particular

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branded products or type of products are actually recycled is a bit beyond the realm of possibility for most manufacturers. It's very, very difficult to, one, try to go back and collect all the Tide bottles in someone's home in Oregon, or two, to even know how many of those are being recycled. We don't have access to that data. And in fact the data that the department gets on what is recycled is itself rather limited. And every time I'm quoting about data in here, I'm -- we're quoting from the department's report issued in January, unless I mention otherwise. That report mention that the data is hard to verify on what is actually recycled in the state, because it's based on surveys, not sampling. What's disposed in the state is based on sampling done by the department. But what is recycled is based on surveys and all kinds of containers are reported in those surveys together. All of the kinds of products you saw here are reported as one sum. So then we're down to the third priority, recycle. And obviously this is where the whole system and all the parts of the system need to work together in order for it to be successful. And I think what you've heard is since we've moved to co-mingling, the system, from the perspective of this particular kind of product, has

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not been working as well as it should. And our position is it's not working as well as it was back when we had source separated materials. I have also worked for the paper industry for years and I remember first being taught about paper recycling. Keep it separate, it's very valuable. Mix it together and at some point it becomes garbage. And that is, I think, where we have moved as a department, this department, and your local government colleagues have moved to a system that is supposedly simpler for consumers. You don't have to keep it separated, but has these problems of contamination, co-mingling and loss of materials. And that's a policy decision that's happened since this bill was passed, since these rules were written, and since we committed to the 25% recycling rate. In the data -- is really important with respect to this issue, because obviously the consequences of small movements in the data are very important to a whole number of companies and a whole number of Oregon consumers --

(End of Tape 5 Side 2B)

PAUL S. COSGROVE: -- And I'd like to spend just a second on the data. This is all again from your report. 1993 to 1995, the first years after passage of this act back in 1991, rigid

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plastic container collection increased about 10% per year. Everyone got on the band wagon. Lots of consumers, lots of cities added rigid plastic containers, at least bottles and jars to their programs. Lots of publicity, high rates of increase. 1995 to 1999 the report your staff has made back in January calls the increases fairly stable, 4.7% per year on average for those years. In the year 2000 another big jump, 8.8%. And your staff attributes that to the publicity that came with the change from individually sorted recycling bags that we were all used to the new co-mingled system. And initially all that publicity about it's easier to recycle, you can put it all together, had another jump in the increase of rigid plastic container recycling. But from 2001 to 2005, as co-mingling has been implemented in nearly every municipality across the state, certainly every significant one, the rate of increase has dropped to be very small, 2% or less per year. That is the kind of change that's concerned us. Your staff believes that 1700 tons of what's put at the curb by us, as homeowners, is lost in this system, roughly 20% of everything that's put in the curb of rigid plastic containers is lost. And if you look at the charts in your staff report you'll see that during

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that same period of time that now we're losing 1700 tons the amount of increase that they've talked about is only 1200 tons. We're losing more than we're gaining. Let me back up, that's not quite the correct way to say the statistics. We're gaining 1200 tons by moving to co-mingling, we're losing 1700 tons. Those -- that data is from your staff report. I'm not making that up from any other source. The other thing I would like to point out and it's not quite so evident in your staff report, but it's very important. There's another 1700 ton issue here, besides the loss. It's mentioned in the report in January that actually the original estimate of tonnage collected of rigid plastic containers in 2005 was over 15,000 tons, actually 15,495. And the department has always done a reduction in that number, based on its estimate of what it calls contamination. And contamination is several things. It's leftover product in the bottom of a bottle, it's lids and caps, which are being recycled, but they're not defined as rigid plastic containers so they're taken out of the calculation. Its bottles that are too small or too big to be defined as a rigid plastic container, even though they're being recycled. They used to use a 5% reduction. They now think, based on

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preliminary data that is not yet complete, and I stress that and that's the term that's used in the report, and that they think they'll have better estimates later this year, that that should be increased to 11% of contamination. Now, whether it's 5 or 11, I think, is an interesting question, but that makes a difference of swing of another 1,692 tons, essentially another 1,700 tons difference in the rates. And with respect to those swings, it makes a huge difference to us, as manufacturers. Unfortunately, we don't have much influence realistically on the recycling system in Oregon. Our responsibility is to make our packages recyclable, to encourage our consumers to put them out for recycling, to make them easy to recycle. Most packages of consumer products now are made with PET, the number one in the chasing arrow on the bottom, or HDBE, the number 2 chasing arrow. A few other resins for particular reasons, but most are in those categories. But we can't control how easy it is or how well the system operates. One other thing I'd like to point out, in terms of all of us working together -- you're in a state owned, or actually I think leased facility. You don't see any place for anybody to put their recycled containers --

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LYNN HAMPTON: (inaudible) containers, they're paper.

PAUL S. COSGROVE: -- for the public. I would suggest to you, if you go into state and municipal facilities you will see very, very few of them make it possible for us to recycle. There's one exception that I think we've probably all become aware of, Portland and its airport. Lots of different recycling slots for bottles and papers and so on. Frankly, Metro in the Portland Center for Performing Arts does an excellent job. State facilities are amongst the worst in my viewpoint. The legislature has, in its back rooms, recycling for its staff. In its public facilities, it does not, or at least it has minimal recycling for containers for the public. Do we have recycling facilities at our roadside rest areas like in Europe? No. do we have them at our state parks? I believe the answer, almost uniformly, is no. If we're all going to work together to help the public recycle we have to make those kinds of changes as well, and those are changes that I think show that the responsibility for the state to have some, as well as our local government partners, to work with this system. Let me talk very briefly about consequences. There will be others who

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will talk about consequences particular to their industries, but there are literally thousands and thousands of products that will be affected if no December 31st this agency says it's still below 25%. You saw a number of them. Think of all the products at your local Frys store, your high tech stores that are in those kinds of plastic clam shells. Think of -- you don't have an exemption for food in this state. We have an exemption for solid food. Milk jugs aren't exempted from the requirements of this -- unless they have some other way to comply, neither are juice bottles, and I'm talking about the Tropicana orange juice. All of those products are affected. Ironically, the one that will not be affected at all, or at least one of them, is water bottles. It's absolutely clear that water bottles made from PET will be recycled at a rate above 25%. All PET will be above 25%. That -- sale of that product will not be affected. What will be affected is some of these other products you're seeing. And that's why we're so very concerned that we address this issue now. Changing packaging, even changing labels on packing, let alone changing the type of packing. Moving from a type of packaging that's in the stream of commerce and getting it off shelves back out of the stream off

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commerce is not a simple process and it takes time. We couldn't possibly comply, if on December 31st a rate changes was announced, "It's still below 25," and enforcement began January 1. We'd have to start complying long before that. In other words, we'd have to be taking steps long before that. And that's why our view, waiting for the legislature, isn't satisfactory in this case. It really falls upon you to take a look at this system and see what you can do to make sure it's fairly assessing and giving credit for what is happening and putting blame, or responsibility, where it ought to lay. The Bonneville expansion has been mentioned. I just quickly checked. There are several bills, of course, that deal with water and/or other containers. None of them would take effect until 2008, some of them wouldn't take effect until longer. That's not a solution. I can assure you that it's not by any means a clear shot that Bonneville expansion will pass in that legislative body. It never has. There have been times that there have been also great efforts to do so. There was an initiative before the public to expand the bottle bill that was rather roundly defeated. I'm not saying that's what's going to happen this time, but in other words, us manufacturers

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of the soap and detergent bottles, can't wait to see how that kind of political argument plays out. Now, specifically to what we've requested. There are only two states in this country that have this kind of legislation, Oregon and California. There are dramatic differences between how you can comply in Oregon and California. The reason we've asked for what's called averaging is that is a compliance method in California. We know how to do that. The rate has been below 25% in California. We use averaging as a method of compliance. And what that means is if I'm a manufacturer of five different sizes of a product and the little bottle can't take very much recycled content, but the big bottle which is thicker can, you can average the tonnage of recycled content amongst all those bottles, and as long as it's on average over 25%, it complies. All those bottles comply. It's been stated that we don't allow averaging in Oregon and the statute might not. I would suggest to you the rules already do, in one respect. We can average bottles in January to bottles in December. That's already part of EQC's rules. It has been since the beginning. We just can't average in January little bottles to big bottles. And to me, if we can average over a year and that was a sensible

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choice back in 1994 when the rules were written. It seems logical to us we ought to be average within a month, or time period based on size. So that's one major difference. The other differences are probably not within your purview. There are exemptions in California for good reason. For all kinds of other products that do not have to comply with averaging plastic container law, liquid food, meaning milk and juice, are exempted in California. They're not in Oregon. Containers for pesticides and hazardous materials, which are regulated and the packaging is regulated by either EPA or US Department of Transportation. You've heard about conflicts with other laws, as one of the factors. Those are exempted in California for good reason. They're not here in Oregon. Cosmetics and I need to step back. Cosmetics is a term of art under the FDA. It really means shampoo, toothpaste, and yes, the things that we commonly call cosmetics, but it's a whole lot more than that. They're regulated by FDA for safety reasons, packaging is regulated. They're exempted in California. They're not exempted in Oregon. Without averaging and without the ability to give credit to the consumers and our homeowners how are actually putting those bottles and cans -- excuse me, those

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bottles into the containers, we're not gonna be able to comply in Oregon even though these same companies, both Oregon companies and outside of Oregon companies, know how to comply in California. And that's a major concern to us. We're obviously a very small part of the worldwide market. It's very difficult, sometimes expensive, sometimes impossible to have a special Oregon only package, especially when the goals of this legislation are being met in California under a regimen that we understand and can comply with, but that that regimen, which includes averaging as a major component of it, is not available to us here. There will be thousands of products affected toward the end of this year, if changes are not made. Those -- the effect of non-compliance of the system not working is going to fall on the product manufacturers and the people who buy those products, the Oregon consumers. Those other elements of the system who could help, frankly, you could define rigid plastic containers as a principle, recyclable material under your rules and require cities to include those in curbside programs. You have not done so. Cities could do it voluntarily, with the exception of bottles and jars and a few municipalities, Eugene being one of them. They have not done so. The city of Portland has not

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done so, for example. So there are a number of things that could be done -- the state could start putting out recycling bins in its parks and waysides and public buildings and we could get some of those water bottles back in the system as recycled materials. But if none of those things happen and only some of those can we control and, frankly, only some of those can you control, we're gonna be in a real pickle come later this year. So that's the rational for seeking your consideration of the allowance of us to do averaging, so that not only can we average from January to December on an 8 ounce bottle, we can average from an 8 ounce bottle to a one gallon bottle. And we think that's not a particularly difficult change to make or an unusual or radical change to make. And we also believe that especially given the data points being adjusted and changed and moved with small percentage -- or small poundage differences making big percentage differences, we think it's appropriate to count the 1700 tons estimated that are put out on the curb by Oregon consumers as part of the recycling rate. One last thing on that issue; that is not normally how we think of as professionals of recycling is putting it out on the curb, but as your assistant attorney general pointed out in his

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legal opinion and I'll quote, "One must acknowledge, however, that a common understand," probably the understanding of Oregonians, "of the term recycle is to source separate and make available for collection. And that the statute sometimes loosely refers to the term recycle in this context." I think that's what the public thinks they're doing and believes they're doing when they're doing what they're doing, putting those out on the curb. So with that I will close. I appreciate your opportunity to sort of set the stage. I'd be happy to answer any questions. There are also folks behind me who have specific pieces of information and how it affects their industries. Thank you, madam chair.

LYNN HAMPTON: Commissioner Uherbelau?

JUDY UHERBELAU: Thank you, Mr. Cosgrove. Thank you. I mean, I think you've made some excellent points from things that I haven't thought about before. Just the idea of do we have in our facilities proper places to dispose of things. This is a very, simple, easy thing to do and yet we don't. But my concern is I'm assuming that the original purpose of the recycling bill was to keep these things out of our land fills and where they do

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harm and that type of thing. And when I read your -- when -- I'm not reading it word from word, but basically defining recycling as all those containers -- collected and intended for recycling. If we make that change that's really not a furtherance of our goal. Now I realize we're not meeting our goal and I think there are other ways to meet that goal. And I think we should be pursing those, and I would certainly encourage DEQ to do that. But that portion of your log concerns me because I think that's getting completely away from the goal of the original statute.

