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OREGON ENVIRONMENTAL QUALITY COMMISSION MEETING MATERIALS 02/05/2004

DEQ

State of Oregon
Department of Environmental Quality

Oregon Environmental Quality Commission Meeting
February 5-6, 2004

Department of Environmental Quality Headquarters
811 SW Sixth Avenue, Room 3A
Portland, OR 97204

Thursday, February 5, beginning at 1:00 p.m.

Prior to the regular meeting, the Commission will hold a working lunch and an executive session at 11:30 a.m. to consult with counsel concerning legal rights and duties regarding current and potential litigation against the Department. Executive session is held pursuant to ORS 192.660(1)(h). Only representatives of the media may attend, and media representatives may not report on any deliberations during the session.

A. Information Item and Public Comment: Umatilla Chemical Agent Disposal Facility
Dennis Murphey, DEQ Chemical Demilitarization Program Administrator, will update the Commission on the status of trial burns, public outreach efforts, legal proceedings, and other issues related to the Umatilla Chemical Agent Disposal Facility (UMCDF). Following the update, the Commission will hold a public comment opportunity on the UMCDF Class 3 Permit Modification Request UMCDF-03-041-PFS(3), "Change in Incinerator Emissions Compliance Point." If approved, this Permit Modification will change the location at which measurements are taken to determine if UMCDF is in compliance with the emission limits in its hazardous waste and air permits. UMCDF proposes to measure air emissions after the pollution abatement system carbon filters instead of before the filters as originally required by the Commission.

B. Informational Item: Update on Revisions to Environmental Enforcement Rules
Anne Price, DEQ Administrator of the Office of Compliance and Enforcement, will update the Commission on proposed rule revisions that govern enforcement of Oregon's environmental regulations. Over the past two years, the Department has sought guidance from the Commission in revising the rules to ensure that enforcement actions are equitable, easier to understand, and protective of the environment and public health. At this meeting, Ms. Price will talk with Commissioners about key issues in the draft rules, which were issued for public comment in January and will be finalized for Commission adoption this spring.

C. Informational Item: DEQ's Strategic Directions – 2004 Draft
Over the past two years, the Commission has been vitally involved in developing DEQ's Strategic Directions – four high-level priorities that direct the agency's decisions on resource use, policy development, and daily workload management and service activities. They include delivering excellence in performance and product, protecting Oregon's water, protecting human health and the environment from toxics, and involving Oregonians in solving environmental problems. At this meeting, Director Hallock and members of DEQ's Executive Management Team will review key changes from the 2002 Strategic Directions,

based on progress made and new directives from Governor Kulongoski. Director Hallock will seek input from the Commission and stakeholders before finalizing the 2004 Strategic Directions this spring.

D. Informational Item: DEQ's Executive Measures Update and Report

In 2001, DEQ's Executive Management Team began developing a series of executive-level measures to track the progress on DEQ's Strategic Directions, evaluate the agency's performance, and guide decision making on resource allocation and agency work priorities. DEQ has kept the Commission informed of the use of measures, most recently in October 2002. At this meeting, Helen Lottridge, DEQ Management Services Division Administrator, will update the Commission on the results of executive measures to date, present the draft Annual Executive Measures Report, and seek feedback and guidance on future evaluation efforts.

Friday, February 6, beginning at 8:30 a.m. and including a working lunch with Lance Clark, the new Natural Resource Policy Advisory for Governor Kulongoski.

E. Approval of Minutes

The Commission will review, amend if necessary, and approve draft minutes of the December 4-5, 2003, Environmental Quality Commission meeting.

F. Informational Item: Role of the Oregon Institute for Natural Resources

Gail Achterman, Director of the Oregon Institute for Natural Resources, will speak with the Commission about the role of the Institute and partnership opportunities with DEQ and other state agencies. The Oregon Institute for Natural Resources was created by the 2001 State Legislature to provide one place for Oregonians to get information, ask questions, propose studies, provide opinions and advice, and learn about the natural resources and environmental conditions throughout Oregon. The Institute is housed at Oregon State University.