PAUL S. COSGROVE: Madam Chair, Commissioner Uherbelau, I understand the point. Recall that this goal was set in a comprehensive recycling statute passed unanimously by the legislature in 1991. We've talked about it now in terms of rigid plastic containers and how manufacturers must comply. It also set all sorts of recovery goals, interesting note the term, "recovery goals" for local governments, not recycling goals. That's a significant difference. We judge different people under the statute in different ways. For local governments, it set requirements for newsprint minimum content, it set requirements for glass, it set up a whole system. If

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the system isn't working well, as a whole, unfortunately what this particular piece of that system does is it puts the burden of that non-functioning system on only one segment, and it's a segment that I think you'll have to agree realistically won't solve the problem, or at least can't solve the problem alone. And that's our concern. If those of us who are working with our consumers, and our consumers more importantly are working to put things out at the curb, we'd like them to get credit for the part of the system that they have. To the extent the rest of the system isn't working so well, I think we need to attack that and place responsibility and make changes there.

JUDY UHERBELAU: Now, I can agree from where you're coming from, theoretically, but I also have to say that once you put something in the law you're stuck with it, at least until it gets changed. And so we're only -- we're addressing the wrong thing. We're not addressing the program itself, which is not doing what it should do. And the other -- and I don't know if you've had a chance to read it, but we received a memorandum from the Department of Justice arguing that they don't think we have the legal authority to make that change or what your

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response to that might be.

PAUL S. COSGROVE: Madam Chair, Commissioner Uherbelau, I have read it. It was part of the packet with the staff report, and I'll just make two comments. And I'm just turning as I speak. And I've known Mr. Eddleman for a number of years and have high regard and respect for his analysis.

LYNN HAMPTON: (inaudible), Mr. Cosgrove.

PAUL S. COSGROVE: Pardon?

LYNN HAMPTON: I'm sorry, I was just noting it was Attachment C.

PAUL S. COSGROVE: Thank you. I was shuffling. I appreciate you pointing that out. I read one comment from his report that I think is important -- his acknowledgement that a common understanding and the term and what we're dealing with here is trying to construe what the statute means. And that's the role of lawyers, and unfortunately I'm one of those too. And so we might differ on our view of what the statutes mean. But I think he correctly points out is you look at the language, what it means, and you sometimes look at the common understanding. And he points out that a common understanding of that term fits the kind of request

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we are making. It's not the only one. He comes to the conclusion that unlikely a court would find you have authority, but unlikely doesn't mean it's not necessarily completely true, and I think there's a good argument made on the other side. I don't want to get into a legal discussion with him, but I don't think his is an absolute opinion. With respect to the averaging, I think what the opinion misses -- or at least the staff analysis misses, is we allow averaging in Oregon. We just don't allow this kind of averaging. If we don't allow that kind of averaging and literally every single bottle made every single day at every single place that's then put in a product and shipped to Oregon has to have 25%. I would suggest to you everybody is out of compliance already. In other words, we have said that the language is sufficient to allow sensible measurement -- averaging and measurement on an average in the aggregate. We're just asking for different kind of aggregation.

LYNN HAMPTON: Question? Commissioner Blosser?

BILL BLOSSER: You sited and the staff gave us statistics on the recycling rate, and you sited and the staff did that beginning in 2001

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the rate has been plummeting from 30% now down to below 25%. Why have you guys waited so long? I mean, you could see -- the trajectory is plummeting and in fact the last two years it's been below 25%. Why did you wait until the 11th and 59th minute to bring this to us?

PAUL S. COSGROVE: Madam Chair, Commissioner Blosser, there are two answers to that. One is, the actual rates for 2004/2005 were not available to anyone until the department did a 2005 waste composition study and 2004's rate is an interpolation, based on data from 2002, adjusted to 2005. And the actual rate for 2005 was announced in the fall of 2006, just last fall. So that's one issue. The second issue is, and I will find the exact quotation, and I'm reading from, by the way, DEQ's report in January when it announced the rate was below 25%, and I'm not sure you have that in front of you (inaudible). All of those rates were adjusted downward. I mentioned the 1,692 tons based on contamination. That new contamination adjustment of -- 1,700 tons for rounding tons, which is about 2%, 3% points. All that adjustment was made for the first time in this document issued on January 2nd, 2007. We had rates that were announced by this department,

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considerably higher than this, until January of this year. And we did not have rates for 2004/2005 until the fall of last year. So I recognize, should we have come earlier? That's a decision for you to make. But I think there are good reasons why we didn't come earlier, that in fact this problem has only become completely evident to any of us relatively recently.

LYNN HAMPTON: Commissioner Blosser, do you have any questions or comments?

BILL BLOSSER: The recycling rate of 25% is, at least in my mind, pretty abominably low in the first place. It's a pretty low hurdle to get over. It should be a low hurdle for us to get over, and clearly the system is not working very well when we've basically, barely stayed above 25% for 15 years almost, 12 years. One would have hoped that the trajectory would have been going up and we would never even be having this discussion. But clearly that has not happened. And the staff talked about a lot of the reasons for that. What I'm curious about is is your association and your group -- have they been heavily lobbying over time for, for example, expanded curbside recycling of plastics to get more of the plastic into the stream, so that it's not centered down a couple of types of containers and a lot of

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it's escaping it. Have you been appearing before the state sustainability board and the governor's office pounding on the table saying, "Why aren't you recycling plastics?" I mean, what you're saying -- you know, what can you as manufacturers do, but certainly since you're the ones, as you said, who end up paying the price, in a certain sense, you'd think that you guys would have been all over in previous sessions of legislature encouraging adding other containers to the bottle bill or whatever -- some kind of a way of inducing consumers to recycle, heavily lobbying metro to include other containers in the Portland/Metropolitan area, whatever. I mean, I'd think you guys would be in the forefront of pushing that. Have you been and what has been -- if you have, why do you feel like you had no result?

PAUL S. COSGROVE: Madam Chair, Commissioner Blosser, pounding the table, I think, would be a dramatic overstatement of what we've done. However, I have personally been involved in both legislative and regulatory efforts to try to change the standard by which a local government must decide when to add things as principal and recyclable materials. And the current standard is an unrealistic one. And it specifically said in your rules for

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plastics as an unrealistic one in my judgment. It requires not that the local government determine that the incremental cost of adding some of these other materials is offset by the recovery by selling of the resin. And by the way, as your staff points out, resin points have been reasonably high recently so that's not a problem. It requires some look at the whole cost, as if that's the only thing they're going to the curb to get and makes that economic calculation very difficult to get into and get these to be defined as principle, recyclable materials. That's one issue and we have tried to get that changed. I personally have been involved in that and have not been successful.

LYNN HAMPTON: On that point, is that a statutory definition or is that a rules definition?

PAUL S. COSGROVE: It's a rules definition that local governments have fought with. It's never been brought before you as a commission. It has been discussed in workgroups.

LYNN HAMPTON: Thank you. Sorry for the interruption.

PAUL S. COSGROVE: No problem. And it has also been discussed at other times that

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we've gone to the legislature and talked about the kinds of exemptions to conform to California, which we did in '95. That was the first time that any food was exempt in Oregon. And I think there was a bill in '93. So pounding on the table, that's not accurate, but there have been efforts, I think, to do that. I think one of the reasons local governments have not been pounding on the door to add these products to their systems is pretty understandable. Many of them are facing tonnage recovery requirements, either self set like the city of Portland or Metro, or set by the legislature by law. And these are not big tonnage issues. If you've got 100% of the recycled plastics in Oregon -- pretend for a moment you could do that, you wouldn't make much difference in the overall recycling rate. And the city of Portland, for example, is moving to greatly expand and even looking at doing yard debris weekly and garbage every other week, because its' looking for tonnage. And I can assure you that sticks and stones and leaves and branches will help them reach those tonnage targets a whole lot faster than a few more milk bottles or water bottles. And that's just the nature of what we've set up is a numbers driven system, even though I think you could make a solid argument that

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recycling leaves, which are biodegradable, compostable, may not be the best -- aren't as high -- recovery of resource as recycling plastic or glass or metal. But that's not the way we set up the system. So there's some disadvantages in trying to get this material put into municipal systems.

BILL BLOSSER: Just a follow up question on that. Is the group -- you know, you said you represent one of them, but there's a larger groups and you listed all the names, are they supporting the expansion of the bottle bill?

PAUL S. COSGROVE: Madam Chari, Commissioner Blosser, the Soap and Detergent Association doesn't have a petition on the bottle bill. It has bottles but they're not the kinds that are ever connected in the bottle bill. I expect there are other folks in the back who have -- as a matter of fact, I know there are other folks in the back who oppose an expansion of the bottle bill. And there may be others in the back, a part of a coalition who are either neutral or support it. The one thing I have heard from some opponents of the bottle bill who may not be adversely affected in this very same realm if the bottle bill isn't expanded is, you know, it is the most expensive way of recycling

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we've ever devised. It may be very effective but it's a very expensive way and there are lots of efforts to try to make the curbside system better, because it is a far more efficient way to collect all kinds of materials if we can make it more efficient. So I think that concern exists with respect to expanded bottle bill.

BILL BLOSSER: Again, going to the staff report. You read a few things out of the DOJ's thing, but the bottom line thing that I keep going back to is, I read the DOJ saying, "You do not have authority," or "You have authority -- you may have authority, but it's unlikely the courts would support you in this changing of the definition." And my experience on commissions has been tough for commission to just thumb our nose at the DOJ. Do you have some other really good argument that we could put before us that would completely counter what the DOJ is saying? Obviously the way he weighs the stuff and came down the side that, "I don't think you can do this."

PAUL S. COSGROVE: Madam Chair, Commissioner Blosser, as you know, sometimes the answers you get from attorneys based on questions you ask -- and so I'd just start with that. The process

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for (inaudible) interpretation, I think as Mr. Eddleman set forth, is to determine the intent of the legislature. And in Oregon that means we look at the plain language and common understanding correctly. Some of his colleagues representing -- advising other agencies, totally separate from this and totally unrelated to this, have pulled out Webster's dictionaries for me periodically when they've been talking about what they think statutory construction should be, and that's not inconsistent with what our supreme court has told attorneys to do in statutory construction. I think there's a -- within Mr. Eddleman's opinion of (inaudible) on the definitional issue, there's the roadmap there. A common understanding of this, a common, not the only understanding, but a common understanding is it means getting it separated -- ironically, separated, and collected, even if it's later gonna be co- mingled and lost and that that is recycling. So I think that gives you the roadmap. With respect to averaging, I'd just repeat that the rules don't now require each and every container to have exactly 25%. You already allow averaging, just of a different type. I think if you can allow -- and it's never been challenged -- the advertising -- the averaging from January to

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December -- I can't imagine why anyone would have a good challenge for the 8 ounce to the gallon averaging.

BILL BLOSSER: One last questions.

LYNN HAMPTON: Okay, go ahead.

BILL BLOSSER: Again, in the staff report it says that the law requires that legislature conducts a hearing when it drops below 25%, and as far as I know they haven't done that yet. And so the staff concludes it would be premature to do it until the legislature has done what they're supposed to do, statutorily.

STEPHANIE HALLOCK: Commissioner Blosser, that hearing was held this week. That was the hearing that was referred to. Senator Havokian held it this week.

BILL BLOSSER: So this staff comment here is no longer --

STEPHANIE HALLOCK: I'm sorry, we didn't clarify that. That hearing, originally, we thought was going to be later and he moved it up after this staff report had been written

PAUL S. COSGROVE: It was after the report was written, yeah.

JUDY UHERBELAU: So it's been had

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-- what happened?
STEPHANIE HALLOCK: Well, our staff testified and a number of other people testified, and Loretta can come and talk to you in more detail about the testimony that we gave and some of the other comments, and Mr. Cosgrove can comment as well. He was there. But the legislature -- I was not there myself. I don't think any action was taken. They just heard the testimony.
LYNN HAMPTON: Commissioner Uherbelau?
JUDY UHERBELAU: This is a follow up to Commissioner Blosser's question and your response. You were talking about the common understanding of plain language. You can also look at legislative history and in fact that's what the court does a lot of times when they can't quite figure out what's going on. Have you -- has anyone of your people looked at the legislative history to see if there's any answers there?
PAUL S. COSGROVE: Madam Chair, Commissioner Uherbelau, I would never suggest that memory after 16 years is a reliable indicator for --
JUDY UHERBELAU: That's why I didn't ask you about memory.

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PAUL S. COSGROVE: -- Many of us in this room were there 16 years ago. The process for putting together Senate Bill 66 was -- as many of you are familiar of when you amended and engross a bill it becomes a engrossed, and then maybe if it's done twice it's b engrossed. We were at D engrossed and my -- I remember an amendment I did. It was Amendment Number 77. We were D- 77. There were multitudes of workgroups, four or five or six, going on in the building, none of which is reported, many of which we were all there. There was a plastics one, a newsprint one, a municipal one. When it finally came down to it I don't recall that any of these issues, in particular, I may be wrong, were discussed on the public record. And it was rolled out as here's a whole set of compromises in a very, very big bill that's been amended many times. That's my recollection.
JUDY UHERBELAU: So they weren't anticipated, that's why they weren't discussed.
PAUL S. COSGROVE: Well, we collected these things source separated then. You know, it's interesting and I apologize, maybe this doesn't answer your question, but when I go around my neighborhood -- I'm in the city of Portland, but I'm

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right by Washington County, so I see two different sets of people with two different colors of bins. I still see -- frankly, I set them out this way too, there's a sack of the glass, there's a sack of the plastic, and I know mix my plastic and tin cans together, but I never keep it mixed up with my paper nor with my newsprint, which comes from a different place. And that's true. Lots of people still do that, but the system unfortunately has moved to almost completely taking even the source separated and co-mingling it.
LYNN HAMPTON: Ken, comments, questions? Okay, I have a question. One question and I think that I missed a portion of the sentence that you said. You said that, and I believe you were referring to the report that came out this January, there was an assumption that had changed, was it about the contamination rate from 5% to 11%?
PAUL S. COSGROVE: Yes, and I will --
LYNN HAMPTON: What was the affect of that on the 25% recycle level?
PAUL S. COSGROVE: It reduced -- and ironically it's the same figure, but it's a different calculation. It reduced the tonnage

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recycled by 1,700 tons, which is a couple of percentage points. Now it would have been reduced about half of that had -- about 5% of the old contamination, it moved to 11%, which the report talks about is about -- well, you do the math and it's 1,692 tons. That is the change in assumptions and that was then retroactively applied to all the rates back to '93, that same kind of change.
LYNN HAMPTON: Did that change in assumption have the effect of bringing it below 25% and triggering this inquiry that we're here about today or would it have been below 25% anyway?
PAUL S. COSGROVE: No, actually that assumption in and of itself would have made the difference. Any of these changes would have made the difference. It's that close.
LYNN HAMPTON: All right.
UNIDENTIFIED SPEAKER: (inaudible) 400 tons. So we're looking at 60/80 dump trucks. I mean, this is like (inaudible) deal.
PAUL S. COSGROVE: And just in summary, it is a big impact for a relatively small amount of tons. And that's the importance that we want to bring to you is I wish it were so easy as just figuring out water bottles. It affects all these

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products. It's a complex system. Data changes have made it difficult to predict for everybody, the department included, but there is just a very big impact potentially looming very soon.

LYNN HAMPTON: Mr. Cosgrove, thank you.

PAUL S. COSGROVE: Thank you very much.

LYNN HAMPTON: Okay. Just to proceed (inaudible) but do we need a break?

UNIDENTIFIED SPEAKER: I have to leave at 11:30.

LYNN HAMPTON: All right, we're going to proceed now to the public comment period. And we will begin with Mr. Jim Craven. Is that the correct pronunciation of your name, sir?

JIM CRAVEN: Chair Hampton, members of the commission, Jim Craven, representing the American Electronics Associations. Nice to see some old friends here on the commission.

LYNN HAMPTON: And I'm sorry, are you saying Craver?

JIM CRAVEN: Craven.

LYNN HAMPTON: Okay, thank you.

JIM CRAVEN: I am not an expert on

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rigid plastic recycling, in fact I spent a good part of my 20 years career in Salem being thankful for that fact and watching the work that Mr. Cosgrove and others have had to do on this mentally complex issue. Just recently I was alerted by many of my national members, and I represent the high technology industry, and some of our members are involved in consumer products, to the issue of clam shells. And I had to step out so I didn't all of Mr. Cosgrove's testimony, but if you can imagine going to a Fry's electronic or a Best Buy there's a lot of stuff in electronic field that uses this form of packaging. We also use blister packs, which I understand are exempt from this law. That's the cardboard back with the little bubble on the front. This is a clam shell, which I learned just recently all about clam shells. I also understand that many of these products are composed of PVC, Poly vinyl chloride, as the main resin in the product. I think you've heard today that this is one of those issues that has, to me, sort of an Alice and Wonderland component to it. We thought people were doing the right things, we're meeting these goals. I think the idea of an overall 25% -- if we're sort of meeting the overall societal goal this need to go then micromanage bottle by bottle, Tide by All,

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shampoo by cream rinse approach wasn't necessary. And that is apparently what we're facing. I've been told on the PVC packaging on the clam shells, which are part of this law in Oregon, that they're not -- people don't take them. They are excluded from you big, blue rollaway. So we have this dilemma were we have a product that the co-mingled recycling programs do not accept. And with a looming mandate for producers of such products in Oregon only in the united states, as I understand, to produce such packages with 25% post consumer waste content. If you're not collecting it from consumers where do you get the post consumer waste to produce post consumer waste products? So this is sort of the looking glass, sort of essence to this debate that I have recently just entered into. I think the fact that there's a couple things that you've heard this morning. One is, we'll get a rate in December telling us whether all of our packaging has to be changed on the shelves by January 1st. That seems to me sort of odd.

LYNN HAMPTON: Not January 1st of that year. January 1st of the following year.

JIM CRAVEN: Yeah, the immediately following year.

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LYNN HAMPTON: No, the year after.

JIM CRAVEN: Okay, like I say, I'm trying to come up to speed on some of this.

LYNN HAMPTON: And Mr. Craven, I am listening with interest, but we have eight people and a commissioner who's (inaudible) time.

JIM CRAVEN: Right.

LYNN HAMPTON: Okay, thank you.

JIM CRAVEN: So my only point is it would be great to find solutions, whether it's on the processing side, whether it's some consideration of a rule change to get us through what may just be a rough patch, I would just urge us all here or over at the state capitol, that we find a way to resolve this so we don't have huge markets disruptions. Thank you for you time.

LYNN HAMPTON: Thank you very much. We have eight commenters and I would love for Commissioner to participate in the deliberation on this and he has to leave at 11:30. So I'm gonna invite people to come up. Julie Brandis, if you can restrict your comments to three or four minutes that would be appreciated. And remember that we are recording the proceeding. Good morning.

JULIE BRANDIS: Madam Chair, members

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of the commission, for your record, I am Julie Brandis with Associated Oregon Industries and its retail counsel. AOI represents both manufacturers and retailers. Within our membership we have about 300 retailers. We are here today to ask you to support the petition that asks for, one, the corporate averaging and, two, to account for the 1,700 tons of plastics that consumers are recycling especially because the curbside system has been working. Consumers are participating in that. It just seems to be somewhere else in the system that we're not quite having the best of luck with. Your timely decision and favorable decision is most important because of the breadth and the depth of the product, which may be covered. My 5th grader helped me this morning to put this display together. It's very important to her and she cleaned out her bathroom so I was pleased. But in reality we are talking about everything from baby wipes to hair straightener back there. We are talking about the largest manufacturers and the smallest specialty manufacturers. For example, I buy all my skin care product from a young lady who basically manufactures something in her garage in Portland. And we are talking about the largest retailers to the smallest one chair beauty

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salon in any of your hometowns. Two months has passed since the DEQ has made its announcement that we have failed to make the rate, and we still don't know resin types, products, but most importantly how to comply. Despite the sophisticated retailers and manufacturers -- despite how sophisticated retailers and manufacturers are in the 21st century we still need time to decide how to manage our inventory, especially when the constraints of this law will impact Oregon and no other state. Keep in mind, we have to comply by January 2008, following the retailers busiest season and highest inventories. Our decisions about every clam shelled Barbie occurs six months ahead of time. We need to know how to comply and we need to know your intentions for enforcement. The only state with a similar law is California and they do allow for corporate averaging. And therefore, that proposal obviously eases our compliance. Especially we can't imagine all product packaging to be changed simply for Oregon. By accounting for the 1,700 tons you recognize that consumers did the right things. Keep in mind that w need to be working to supply chain and informing consumers about the products which will be removed or changed. And really we do need a great deal of time to start that

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communication of the supply chain to the end of our supply chain.

(End of Tape 6 Side 3B)

JULIE BRANDIS: We also -- I'm very concerned about the DEQ staff suggesting that we wait to see what the legislature does. I've been in the legislative process for 20 years. I have made a lot of predictions at the beginning of a legislature and I have never been right on any one prediction. So it is very risky business to do that. They are considering something like the bottle bill expansion and, again, I think estimating what comes out at the end of that is, again, hard to decide. This starting a workgroup --it will be a broad-based workgroup with many of the -- those constituencies involved around the table and I can't predict what they'll come up with at the end. So we urge you to consider the petition and thank you for your time.

LYNN HAMPTON: Thank you. Thank you very much.

BILL BLOSSER: I just have a quick question.

LYNN HAMPTON: Yes.

BILL BLOSSER: Well, I would be supporting a revision to the bottle bill and trying

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to expand the amount of things that are subject to required recycling one way or another?

JULIE BRANDIS: Madam Chair and members of the commission, first, the last few years we haven't really taken a look at the bottle bill, in terms of our board position or executive committee position. We have been looking at things like electronic product stewardship recycling and that's been most of my efforts, in terms of recycling. In terms of the bottle bill, keep in mind that we do represent a great deal of retailers and this impacts their store space greatly. And we heard phenomenal testimony yesterday about the amount of space that retailers would have to comply with the take in additional bottles. They made a compelling argument. Most of the retailers I represent aren't grocers, but those grocers did make a compelling argument about the amount of space and where they're to find it within their stores. They have parking lot restrictions as it is, so they can't just expand their stores. So I think what our board and executive committee has always said is we've got to take a look at the final product, in the work groupers meeting we'll take a look at that when the workgroup produced their final document for the legislature. The other thing we're

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looking at is recycle bank. That's a project that's been proposed -- it's actually in place in the east, like in cities like Philadelphia, where they pay consumers for the recycling. It's a system that is set up and we are looking at trying to expand that in Oregon in a pile up program. And the retailers participate in that. For example, I don't think Target has signed on yet, but they're close to and I think Starbucks is signed on. So you get a gift card once you reach a certain amount of recycling -- recycled product at your curbside. It weighs -- it uses a measuring system.

LYNN HAMPTON: Other questions, comments? Thank you. Thank you, Miss Brandis. Dennis Graising, Greasing? Welcome. What's the correct pronunciation?

DENNIS GRAESING: Thank you. I appreciate you holding this (inaudible) this allows me a chance to meet with an old friend (inaudible) representative for a number of years. My name is Dennis Graising. I'm the Vice President of Government Affairs for the Soap and Detergent Association. We a 110 member association, which includes the manufacturers of the finished packaging that our members use. We represent the soap, detergent and

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general clearing products industry. And our membership ranges from international global companies like Proctor and Gamble (inaudible), to small local companies. That would include people like Seventh Generation, a well known brand. We -- I can't emphasize enough the proposed regulatory (inaudible) are essential for compliance for both large and small companies. I've seen comments to the contrary. Small companies will require this more than large companies. (inaudible) members largely initiated the design and introduction of environmentally responsible packing in the late 1980's. We have concentrated our product, we have reduced our packaging as a result, and we've still maintained a 25% of recycled content and above. And as Mr. Cosgrove ably pointed out, we don't even get credit for the reduction of waste through our source reduction efforts. We do environmentally responsible packaging as a core value in our member's sustainability pledges. And we have maintained our commitment to this for over 20 years. If I may, Vice Chair Blosser's comment about what have you done? Since the court issue here in Oregon seems to be the shift from source -- curb source separation to co-mingling I don't think there's anything much we could have done. These were local decision made in a

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good faith attempt to expand the amount of materials brought in. What we have with this 1,700 tons of misdirected material is an unintended consequence of that. However, that consequence falls on us. The law, as it's written, reflects California's in that each sector is essentially assigned a role. It's implicit. It's not explicit. It's implicit. We have always viewed our role as two fold. One, to produce the materials that -- the packaging that can use the recycled content and, two, to support thereby the recycled markets. I believe that we are still the largest consumers, this is a (inaudible), of recycled HDPE and PET used in non-beverage applications in the country. That is our role. My members tend, when the market allow, to use more than 25%. There are upward limits beyond which you can employ recycled content, but you can go above 25 and we do that when the material is available. It's also critically important for you to understand that the current state of the resins market is supply constraint. It's imbalanced, but barely. We would like there to be more supply. That would reduce the price, it would make it more available to us, more reasonable for us to use in greater applications. That's not the case. While the exemption issue that