G. Director's Dialogue

Stephanie Hallock, DEQ Director, will discuss current events and issues involving the Department and the state with Commissioners.

H. Action Item: Three Basin Rule Findings for Fishermen's Bend Recreation Site Water Pollution Control Facilities Wastewater Treatment Permit

The Commission adopted the Three Basin Rule in 1977 to protect the pristine watersheds of the North Santiam, Clackamas, and McKenzie River subbasins, which provide drinking water to over seventeen percent of Oregonians. The rule was amended in 1995 to prohibit new or expanded wastewater discharges to these subbasins without specific Commission and DEQ findings to protect water quality. At this meeting, Kerri Nelson, DEQ Western Region Administrator, will request that the Commission find that the Bureau of Land Management's proposed wastewater treatment systems for Fishermen's Bend Recreation Site in the North Santiam River subbasin satisfy requirements of the Three Basin Rule.

I. Action Item: Request from the US Fish and Wildlife Service for a Waiver to the Total Dissolved Gas Water Quality Standard on the Columbia River

The Commission will consider a request from the U.S. Fish and Wildlife Service for a waiver to Oregon's total dissolved gas water quality standard to enable water to be spilled at Bonneville Dam to assist fish released from Spring Creek National Fish Hatchery. The Fish and Wildlife Service has requested to spill water for ten days in March 2004. The Commission has granted similar waivers in previous years. Mike Llewelyn, DEQ Water Quality Division Administrator, will present the request.

J. Informational Item: Forest Practices Act Sufficiency Analysis and Forest Practices Act Rules being developed by the Oregon Department of Forestry

Ted Lorensen, Oregon Department of Forestry (ODF) Stewardship Division Chief, and Mike Llewelyn, DEQ Water Quality Division Administrator, will present a status report on the ODF rulemaking and other activities under the Forest Practices Act in conjunction with the *Forest Practices Act Sufficiency Analysis* completed in October 2002. The Sufficiency Analysis was a collaborative, three year joint effort by DEQ and ODF to determine the effectiveness of the Oregon Forest Practices Act in achieving and maintaining water quality criteria for temperature, sediment, turbidity, aquatic habitat and biocriteria (i.e., aquatic diversity).

K. Action Item: Vote on New EQC Vice Chair

The Commission will vote on a new Vice Chair to replace former Commissioner and EQC Vice Chair Tony Van Vliet.

L. Commissioners' Reports

Adjourn

Future Environmental Quality Commission meeting dates include:
April 8-9, May 20-21, July 15-16, September 9-10, October 28-29, December 9-10

Copies of staff reports for individual agenda items are available by contacting Andrea Bonard in the Director's Office of the Department of Environmental Quality, 811 SW Sixth Avenue, Portland, Oregon 97204; telephone 503-229-5990, toll-free 1-800-452-4011 extension 5990, 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 Andrea Bonard as soon as possible, but at least 48 hours in advance of the meeting.

Public Forum: The Commission will break the meeting at approximately 11:30 a.m. on Friday, February 6 to provide members of the public an opportunity to speak to the Commission on environmental issues not part of the agenda for this meeting. 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.

Environmental Quality Commission Members

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.

Mark Reeve, Chair
Mark Reeve is an attorney with Reeve Kearns in Portland. He received his A.B. at Harvard University and his J.D. at the University of Washington. Commissioner Reeve was appointed to the EQC in 1997 and reappointed for a second term in 2001. He became Chair of the EQC in 2003. Commissioner Reeve also serves as Co-Chair of the Oregon Watershed Enhancement Board.

Deirdre Malarkey, Commissioner
Deirdre Malarkey is a graduate of Reed college, with graduate degrees from the University of Oregon. She has served previously on two state natural resource boards and on the Water Resources Commission and retired as a land use planner. Commissioner Malarkey was appointed to the EQC in 1999 and lives in Eugene.

Lynn Hampton, Commissioner
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.

The fourth and fifth Commission seats are currently vacant.