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Mr. Cosgrove raised is not within your purview and recognize this, you have to understand the following. We are currently operating under essentially a California regiment where we have exempted categories for products. If the Oregon law is triggered, those product categories will come under the law. It -- this will induce an even greater demand on the recycled resins market. The fact of the matter is that there may not be the supply there. This is why corporate averaging is so important. I also want to point out that corporate averaging will not in any way diminish our required commitment to the purchase and use of recycled resins. It simply grants us flexibility in the marketplace. Excuse me, while I try to be concise here. Based on conversation with member companies we would estimate that if the Oregon law is triggered, as it's currently drawn in statute and regulation, the initial cost to a large company will be $10 million with $2 million in recurring expenses on an annual basis, and that will be because of the anticipated premium price, increased premium price that recycled resins will demand in the marketplace. Ironically or (inaudible), one of the outcomes of the situation, if it's not address in Oregon, could be a significant reduction in the use

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of recycled resins. Because you'll create a new demand for these product categories which are currently exempted, there will be less supply available, companies will be forced, perhaps, to reduce their current levels of purchasing because of market demands. In summary, because your law is different than California's, a failure to confront these issue by this commission will result in market chaos. We cannot wait much longer. The decision that are -- that will lead to compliance on January 1st, 2008, are probably already being undertaken by companies. They need to see that there will be some change, that there will be some hope that (inaudible) alternative compliance options. This is the length -- you've heard six months. It's probably longer. We need -- it's essential that we have a decision. We are going to the legislature as well, but I would urge the commission to initiate approval of these petitions and proceed with a regulatory process! With that, I know we're stressed for time, Madam Chair. I'd be happy to answer questions that --

LYNN HAMPTON: Well, it's apparent to me we're not gonna be able to reach deliberation by the time that Mr. Williamson needs to leave. So I don't want you to truncate your remarks overly. We

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(inaudible) anything major. Commissioner Uherbelau?

JUDY UHERBELAU: Yes, I want to make sure that I understood you. You were saying that there would be a $2 million cost to the industry if the -- because we've recycled less than 25% and the result is triggered?

DENNIS GRAESING: No, what I'm saying is -- as I understand the comments from my members, because you will -- triggering of the Oregon law will bring new categories of products under that law, cosmetics, hazardous materials, five gallon buckets, which are not currently -- they are available for counting in California at the option of the manufacturer. If those products are brought into the -- under the prevue of the law, that's what will change things.

JUDY UHERBELAU: What's till not being made clear to is we're talking about the changes that Mr. Cosgrove has discussed and are you saying that if those changes aren't made they'll be a $2 million cost to your things, or if they are made -- you're just not being clear.

DENNIS GRAESING: What I'm saying is, when you have companies which have products which are not currently brought under either of the laws.

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JUDY UHERBELAU: Right.

DENNIS GRAESING: They have to go to that and triggering the Oregon law will then bring them under a law and requirements. That the initial increase for a large company has been estimated to me to be about $10 million, then there will be -- that's packaging redesign. Now, if -- and approvals, if you can get them. I mean, the process for FDA for cosmetics is very simple. They don't approve anything. They say, "We don't object." You have to apply to them, because the package is considered part of the product. You apply to the FDA and at some point in time they issue what's called a letter of non-objection, but the liability continues to rest with the manufacturer, but they do not approve. So with these new products coming on and a supply constrained market you're gonna see a price increase, and it's that $2 million increase anticipated because of resin costs, because of the new product lines being brought into play that we anticipate.

JUDY UHERBELAU: Thank you.

LYNN HAMPTON: All right.

STEPHANIE HALLOCK: Madam Chair, I'd just like to make a clarification for the audience's benefit, in terms of -- if Commissioner Williamson has

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to leave the commission will still be able to take an action on this today. There will still be three remaining commissioners and have a corium and they will be able to make a decision today.

LYNN HAMPTON: And I -- given that we're not gonna be able to reach deliberation, I would like to take a five minute break right now. And then everybody who signed up will have an opportunity to continue to speak to us and we will be here until we're done. Don't worry. So we'll take a five to seven minute break right now.

DENNIS GRAESING: Thank you, Madam Chair and members of the commission.

(Break for recess)

LYNN HAMPTON: Presume our session.

(Inaudible discussion)

LYNN HAMPTON: Having heard from Mr. Graising, which I think is the correct pronunciation, we're going to move along and hear from Mr. Jeff Murray and a person named Kristin Mitchell has asked to come up at the same time. Is that acceptable to you both?

UNIDENTIFIED SPEAKER: Yes.

LYNN HAMPTON: Is there any problem with that, in so far as the way the hearing is

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conducted? Okay, all right. If you'll identified yourselves for the record and your affiliation, if any, and we'd be glad to listen to you.

KRISTIN MITCHELL: Good morning, Chair and members of the commission. My name is Kristin Mitchell.

LYNN HAMPTON: Okay, I'm gonna apologize and I should have noted that at 11:30 Commissioner Williamson had an unbreakable other commitment and he had to leave. And so right now we -- I'm, I guess, ascertaining that we continue that we have a forum, so we're going to continue. And Miss Mitchell, would you repeat what you said for us please.

KRISTIN MITCHELL: Of course. Thank you. My name is Kristin Mitchell. I'm the Executive Director of the Oregon Reffuse and recycling Association. Our members are the ones that are collecting garbage and recycling curbside and commercial operations all across the state of Oregon. We operate the material recovery facilities, where those materials if they are co-mingled go, and the transfer stations and most of the land fills in the state as well. So we are the group that I think you've been hearing some about this morning, and I

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thought it might be helpful for you to have me up here for questions, if nothing else. In fact, originally I just submitted some written testimony and was preparing to testify, but I felt like it was important at this time. Jeff Murray with Far West Fibers is a member of our association, as well. And I wanted to just start with a few things. First of all, I think you may have gotten the information from some previous testimony that the system in Oregon, the collection and recycling system in Oregon isn't working very well. And if you understand the way Oregon's system works -- the state of Oregon set a goal for the recovery of 50% of the waste stream by the year 2009, originally it was 2000 and it was moved to 2009 in order to give us a little more time to get there. One of the ways to do that is for cities and counties to implement programs in communities of over 4,000 people that are curbside collection programs. And we work with the cities and counties. We basically privatize what would otherwise be a public service by taking care of those programs for the cities and counties. And so we're one of the ones that they rely on to help them reach the goals. In the most recent year, for which we have numbers with the DEQ in 2005, our recovery goal in Oregon --

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or our recovery rate in Oregon, I should say, is 49.1%. So we are less than 1% currently of reaching the 50% recovery goal that's in the year 2009. So instead of taking the position that the programs aren't doing the work that they need to do, I think the exact opposite is true. It's through the investments of truly the citizens of Oregon. These are rate payer systems. If, in your communities where you live, if you have garbage collection, I believe your companies are members of our association. The rates that they charge you are established by the communities. The service standards are established by those communities and we go out and do the work to get it done. And in almost every -- every community in this state that's over 4,000 is already meeting the requirement that the curbside program is in place. There's 100% goal on that, whether it's through a curbside program or through an alternative program. And there are a number of smaller communities, as well, that we've been able to expand into to provide curbside collection of recyclables as well. There has been a shift in the system to more co- mingled recycling collection. And one of the major reasons for that is not that local jurisdictions make decisions on programs based on weight, because the

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more weight they get out, the more material they collect. But local jurisdictions base their programs on what rate payers want. And rate payers in Oregon have wanted rigid plastic container recycling or plastic container, at least in some form. And as more programs moved to more plastics recycling we started running out of room on trucks. It used to be that you'd stop curbside and somebody would pick up the plastic and it would go in a certain bin of a truck, and glass would go here, and the other -- the paper would be there, and the cardboard here, and the used newsprint down there. Well, you can imagine how many bins are on each truck, and if there are more people putting out paper then they are other things, you're gonna run out of room on the route before you can complete it, go back, come back and forth. So one of the ways they dealt with adding recycled plastic, which took up more room, at least volume wise and Jeff can refer -- correct me if I'm wrong here, as they started looking at ways to co-mingle those materials. And then determined that if they co-mingled even more materials, made it easier for people to do it we might pick up more recycling in general and come closer to meeting our goal. And you have in your documents this report from the Oregon -- the DEQ

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testimony before the Senate Natural Resource Committee. Do you guys -- am I wrong or do you have this chart at least? The Oregon rigid plastic recycling chart?

LYNN HAMPTON: Yes. Is the first page -- does it say "Rigid Plastic Law Background"?

KRISTIN MITCHELL: No, but we may have the same chart.

STEPHANIE HALLOCK: It says -- attachment 1 says, "Oregon Rigid Plastic Recycling Rate," and it's this table -- Helen handed it to you before Loretta spoke this morning.

LYNN HAMPTON: The one with the pictures on the back?

KRISTIN MITCHELL: Here's what it looks like on the front.

LYNN HAMPTON: Okay.

KRISTIN MITCHELL: If you look at this chart, once you have it let me know -- okay, so it shows on the top number, the middle column, "Tons recovered." And what it's showing you is the Oregon rigid plastic recycling rate from 1993, which is when they started tracking the number, because the programs went in place in 1991, but with the legislature that's when they passed the law and we were starting to do the programs. So we started tracking numbers

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then and the most recent number tracked are for 2005. And if you look at those numbers as a whole it shows tons recovered in 1993 rigid plastic, a little over 8,000. And tons in 2005, 13,008. About where we are. But yesterday -- we've been doing some other work with the legislature, talking about bottle bills and what the rigid plastic container rate was, and Jeff Murray asked Pierce Findelow, who you heard from earlier, "can you split that number for us? Can you tell us, in that rigid plastic container number, which of those containers come through the bottle bill system," which is a redemption system, which isn't something that our members participate in. We're curbside only or commercial only, but we're not part of the redemption system. "Which of those are bottle bill and which of those are non-bottle bill?" And so Peter did the split, and like I said, I wasn't intending to testify but I did give one copy to --

LYNN HAMPTON: We've got it here. And since there are only three of us we can see it.

KRISTIN MITCHELL: I made a bigger version for me. But the bottle bill numbers for '93 to 2005 are hovering at 4,100 -- well, in '93 it was 4,184. In 2005 it was 4,171. So actually we've had a little decrease in the bottle bill redemption bottles.

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In the non-bottle bill rigid plastic container rtes, the part that our members are responsible for, in '93 we had 3,831 tons. In 2005 we had 9,633 tons. Now you've heard -- there are a lot of numbers out here, and I'm not pro at numbers. I was admitting I was a foreign language major in college, but even I can do the math. It is a little bit of a foreign language to me when we talk numbers. But even I can do the math to figure out that 9,633 tons is over 250% increase in the tonnage that was being collected in 1993 when we started these numbers. So if you consider the numbers that you're hearing, some from the DEQ in their report that they worked with Metro to get a tonnage number of 1,700 tons being lost in the system, you've heard a lot about those tons being lost in the system and companies like Jeff's are the reason they're missing them. You need to consider in that that we've had a 250% increase. And if you're trying to maintain a recycling rate at 25%, I think that the programs that we've put in place have at least kept them in the range. I mean, these are programs that we've invested in, that the rate payers have invested in, that local cities and counties have been willing to raise rates to take care of that have been bought off by this entire system. We didn't

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expect the co-mingling recycling system to bring in so many plastic containers. The expectations were that we would have about 2% in the mix in the cart on the curb, and it's been closer to 5%. So just the sheer numbers for us, the volume for us has been an issue as we try and sort those materials and get them into the appropriate containers so that we can take them to market. In fact, Jeff's companies -- he'll tell you about it, I'm sure, has recently invested a million dollars, you may have seen the front page Oregonian a couple weeks ago. It had Jeff in front of a bail of papers, kind of a running man. You couldn't really see -- they say it was Jeff. I think it might be true. But that's one company -- one of their plants in the Portland area has already invested a million dollars. They're going to investing close to another million dollars in their other plant. We have two other members in the Portland area -- between the four of them they take -- 85% of the recovery that happens in the state goes through those plants. And they're all investing in the range of a million dollars to try to take care of this new, increased number that was not expected and we're trying to find ways to deal with it. That's the piece on this. There are other issues as well. When

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you talk about clam shells, and I know there's a lot of packaging out there -- we can't affect the packaging. We can only collect the materials that really -- that are markets that are avail be for them. In the last couple years clam shells have started to have some markets. But one things cities and counties don't want to do is they don't want to start a program for a material that doesn't have a market that won't be there in the long run. You can't come back to your customers and say, "Well, you could have put your clam shells out last week, but this week it's not gonna work." Commodity markets, as you know, are very up and down. And currently, from what I understand, there is at least a steady market for those types of materials, but it's a cost to put the programs in place and to have those kind of materials come into the system. And we're always looking for ways to add additional materials, because that's our role with the cities and counties that we serve. But I think you have to remember that if there isn't a market for something it's going to hard for us to recycle it and do something positive with it. I guess those are most of my comments. If you have questions for me I'd be happy to answer them.

LYNN HAMPTON: Does your association

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have a position on this request by this organization regarding the petition?

KRISTIN MITCHELL: In my written comments I mostly wanted to clarify that I felt there were some issues with the rate and how the rate was reviewed. I think the best and most productive thing that can be done is to get better information about what's actually being recycled out there and what's actually being disposed. I know the DEQ has worked with Metro to come up with an estimated 1,700 ton number. I think that we have members that are somewhat skeptical of the number and would prefer to be a part of the discussion on it and how to review what the numbers are. I think that Jeff Murray's company is looking at doing its own internal review to see what the numbers are currently. As far as their petition today, I think the point for us is we're doing the best we can to maintain what's available out there for collecting and these programs and we think we've done a pretty good job. But if you look at the increase in the generation numbers, which is what I think is pretty important -- if you look at the DEQ's report talking about water and juice sales or recycled at a 33% rate, and carbonated beverage sales -- or soft drinks and things like that

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are recycled at a 75% to 85% rate. Unless we find a way to encourage people to bring those containers home and put them in their system, put them in their curbside system, or bring them home and redeem if they happen to go to a bottle bill, that disposal bill will continue to rise. And regardless what we do on the recycling end, we will never be able to maintain a 25% rate. I'd like to see -- I think we've stepped up to the table, both in the programs we've done and in the individual investments that we've made and I guess I'd like to see the same commitment on the part of the manufacturers.

LYNN HAMPTON: All right. Commissioner Uherbelau?

JUDY UHERBELAU: Yeah, do you have a comment or -- you know, one of the other speakers talked about the fact that because of the co-mingling and the plastic gets mixed up with the newspaper and then it doesn't get sorted correctly and it gets lost and goes to the landfills, can you comment on that as to what you think, since you work with the recyclers? Is that a large percent and why it's happening and what can be done to terminate it from happening?

KRISTIN MITCHELL: Chair Hampton, commissioner Uherbelau, are you asking me -- let me

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see if I can figure out how to answer that. A lot of the programs have moved to a co-mingled system for the reasons I've described. And there definitely has been some increase in the contamination as a result, because generators put maybe things into -- they think, in good faith, that they can recycle these things and maybe they can't, or maybe they are lost through the system. But I think you have to calculate the nets to figure out the value. If our numbers -- just on the rigid plastic containers have increased 250%, over 250% in the time these programs have been in place, and a significant amount of that is due to the co-mingled system. A 20% -- even if it is a 20% number on these particular bottles, we're still at 230% of an increase. To me, I think we can always do a better job of more sorting and more education. We work pretty hard with the customers to try and make sure they understand what goes in the mix and what shouldn't. But I think the system in place is the way for us to meet these goals and I think the numbers show that.

BILL BLOSSER: I think maybe the same question. Are the million dollars you've invested and are gonna invest again, will that increase your ability to sort?

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LYNN HAMPTON: Identify yourself for the record.
JEFF MURRAY: Sorry.
LYNN HAMPTON: That's okay. Just for the record.
JEFF MURRAY: Madam Chair and commissioners, I'm Jeff Murray and I'm with Far West Fibers. And the answer is yes. Last April we invested nearly a million dollars in additional equipment. Literally tonight and over the weekend we're spending another $50,000 on speeding up our belts to work better with this new equipment that we put in. We've already improved on getting cont -- more containers out and we're going to continue to work on that. But even -- well, actually would it be all right if I went ahead and --
LYNN HAMPTON: I think this is an --
(Inaudible discussion)
JEFF MURRAY: Okay, once again, Madam Chair and commissioner. My name is Jeff Murray and I am Vice President of Far West Fibers. I have been in the (inaudible) recycling industry for 30 years and actually more than that, because I grew up next to a garbage man. Far West is a privately

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owned Oregon business that has process recycled materials in Oregon for over 25 years. Far West operates 4 recycling facilities throughout the Portland/Metro region and we currently process an excess of 40% of the curbside throughout the state of Oregon. Oregon -- Oregon's curbside recycling programs are looked on as some of the best in the nation, as you probably are aware. During the early 1990s plastic bottles were added to the Oregon curbside programs. Collection vehicles were retrofitted with small compactors to handle this bulky, light material. By 1993 non-bottle bill plastic containers grew to a volume of 3,831 tons. Because of the continued growth of the plastics the curbside collectors, processors began to experiment mixing plastic containers with paper in 1995. In 1996 several of the haulers that we provide services to moved to co-mingling in all paper, plastic and metal containers together. This change allowed the haulers to move to compaction of curbside recyclables, which was much more efficient on the collection end. It also allowed them to collect more plastics. It is also -- sorry, it also caused us to begin to -- an ongoing investment in sort lines and various sorting equipment. To day, Far West Fibers, in equipment

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that's still currently being uses, has invested over $7 million in sort equipment. In 1996 plastic bottles were less than 1/2 -- 1 1/2 % the curbside mix. In 2001 plastic containers grew to over 2%. This is about the time we ordered -- what I'll call our biggest round of equipment. We spent $4 million plus at our two facilities for equipment on this 2% number. We figured it might go up a little bit. Currently plastic materials are now over 5% of the curbside mix. They may not sound like a big number to you, but when you think about plastics and its weight, it's an incredible change.
LYNN HAMPTON: Well, do you mean 2% by weight?
JEFF MURRAY: -- yeah. It's by weight, not by volume. Thank you for the question. The good news, in 2005, the most recent year reported by DEQ, 9,633 tons of non-bottle bill plastic containers were recycled in Oregon, an increase, as Kristin mentioned, of over 250% when compared to 1993. Wrong way. The bad news, our sort systems were not designed to handle this volume of plastic containers. This is an industry wide challenge, not just one for Far West Fibers. It has been reported by DEQ that from samples taken by Metro staff, 20% of plastic

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bottles curb are winding up at Northwest News Mills. Though we question the number, we do not disagree that the number of containers going to these news mills is unacceptable. What is being done to solve the problem? In April of last year Far West invested nearly a million dollars in upgrades to the sort system at our Hillsboro facility, as I mentioned earlier. The primary upgrade was the addition of a container screen at a cost of over $800,000. Starting this evening, as I already mentioned, we're doing some more modifications to our system. We'll know during the next few weeks if these investments will lead to considerably less plastic containers going to the paper mills. If not, we will continue to invest. If we are successful we will also make the same investment at our second facility. So it's not just a matter of a million dollars for our company. Anything we have to do we have to do twice, so it's $2 million. I've also been made aware that another major processing facility, a competitor of ours, owned by SP Newsprint, has ordered new state of the art equipment that should be installed this year. The primary purpose is to get containers out of the paper. Another processor, KB Recycling, and also a member of (inaudible), has been out to look at our

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upgrades and is weighing out options to get the rest of the containers out as well. These actions should help make a significant impact in a relatively short period of time. I apologize. Oh, I'm sorry. In addition to these actions we've already taken, in 2005 Far West Fibers expanded the types of plastic containers that we would accept for recycling at our depot programs. We don't like to add new plastics to curbside programs without first finding out, do we have long term markets for them? So the first place we expand the collections is at depots. One, to see if the public wants to utilize that service and, two, to see if we have long term markets.

LYNN HAMPTON: Do you mind if I break in and ask a question?

JEFF MURRAY: Absolutely.

LYNN HAMPTON: Isn't this kind of a chicken and an egg problem? How can you have a market for something unless you're collecting it, and if you don't collect it unless you have a market, isn't this kind of an actors/equity card situation?

JEFF MURRAY: it can be.

LYNN HAMPTON: All right, I just wanted to make sure that I'm understanding that it is.

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JEFF MURRAY: No, that's correct. And part of what happens is we are approached by various people, "Would you be willing to collect this material and that material?" And we say, "Are you wiling to take it from us?"

LYNN HAMPTON: So you see the faint dawnings of a market and you can act on it.

JEFF MURRAY: Right. And then we go back and fort and over time it either develops or falls apart. But we do not want to add a material to the curb until we're very confident that we can continue the market.

LYNN HAMPTON: And Mr. Mitchell, I don't want to be too unfair, as we change the tempo of our hearing I sort of ruthlessly terminated -- I'm sorry, Mr. Murrah, I ruthlessly foreshortened our earlier commenters, so if you would wind up.

JEFF MURRAY: The end result of this, which I was getting to, is these additional materials in 1996, the full year that we collected and accounted for over 400 tons of various types of containers that would be qualified as a part of the rigid container program. In near summary, curbside recycling programs have excellent participation rates. Programs that utilize roll carts have been able to

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add additional plastics. With all that I've said, this problem of 25% will not be solved at the curb. The vast majority of the newer beverage containers are not a part of the bottle bill and they are not consumed at home. These bottles are being found in garbage containers at parks, on the sides of roads, and at the beaches. Our industry will continue to adjust its increase in plastic collection, however this will not solve the problem long term. We, the residents and businesses of Oregon, need to find an answer for recovering the containers that are away from the house. If we don't, we will be back here in another two to four years trying to find ways to get the number -- get the number above 25%. I ask that we work together to solve this problem. Thank you.

LYNN HAMPTON: And I just have one final question. I'm assuming that as the recycling groups like yours are increasing able to recover the plastic from the paper or the other types of recycling material that that material is recycled?

JEFF MURRAY: Absolutely.

LYNN HAMPTON: But what happens to that -- you spoke to the newspaper associations trying to increase their efforts to get plastic out of the

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paper, is that then recycled or disposed?

JEFF MURRAY: At this time it's disposed, however they may have found -- we've been working on some markets for the material, but we do not look at that as the solution.

LYNN HAMPTON: Okay. Thank you.

JEFF MURRAY: Thank you.

LYNN HAMPTON: I'm sorry. I'm premature here. Commissioner Blosser?

BILL BLOSSER: Commissioner Williamson pointed out before he left is our problem is a 400 ton problem right now. The magic 25% number we're falling 400 tons short. Do you see a way to pick up that 400 tons somehow that the manufacturers could rely on that it would actually happen? I mean, what if Paul sent an extra sorter to each of your plants or he hired five extra sorters to show up at your plants?

LYNN HAMPTON: Sends his children.

BILL BLOSSER: And would -- and there were five extra people standing in your line, could they get 400 tons between you -- I don't just mean you alone, but other places? What if Paul went door to door and said, "Please put your plastic in the bag? Please or you won't have any shampoo.

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We'll take your shampoo away from you unless you put those bottles in there." I mean, do you see ways of either increasing the curbside where more would end up in the recycling containers rather than in the garbage part, as well as sorting it out of the stream after you get it.

JEFF MURRAY: Madam Chair and commissioner Blosser, my answer is yes for short term. I believe the actions our company is taking, other companies are taking, is going to get the majority of those bottles that are currently headed to the mills back out within the year. With that said also, there's more and more programs throughout Oregon moving the roll carts. One of the challenges to adding more plastics that could go at the curb -- a lot of places are still using the bin system and if you've noticed the bins are overflowing, beginning -- the materials being put in paper bags that fall apart at the curb and so on. So as these new programs come online with roll carts then other materials are able to be added, other plastics in particular, which city of Portland tends to do. I have a meeting I'm supposed to be at right now in Clackamas County where we're adding plastics to the curbside as they move into roll carts. That will have an impact. But in the

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long run we -- bigger picture -- it would be a short term fix I believe can happen. We need to look at what's gonna happen as more and more and more plastics are being produced.

LYNN HAMPTON: Commissioner Uherbelau?

JUDY UHERBELAU: But given that, it seems to me that what you said, unless I misunderstood it, is that a lot of plastics being used are not used at home. They're used outside of the home, and so wouldn't it be profitable, so to speak, if we had containers, especially in places where people tend to be, like in athletic fields, at schools, at parks, at you know, stores --they go in and they buy something and drink it and toss it in the garbage? Wouldn't that increase --

JEFF MURRAY: Madam Chair and commissioner, I agree with you. I believe there are some colleges that experiment with this, you know, trying to collect beverage containers at big events and all that. As a representative of Far West Fibers I can sit in front of you and say we do support a thorough out expansion of the bottle bill, I think. It's a bigger picture issue and if you -- we've learned over time if you have a bounty on the bottle

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it will come back.

LYNN HAMPTON: Thank you very much.

KRISTIN MITCHELL: Thank you for you time.

LYNN HAMPTON: You bet. And it's Mr. Murray and Miss Mitchell, and I apologize, Mr. Murray. All right. We're going to move along to Mr. Jeremiah Bowman.

JEREMIAH BOWMAN: Good morning. I guess afternoon now, technically.

LYNN HAMPTON: Afternoon, yes.

JEREMIAH BOWMAN: Madam Chair and members of the commission, my name is Jeremiah Bowman. I'm an environmental advocate with the Oregon State Public Interest Research Group, or OSPIR. I guess I'm the first witness today who neither sells anything in a product in a plastic container, nor recycles plastic containers. However, as you may be aware OSPIR has a long history with plastics recycling. Not only were we the sponsors of the ballot measure already referred to today as having been defeated soundly at the ballot by millions of dollars of spending by a whole coalition of industries concerned about recycling laws. But it was another OSPIR ballot measure in 1990 that lead to the current rigid

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plastics recycling law that many of the industry associations before you today supported in the legislature. Let me summarize what I'm going to say by saying I'm disappointed, honestly, that this petition has come in front of you today. And I'm somewhat disappointed today by some of the comments and direction of what I've heard today, because I believe that Oregon can do better. I think Commissioner Blosser hit the nail on the head early on when he said, "falling below is certainly a warning light, but there's an evening bigger problem in that that rate has never been above 30%." And this stands in stark contrast to our highly successful recycling programs for many other materials, including (inaudible) containers. I guess the disappointment comes in that the many (inaudible) associations petitioning for this rule change are using resources for this rule change, rather than on any number of other solutions to the problem that we actually have, which is a low recycling rate for plastics --

(End of Tape 5 Side 4B)

JEREMIAH BOWMAN: -- while we hear concern that there's not enough time to switch to recycled plastics for these containers or change to plastics that are easier to recycle, we're here today

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debating what the definition of recycle is, rather than working on those solutions. Many of these solutions you've already heard so I won't spend a lot of time on them, but are very common sense and would be very workable. Extending the bottle bill would not only be highly effective for increasing recycling rates, but is widely popular among Oregonians who (inaudible) renewing, recycling behaviors simply by the very excitement and visibility, which I think is evident from a lot of the media coverage and political support for doing so. But as you've heard today many of the associations aren't supporting extending the bottle bill and (inaudible) are opposing that measure. We could also add more containers to curbside recycling and I believe I heard Mr. Cosgrove say that this commission could be doing so by rule, but unfortunately that's not what the petition pertains to. This response to our low recycling rate, I'd like to point out, is in stark contrast to how other segments of our business community, both in Oregon and around the country, are responding to similar problems. Representative Dingfelder earlier this morning talked about the electronic waste program being debated at the legislature. They're electronic manufacturers from around the country are stepping up

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to the responsibility that rests uniquely with manufacturer to deal with the (inaudible) consequences of their products. As a consumer myself, having struggled to open many a clam shell container, I can tell you there are a lot of consumers demanding that they're products come in clam shell containers that are hard to recycle. I do think the manufacturer are in a unique position to decide what kinds of containers their products go into. And that's why we support producer responsibility for dealing with solid waste problems. With electronic waste, electronic manufacturers are literally supporting and proposing and lobbying for a bill that would require them to fund the collection and recycling of their products at the end of their useful life. That's an incredibly useful approach. I think we've laughed a little bit today at the idea that perhaps some of these trade associations should pay for collection of these containers at athletic fields or at the state capital, but that perhaps would be the exact, correct solution. To not only increase the collection of these products, but to put that financial responsibility with the companies that are in the best position to change the products themselves to a more recycling friendly system. Let me now turn to the substance of the

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petition. First and overall comment on a petition, I think it's being characterized as a problem hat manufacturers would now have to certify that their products are either recyclable at 25% -- manufactured at the 25% recycled content or manufactured for reuse. But that endpoint, that behavior change by manufacturers is exactly the goal of this law, in the way I read the law. In fact, it occurs in exactly that order in the statute. The law first duplets those requirements, that any container sold in Oregon meet one of these three requirements. It only then suspends those requirements so long as the statewide recycling rate stays above 25%. And that makes sense. It is a problem that clam shell from PVC is very hard to recycle. PVC also has all sorts of environmental problems involved with its manufacturer and disposal. It's the exact intent of this law that if we can't plastics recycled at 25%, manufacturers look at the question whether we should be switching away from PVC and towards a more environmentally friendly product. On the particular details of the two requests in here, I'm only going to comment very briefly. I agree very strongly with the Department of Justice recommendation that it would be a stretch, to say the least, for this commission to find that

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the word, "recycled," could somehow be defined to include products that are not recycled. I agree that a lot of Oregonians, when they use the word, "I recycle a bottle," mean they put it into a plastic bin on the curbside. But I think they also use that meaning only because they assume that plastic bottle is actually being recycled, not because they actually mean that putting in the bin is the definition of recycled. On the subject of using aggregate or averaged recycling rates for calculating recycled content, I'll simply point out that while it is true DEQ currently allows averaging, in the context of recycling rates, that is DEQ allows bottles recycled over the course of the year to be averaged together to determine an aggregate recycling rate. The subject of this petition is not that recycling rate. The subject of this petition is the content of the manufactured products, the 25% manufactured content requirement. The law is quite clear on that regard. The plain language of the law says, "Any container sold in the state must contain 25% recycled plastic." And I believe that the department of Justice has it correct in saying that "Any container does not leave a whole lot of room for averaging large detergent bottles and with small hand soap bottles." With

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that, I'll end my comments and be happy to consider any questions.

LYNN HAMPTON: Thank you. Commissioner Blosser? Commissioner Uherbelau? Thank you. I think your comments were very clear. We'll move along now to Alex Kylar? Is that the correct pronunciation?

ALEX KYLAR: Madam Chair, members of the commission, I'm Alex Kylar. I'm a legislative analyst with the city of Eugene. But immediately to prior to becoming a legislative analyst I was a solid waste and recycling analyst for the city of Eugene for the past 10 years. And prior to that I ran Green Recycling in Eugene for six years. So I've been involved with this industry for a long time. I'm also the immediate (inaudible) of the Association of Oregon Recyclers. Suffice it to say, I've seen a lot of recycling in this state and the region. Eugene began recycling curbside in 1984 when the original opportunity to recycle act was actually passed by the state legislature that started to talk about providing Oregonians with the opportunity to recycle, and that could be done through recycling at transfer stations or by a curbside. But curbside was very much in its infancy in 1984. We didn't have a whole lot of

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regulation about it through our city code. Haulers were not really even licensed or franchised. There was no methodology for dealing with them, but that all came as a result of the laws that were subsequent to the 1984 act. Today in Eugene customers have an incredible range of choice, in terms of container size and frequency that they can have their garbage and recycling collected. They have a 90 gallon roll cart that gets collected every other week that has co-mingled recycling in it. They have a 14 gallon bin that gets collected every other week that has glass, which we require to be kept separate for curbside recycling. And they also have a 65 gallon roll cart for the collection of yard debris, which gets collected every other week. For this range of services, depending on the size of the containers and the frequency of their collection choice they pay between $5 per month up to $40 per month. This is -- the rates are regulated by the city of Eugene and we take a look at the hauler's expenses and we try to give them an appropriate rate of return. We examine their expenses for reasonableness and then we set the rate accordingly. And this is done all over the state of Oregon. Local governments have that ability that they regulate to a collection and they

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set garbage rates, and they set the service standards, just as Miss Mitchell said. In terms of plastics, actually beginning in 1984 Eugene haulers collected plastic bottles and plastic tubs. We were really one of the very unique communities in that regard, but it wasn't always a great thing. We were -- not the city, but processors in Eugene, and back then it was just these little non-profit organizations, were told by the plastics industry that they could recycle these materials, no problem. And due to the diligence of processors in Eugene we really strive to continue to recycle those materials. And so we've still got one of the very unique programs in the state, although my understanding is now more communities up on the Metro region are adopting tubs as a recyclable material. But there were definitely times when, as a processor of those materials where I would accept them from curbside haulers, I was not convinced that tubs were being recycled. And we were very vocal with the plastics industry that we wanted these materials to be recycled. It was a tough road hoe and the plastic industries, in some cases, responded and in some cases they did not respond. The plastics industry also developed the coding that you see on the bottom of plastic containers, the numbers one through seven.

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That was developed by the Society of Plastics Industry or Society of the Plastics Engineers. I'm not quite sure. There's a couple different acronyms there. You know, those codes were never designed to be used on tubs. They were only designed to be used on bottles. But today you can see that code -- you know if you use a portable toilet there's a code on the inside of the toilet. I mean, this has been incredibly abused. And my point is it was very difficult for us to educate the consumer about what was recyclable and what wasn't. And you can see some of the challenges. The industry rolled out, kind of check the neck, was the standard used in Portland, because they were trying to educate the people, the residents, the rate payers about what was appropriate to put in the curbside container. You know, who paid for those education programs? The rate payers pay for them through the city rate establishment. And we, in Eugene, did a number of things to support plastics recycling through the rate. We paid a premium -- we charged a premium to the rate payer to make sure that plastics recycling continued even when markets were down. So I want to point out that even in -- to the petition, even in ORS 459 today 459A.665 and the opportunity to recycle rigid plastic containers. A

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local government (inaudible) about the opportunity to recycle rigid plastic containers in metropolitan and urban waste sheds. Where there is a stable market for -- price for those containers that equals or exceeds 75% of the necessary and reasonable collection costs for these containers. Your local government is really on the hook, according to state law, to provide the opportunity to recycle rigid plastic containers. And that's why the city of Eugene submitted testimony, in regards to this petition. Should we provide the opportunity of the intent to recycle plastic containers? I mean, we're just very nervous about this concept of what's the difference between the actual recycling and the intent to recycle. And for that reason we do not support the petitioner's request. I know, from speaking to a lot of rate payers, what they think about recycling. And I'm convinced that our rate payers in Eugene -- if they knew that 20% of the rigid plastic containers that they're putting into their curbside bin were being disposed of by a paper mill they would not call that recycling. Now, a definition, a common use of the term might be, "I recycle my plastic bottles." But I've stood at the end of drum pulpers at paper mills and seen them spit plastic bottles out that are

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far beyond recyclable by that point in time in the process, because they're so contaminated by other paper pulp and ink. This isn't -- that would not fly for them to be considered recycling. And it's a tough -- tough for us to mandate, as a local government, it's tough for us to mandate how these containers are actually recycled. You know, you've heard that, yes, 20% of the plastic containers are perhaps going into a paper mill where they aren't recycled, but if you look at the newsprint it's less than 1% contamination of the newsprint because there's such a drastic, huge amount. It's the most recycled material on the curb is newsprint. So this teeny, tiny fraction of contamination in newsprint is actually -- amounts to 20% of the total recycled bottles collected. It makes it very difficult for us to suggest that newsprints should somehow be even pure than 1% contamination. So you know, this is the challenge for local government. Notwithstanding, that we really don't have the authority, through our licensing agreements, to suggest where materials go from the haulers, because there's really no good way to define how -- what kind of facility they should go to. Not only are there some court cases that have been all the way to the Supreme Court called flow

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control, where you cannot direct where garbage shall go. So we're a little nervous about going down that road to say, well, we suggest that the curbside materials that the hauler collects shall go to a facility, said facility that we know is perhaps better than another one or has better equipment than another one. We can't control that. And more over than that, we can't even say you shall go to a facility that is permitted by DEQ, because DEQ does not permit these kinds of material recovery facilities. We use that language when, in our yard debris collection, we say that material collected on the curb for yard debris has to go to a facility permitted by DEQ, thus we have the little bit of security we can promise our rate payers that that material is going to a facility that is above board. But we have not any of that control, because DEQ does not regulate these kinds of facilities, okay? Final point, the petitioners knew or should have known that the plastics recycling rate was falling. Combing old recycling did -- it's come across this nation like a fire storm. And many of the industry associations analyzed it right off the bat. The American Forest and Paper Association public shed a report 2004 that they'd been working on for a number of years document the cost shift from

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collection to the end use processor. This was well known -- DEQ has been publishing this plastics recycling report for a number of years. And while, you know -- anyway, that's my point. Two things that I wanted to respond to that I'd heard in testimony. Kristin Mitchell testified that what rate payers want is rigid plastic container recycling. Rate payers really want low rates, and the reason Eugene accepted co-mingled recycling wasn't because it was something that the city of Eugene initiated, it was something that hauler initiated. And the hauler promised us that they could initiate this massive change of retooling trucks and providing a roll cart to every single customer at no net increase in cost. And after we had been looking at residential rate increase year after year after year we thought that was a heck of a good deal. Now what did we do though? We got a call from the paper industry that said we're very concerned that Eugene keeps glass separated. We heard them, we were aware that there was this problem of contamination. As a result, we have kept glass separated even though it's cost more for our rate payers. The plastics industry never came forward and said we're concerned about our falling plastics recycling rate.

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LYNN HAMPTON: I'm gonna ask you to wind up now, Mr. Kylar.
ALEX KYLAR: Thank you. I don't have any other questions.
LYNN HAMPTON: Is that all right with you?
ALEX KYLAR: You've got our testimony that we've provided in written form. We mainly are opposed to the -- the first point of the petitioners. We didn't really take a position on the second point, so I'm not speaking to that.
LYNN HAMPTON: Questions, commissioners? Thank you, Mr. Kylar. Our final person signed up to give public testimony is Rob Guttridge. Good afternoon, Mr. Guttridge.
ROB GUTTRIDGE: Good afternoon, Madam Chair, commissioners. I'm Rob Guttridge and I'm testifying on behalf of recycling advocates. I am a little unique today in that our organization is a grassroots membership organization. It's not a professional organization or an organization of manufacturers or corporations of any sort. We're individuals. We are consumers, of course, like everyone else in the world. And our organization's mission is to involve people in creating a sustainable

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future through our local efforts to reduce, reuse and recycle. We're interested in solutions that are workable for everyone that don't cost an inordinate amount, that are good for the earth. And we come -- from that perspective, we know that we pay if a product costs more or a package costs more or regulation costs more or a fee imposed by a collector costs more. So we're really looking for the best solution and that's why we supported the efforts in the legislature back in the 80s. We've been around for 20 years to create as good a recycling law as we could that would work for everybody. And when we'd heard the plastics recycling was constantly, "well, it's a manufacturer's choice." We do the best we can with what we have to recycle, but what we see in the store, as a consumer, and what we see on the curb, as a recycler, is a package that a manufacturer chooses. So we need to get the manufacturers getting involved in feeling like they can be a part of the solution if we're going to have a workable solution. We do regulate the haulers, we regulate the processors. Could we get the manufacturers to at least play and participate and recognize the choices they make do affect all the rest of our choices, all the different things we get to do? We do have --

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actually we had a plastic recycling tax credit program offered by the DEQ to encourage infrastructure in plastics recycling. That program was grossly underutilized and eventually did -- some said that it was in effect before and after the passage of the law that we're discussing today. What we feel as an organization is that that law is a good law and it should be allowed to work. The manufacturers have so far mostly chosen ways to avoid participating, unfortunately, and their petition before you today is a continuation of that, I'm afraid. But we do think the law can work. We see the manufacturers making the choices. We're gratified just this week with a major manufacturer, Hewlett Packard, announcing something that they were very proud to announce they were making a change in a packing that would reduce their use of Poly Vinyl Chloride by a huge amount, would reduce transportation costs, and energy costs, and would reduce their costs. You know, it's a smart change for them. They're changing their container. They're changing from unrecyclable container to a more recyclable container and a smaller container. It's the kind of choice that manufacturers make all the time that manufacturers are constantly able to make that made choices to reduce their packaging. And they

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do that constantly. It's one of those things where you don't have to require them to do it. They do it because it's good sense. For the two requests that we saw here today I'm disappointed we can't support either of those requests. Both of them, essentially, would ask DEQ to change the rules intended to implement the law in such a way that the law would no longer have its intent implemented. The first one would substitute an intention for an action, which flies in the face of common sense and it flies in the face of the law as well, in terms of how well intent can connect with action. It varies very much by, you know, what the situation is and it's impossible for DEQ realistically know the intent of a third party. And it's unreasonable for the manufacturers to say, "Well, we think that this third party intended to do this, and therefore it should count." It's not reasonable. And again, as Commissioner Blosser pointed out, the standard 25% is horribly low minimum. It's lower than the similar ratios that were part of this same act for other materials, and so it's a bottom of floor not a worthy and un-hard to reach goal. For the second petition on (inaudible) nationwide averaging for Oregon product averaging, we again feel it's unreasonable to say that

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here in Oregon we intended our law to affect recycling and in a positive way for this state. It doesn't implement the law to say, well, if a company does something on a nationwide basis that should be good enough. I don't think it answers Oregon law to say, "Well, gosh, they can do it a different way in California, which has different rules. Well, if they do it in a way that satisfies California law it should be good enough for Oregon." California law is different. It's more restrictive than Oregon law in a lot of ways, and allows a lot of exemptions because of that restriction that Oregon law does not. I don't think it's DEQ's place or the EQC's place to say, "Well, the legislature was wrong. Let's change our law to meet whatever California did after we did ours." That's hardly appropriate. Thank you. I appreciate the opportunity to comment. Again, I'm unique in that I'm here on my own time. I took the day off work to be here speaking just as a consumer for grassroots consumer organization and we appreciate the opportunity to comment for recycling advocates.

LYNN HAMPTON: Thank you. I appreciate your taking the time to be here. Questions? Comments? Thanks.

ROB GUTTRIDGE: You're welcome.

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LYNN HAMPTON: All right, that concludes the public comment period. Do we need to close public comment or is that just inherent as part of the process?

LARRY KNUDSEN: I don't think you need to take any formal step to do that.

LYNN HAMPTON: I think, Larry, I'm gonna ask you to maybe comment thus far, because there's been a lot of reference to what this opinion means and what it doesn't mean. And do -- if we need to hear from Mr. Eddlman, I don't know. But do you have some guidance for us about this at this point?

LARRY KNUDSEN: Let me provide just a very general answer to that and if you'd like detail Larry Eddleman can come up and provide that. The advice from the Department of Justice was that while we recognize the answer is somewhat uncertain we believe that a court would be more likely to conclude that recycle means to make -- to use the material for another product, rather than just the intent to do that. So it was one of those decisions that it's, you know, more likely or not -- more likely than not that a court would find that the rule change proposed was inconsistent with the statute, what lawyers called ultraviries [phonetic]. It's more or less the same

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conclusion, with respect to the notion of whether or not the 25% recycled content could be averaged across product lines or product sizes. And again, the notion was the law is not certain, but we think that it's more likely than not that a court would reject that kind of a decisions. That isn't to say we would not defend the rule, if you choose to adopt such a rule after you go through the regular rule making process, but it is not -- it's not a position that we would recommend that you take as your lawyers.

LYNN HAMPTON: All right. If my fellow commissioners don't have any other questions for you at this point I think I'm gonna give three to five minutes to Al Kiphut and Loretta and Peter Spendalo to come back up here and offer a perspective now that they've had the benefit of the public comment. Is that okay with you?

ALAN KIPHUT: Thank you, Chair Hampton, members of the commission. I would like to make a couple clarifications I think on comments we did hear earlier just to make sure that we feel you've go the full picture on some of these issues. So I think Loretta and Peter have a couple of points they would like to make here.

LORETTA PICKERELL: Thank you, Chair

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Hampton and commissioners. A couple quick points. One, this is tough law. It's a carrot/stick law, and the carrot is the aggregate recycling rate. The stick is (inaudible) standards for product manufacturers if we don't meet that rate. Early on the plastics industry recognized there were some producer responsibility elements in the law. They came forward. They guaranteed plastic recycling rates, prices for three years. They (inaudible) or funded a plastic recycling facility in Salem and took a number of other initiatives. So clearly there was a recognition. The product manufacturers had some responsibility under this law. And they still do. There are some options for compliance that are tough. The standings are high. That's how the law was designed. And the issues before us today were highly debated before the legislature and by the commission in '94 when we adopted rules (inaudible) that statute right after the statue was adopted. So clearly the issues are the same, it's a hot topic, the standard are high. And I'm not sure what we, as an agency, can do about that, given the statue as it's written. Secondly, there were some questions raised about the material recovery survey and the figures and the data. We can go through -- Peter can if you're interested

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-- I'm guessing that you're not at this point. We could go through and explain how we do this study every year and the kind of sampling analysis we do to account for contamination. But basically the numbers -- we generate the number of recycling rate overall and for rigid plastic containers every years. We've done that for a number of years. We now set rate every fall. The rate has been declining. We've made some minor adjustments in that rate as we've gotten better data that showed what actual contaminates were -- contamination rates were versus what we had assumed they were, and we base it on sampling. So we have made some adjustments to that rate, but the rate has been declining. And so announcing this December that the rate was below 25% was not a surprise. It was more a wakeup call. We're close to 25%. There's no reason, with some effort, we shouldn't get the rate above 25% and take advantage of this way to comply. And finally, with co- mingling, I think there was something said that indicated that co-mingling had actually -- more tons were lost than captures. I wasn't clear on the date, but I wanted to point out that we do have data demonstrating clearly that co-mingling has resulted in a net increase in recycling to spend fairly significant, even after we

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take out the losses. It's important to get -- to reduce those losses, but co- mingling has been a result within that increase. And finally on a couple other minor points that I think are the important, the corporate averaging -- we do not do corporate averaging under our statute at all for determining minimum recycled content. Currently we allow -- we look at each individual container, and we look at the product run for that container, whether the product run lasts a day or up to a year. If that product run has relative -- the same amount of recycled content, ratio to non- recycled resin, we allow that product run to be what's used to calculate the resin. So that's not very simple, but the simple response there is that we don't allow corporate averaging. We allow a container, the product one, for the container to be used as the recycled -- to determine the recycled content of that container.

LYNN HAMPTON: What do you mean by product run?

LORETTA PICKERELL: A product run would be -- the milk jug get -- resins are poured into the vat and sent to the smoll to sent through -- or plastic are sent through the mold and these little milk jugs come out the end. That is a product

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-- the mix they put into the vat, oversimplifying it, that's a product run. They may use the same recycled content ratios going into that vat over the course of a year. We allow that whole product run for that whole year to be used as the -- to determine their resin content.

LYNN HAMPTON: So are you saying if they're 50% in January but 10% in April, and they're varying throughout the year, if you -- at the end of the year reach 25% you're in compliance?

LORETTA PICKERELL: No, we allow -- we allow -- if that -- we allow that run to be used if the ratio of recycled resin to non-recycled resin if that remains relatively the same over the year. If they do a product run A and use 25/75 and then shift and do product run B 50/50, they have to count only the run where that ratio remained relatively the same. So that's -- we don't do corporate average, even under our existing law. Finally, we do allow source reduction. It's still an option. I think there was a statement made that it's no longer allowed. It still is an option for compliance under our law. And with that, I'll -- I think my time is up.

ALAN KIPHUT: If I could, Madam

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Chair, members of the commission, just say that I think you've heard a lot of different issues and possible solutions raised today around this particular topic. I think it's our feeling, as we've made in our recommendation to you in the staff report, that this petition is not the way to get there and so we still recommend denying the petition. I think there are other avenues that need to be pursued by everyone in the room, DEQ and the product manufacturers as well.

STEPHANIE HALLOCK: Madam Chair, if I may, I think in the interest of equity Mr. Cosgrave is not in agreement with the statement the department made about averaging. I think it's only fair that he should get to say to you what his concern is, if that's all right.

LYNN HAMPTON: Yes. (inaudible) body language totaled around the room.

STEPHANIE HALLOCK: Before he drags me out of the room.

LYNN HAMPTON: Mr. Kiphut, had you finished your primary points of you -- okay.

(Inaudible discussion)

BILL BLOSSER: Just one question. Just one of you leave, let Paul come up, and the

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others stay and then (inaudible) resolve it.
(Inaudible discussion)
LYNN HAMPTON: In my trade we would call this sir rebuttal, but I don't think we're gonna name it that here. We'll just give you a moment for that problem that you had with that one part of the statement.
PAUL S. COSGROVE: And it's only that one part. I had two comments. Paul Cosgrove again. When staff is telling you that we don't allow and we do allow you have to remember that none of these things have never been dealt with at all in reality in Oregon. None of these regulations have even been interpreted. None of these regulations have ever been applied. We have been relying on an overall aggregate recycling rate. We have never dealt with recycled content. But the comment that we don't allow averaging and recycled comment I think the rules, as currently written do. And they are OAR 340-090-410 Sub 2 Sub a Sub B and sub ii, which says, "Recycled content for each container is documented by the weight of the recycled materials used to manufacturer that type of rigid plastic container during the same time period within a one year period as determined by the container manufacturer." Now staff may say that they

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don't think that's averaging over a year, I would suggest to you that this regulation, as written, a plain reading of that is exactly that and that's how we certainly have been reading it. As I say, no has ever applied this regulation because it's been unnecessary. So based on my comment that we allow -- would allow recycled content averaging over a time is that language.
LYNN HAMPTON: Based upon that.
PAUL S. COSGROVE: Thank you.
LYNN HAMPTON: Thank you, everyone. All right.
LARRY KNUDSEN: Madam Chair?
LYNN HAMPTON: Yes.
LARRY KNUDSEN: I assume at this point you're gonna move to deliberation?
LYNN HAMPTON: Yes.
LARRY KNUDSEN: And if I could make a couple of procedural comments about that.
LYNN HAMPTON: Would you please.
LARRY KNUDSEN: Since you are now down to three commission members the way the law is set up for this particular board and commission, it takes three affirmative votes to act. And so I think it might be helpful to kind of nail that down a

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little bit, in the sense that, the way I see it, all three of you can vote to accept the petition, in which case we would go out to rule making. But li want to note that as I interpret the law and am advising you that is regular rule making, which is not a quick process. That would mean that we start the process for doing the rule, and as you know, because timeliness has been a big issue here, it takes herculean efforts for a rule to be adopted within less than six months by a board or commission as the APA, as it has been amended over the several years. Another alternative would be for there to be three affirmative votes, which would have you proceed both with regular rule-making and to come back with a proposal for a temporary or emergency rule. There are -- but you can't do a temporary rule unless you make findings and those hadn't been discussed today, obviously. And a temporary rule can only be in effect for six months.
JUDY UHERBELAU: Larry, clarification. But even with the temporary rule, we have to accept the petition?
LARRY KNUDSEN: I think you would, yes. But I think that's a separate step, at any event. I mean, the reason I say that is it would

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make no sense to go out for a temporary rule if you weren't planning to also proceed with permanent rule making cuz the temporary rule would expire. If there are three affirmative vote to deny the petition then that's clearly what would happen as well. If you are unable to have three affirmative votes in the same direction, the law is not as clear as it could be, but my advice to you is that we should treat that as if the petition is granted. And the reason for that is because although the statute's not too clear the model -- or the uniform rule adopted by the Department of Justice, seems to indicate that you either have to deny or go forward.
LYNN HAMPTON: And we have a corium problem?
LARRY KNUDSEN: Right. Now you could and a third option of course would be to set the matter over and hold a special meeting, but you could not -- we don't really have time to do it in the regular session so we'd have to set it over and do a special meeting.
LYNN HAMPTON: How does -- I'm sorry, go ahead.
BILL BLOSSER: On a special meeting we have to give 72 hours notice?

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LARRY KNUDSEN: Yeah, there wouldn't be a particular problem with doing the notice.
BILL BLOSSER: We could make the April 11th or whenever we have a date -- we could make that date easily.
LYNN HAMPTON: That was my question.
LARRY KNUDSEN: Yes, and you could even do it telephonically if you chose to.
LYNN HAMPTON: And commissioner Uherbelau has a question for you.
JUDY UHERBELAU: Again, a point of clarification, what I think I heard you say and it's contrary to my other experiences, if we do -- let's say, two vote for petition and one vote's against, or two vote against and one vote's for. In both of those scenarios we've accepted it period.
LARRY KNUDSEN: Neither one of those votes would be effective. The reason for that would be -- ordinarily under parliamentary procedure a majority of the corium can make a decision. Under the unique statutes that apply to this body and many other boards and commissions, a majority of the commission must affirmatively act in order to take an action. And a majority -- that's the majority of the

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entire commission, and in this case that would be three members.
JUDY UHERBELAU: Okay, than I misunderstood you.
LYNN HAMPTON: So matter what vote, whether there were four or five or three present, three must vote?
LARRY KNUDSEN: Three must vote.
BILL BLOSSER: And you're also saying that if we do not pass a vote by three -- in other words, all three of us don't agree that means we've accepted the petition?
LARRY KNUDSEN: Unless you set the matter over.
BILL BLOSSER: Unless we set it over. So we could -- the three of us could vote to set it over, but if we couldn't agree to set it over either then --
LARRY KNUDSEN: If you can't agree to set it over then, I think, what happens is on the 90th day the department would need to proceed with rule-making.
(Inaudible discussion)
LYNN HAMPTON: Let's deliberate. Let's see where we are before we figure out what

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we've got there. Okay, Commissioner Blosser, will you share your deliberation with (inaudible)?
BILL BLOSSER: I move that we deny the petition, and going through the list that our counsel provided us, I'm convinced there is clear need, continued need for the rule. The state set a goal. It's not a worthy goal. It's not a high goal. Secondly, we have listened to the nature of the complaints thoroughly, so I think we fulfilled that. The rule doesn't seem to me to be very complex. It's fairly clear and simple and it's been forced for over 12 years, and if there were uncertainties or things about it there was plenty of time, at least six or seven legislative sessions, to have clarified it if it was too complex to understand. The rule does not overlap, duplicate or conflict, so I don't see that issue being a problem. I don't see that, from anything I heard today, that there's any technological or economic conditions that have changed. And finally the statute we've seen -- there seems to be good legal basis for the rule so I don't see that that's in question at all. So I think for all those reasons -- and the additional thing that I think that this has been an issue, we've been flirting with the 25% thing since the year this was adopted. If I

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were the manufacturers I would have been worried about this Armageddon occurring for 12 years, not in the last six months or three months, because it's clear that we have not been -- we've been flirting with disaster all the way along. And it's just now that it's coming to a force and I think we need to get with it and get it fixed. And it if needs legislative change, legislature is over there and I would encourage them to go over and talk to legislature. So for all those reasons I move to deny.
LYNN HAMPTON: Okay, do you mind if we hold your motion and wait for a second and let me hear the deliberations? We'll hear, Commissioner Uherbelau, your deliberation about this. Will you share it with us?
JUDY UHERBELAU: Yes, you're putting it on hold but I was gonna --
LYNN HAMPTON: You want to second (inaudible)?
JUDY UHERBELAU: -- Second his denial for all the reasons he said looking at the criteria. And additionally speaking, I think especially eh first request would be in direct contrast to what the law was passed for in the first place. If we

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said that to include all containers collected and intended to be recycled, but didn't get recycled -- I mean, the idea of the law was -- I mean, we may not be doing it. I agree. We have a real problem. But to use that language is contrary to what the intent of the statute was. That's my problem with that. And as to the second, I think averaging is questionable, but especially questionable when it's countrywide. If you limited averaging to Oregon I might think, well -- but for everything you manufacturer and make, to average that, I have a problem.

LYNN HAMPTON: And Commissioner Uherbelau, you saw and were aware of all these factors that were in the statute that --

JUDY UHERBELAU: Yes, and he addressed them and I supported him, as I said.

LYNN HAMPTON: Okay, great. So it has been moved and seconded to deny the petition. And I will just say in short form that I'm in substantial agreement with both Commissioners Blosser and Uherbelau. I am concerned about the structure of a statute that sort of funnels all the consequences of this down to one portion of our economy, the manufacturers, the plastic manufacturers and product

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distributers. I am a lawyer, but I try to not let that unduly affect the minuteness of my thinking. But I think that we are stuck with the law that we got handed to us in this situation. I am encouraged to hear about the other factors that may have changed in the subject area involving this rule. Both discouraged, in the way that --

(End of Tape 6 Side 5B)

LYNN HAMPTON: -- co-mingling has affected the manufacturers. And how the loss in the recycling stream of even a fairly small amount has a major consequence. I accept that as being absolutely truthful statement. But I'm encouraged also to see that some other factors may come into play in the next year that may counter balance those (inaudible). And regardless of how I feel or how clear it is that this small variation, the loss in the recycling stream, affects the manufacturers that clearly is a part of the law. And therefore I don't have any real trouble in, as far as my oral deliberations are concerned, in analyzing these same factors in ORS 183390. There seems to be a continued need for the rule. The complaints or comments received concerning the rule, from the public, covered a wide variety and I don't see that those necessarily require us to

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grant the petition. The rule has -- the rule itself is very complex. The way in which the calculations involved in analyzing the recycling stream do tend to get a little complex. I don't see that this rule duplicates or overlaps. I'm looking down my statutory considerations here. I do think that local governments are going to be bearing some responsibility to help sort this problem out, and I would encourage the DEQ staff to -- Al's nodding me from the back of the room, that this may be a productive area for us to help resolve this problem. And I've already spoken about the other factors, technology, economic conditions, legislation, that may help us resolve this. So are we ready for a vote?

JUDY UHERBELAU: I would just like to add one thing. I think this petition has certainly raised, in my mind and I think in other commissioners, that there are real issues out there that need to be addressed. So I would hate to see this dropped and say, "Okay, the petition was turned down. We don't have to worry about it. We're gonna forget about it." I don't think that's a sense of any of us. I hope that we come up with some ideas that the different entities work together with the industries, counties, DEQ, everyone, cuz I think there

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needs to be resolution on some very important point.

BILL BLOSSER: Madam Chair, can I echo that and say that I am not at all (inaudible) with dilemma that the manufacturers are in, presented by this, and I certainly would be open to our considering rule-making after the legislature goes home if there are some things that we can do to fix problems here that will make it more likely that we get to the 25%, 30%, 50%, whatever. I still regard the 25% as a low target. But if there are things that we need to tweak I am certainly open to that and would encourage us to do that. But I would like to see what the legislature does before we launch into that.

LYNN HAMPTON: One thing that I noted as it went by, and in the context of which of the rules I can't always guarantee I'm grasping the nettle completely, but there was a discussion about including rigid plastic containers as a principle, recyclable material, which would require municipalities, this is what I understood, require municipalities to have curbside pickup. Now, if I -- I don't know if that was a correct understanding but, Al, I'd sure like to hear more about that at some point in the future. All right, I'm ready to cast our vote, if

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the commissioners are. All those in favor of the motion, which would result in denying the petition, signify by saying, "I."

COMMISSIONERS IN UNISON: I.

LYNN HAMPTON: I. Motion is carried. And we're not going to -- having denied the petition I think you can see that our sense is we're not going to ignore this issue and we're wanting to keep those lines of communication open.

STEPHANIE HALLOCK: So Madam Chair? I'm sorry, go ahead. Did you want to continue?

LYNN HAMPTON: Commissioner (inaudible), did you want to say something?

JUDY UHERBELAU: I said the answer to this issue is to make the rigid plastic, at least water bottles, subject to the bottle bill. (inaudible).

LYNN HAMPTON: Stephanie?

STEPHANIE HALLOCK: I just had one other thing before you adjourn that I wanted to advise you and I didn't yesterday because I was waiting for an email to come out to all my staff. But my deputy, Paul Flammen, is going to be leaving DEQ. He's taking a position with the Portland Development Commission. And he will be leaving on

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March 12th and Dick Peterson, who is the administrator of our Northwest regions is going to come over as the interim deputy.

LYNN HAMPTON: Okay, thank you. Is there any other business? Do I hear -- can we adjourn by consensus? Okay, we are adjourned.

(End of Tape 7 Side 6B)

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CERTIFICATE

I, Aimee L. Clem, do hereby certify that the matter herein mentioned on the preceding title page was transcribed via tape recording. I transcribed all testimony adduced and other oral proceedings had in the foregoing matter; and that the foregoing transcript pages constitute a full, true and correct record of such testimony adduced and oral proceeding had and of the whole thereof.

IN WITNESS HEREOF, I have hereunto set my hand this 13th day of March, 2007.

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Aimee L. Clem

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CONDENSED

ENVIRONMENTAL QUALITY COMMISSION MEETING

MEETING
FEBRUARY 22ND AND 23RD, 2007

- - -

TRANSCRIBED BY AIMEE CLEM ON MARCH 13, 2007