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Mikell O'Mealy, Assistant to the Commission
Telephone: (503) 229-5301

February 5-6, 2004 EQC Meeting

DEQ Headquarters, Room 3A
811 SW Sixth Avenue
Portland, OR 97204

Master Agenda – showing presenters and approximate timing of agenda items

Thursday, February 5

11:30 – 1:00	Executive Session and working lunch, Larry Knudsen and Steve Bushong
1:00 – 2:00	A. Informational Item and Public Comment: Update on the Umatilla Chemical Agent Disposal Facility, Dennis Murphey and Sue Oliver
2:00 – 3:30	B. Informational Item: Update on Revisions to Environmental Enforcement Rules, to prepare for adopting the rules at the Commission's April 8-9 meeting, Anne Price
3:30 – 4:10	C. Informational Item: DEQ's Strategic Directions – 2004 Draft, Stephanie Hallock and EMT members
4:10 – 4:45	D. Informational Item: DEQ's Executive Measures Update and Report, Helen Lottridge, EMAG members, and Dawn Farr

Friday, February 6

8:30 – 8:35	E. Approval of Minutes
8:35 – 9:30	F. Informational Item: Role of the Oregon Institute for Natural Resources, Gail Achterman
9:30 – 9:45	G. Director's Dialogue, Stephanie Hallock
9:45 – 10:30	H. Action Item: Three Basin Rule Findings for Fishermen's Bend Recreation Site Water Pollution Control Facilities Wastewater Treatment Permit, Kerri Nelson and Randy Trox
10:30 – 10:45	Break
10:45 – 11:30	I. Action Item: Request from the US Fish and Wildlife Service for a Waiver to the Total Dissolved Gas Water Quality Standard on the Columbia River, Mike Llewelyn and Russell Harding
11:30 – noon	Public Forum
noon – 1:00	Lunch
1:00 – 2:00	J. Informational Item: Forest Practices Act Sufficiency Analysis and Forest Practices Act Rules being developed by the Oregon Department of Forestry, Mike Llewelyn and Ted Lorenson
2:00 – 2:05	K. Action Item: Vote on New EQC Vice Chair
2:05 – 2:10	L. Commissioners' Reports

State of Oregon
Department of Environmental Quality — Memorandum

To: Environmental Quality Commission **Date:** January 16, 2004

From: Mikell O'Mealy, Assistant to the Commission and Director

Subject: February 5-6, 2004 meeting materials

Enclosed are your materials for the February 5-6 EQC meeting, which will be held at DEQ Headquarters in the 3rd floor conference room, 811 SW Sixth Ave., in Portland. Please plan to arrive at **11:30 a.m. on Thursday**; we will start the day with an executive session and a working lunch, before beginning the regular public meeting at 1:00 p.m. I expect the meeting on Friday to conclude shortly after 2:00 p.m., and I've included a "master agenda" for that shows approximate timelines for each agenda item.

In addition to these materials, next week you will receive a final draft of DEQ's Strategic Directions 2004 to go with the information for Agenda Item C, *Informational Item: DEQ's Strategic Directions – 2004 Draft.*

If you have any questions about the meeting or these materials, please contact me at 503-229-5301, or toll-free at 1-800-452-4011 ext. 5301 in the state of Oregon.

I look forward to seeing you soon.

State of Oregon

Department of Environmental Quality   Memorandum

To: Environmental Quality Commission   **Date:** January 23, 2004

From: Mikell O'Mealy, Assistant to the Commission and Director

Subject: Additional materials for the February 5-6, 2004 EQC meeting

Enclosed are additional materials for your February meeting, including:

- Materials for Agenda Item B, *Update on Revisions to Environmental Enforcement Rules*, presented by Anne Price, Administrator of DEQ's Office of Compliance and Enforcement.

- A final draft of DEQ's Strategic Directions 2004 to go with the information for Agenda Item C, *Informational Item: DEQ's Strategic Directions – 2004 Draft.*

- Background materials on the Umatilla Chemical Depot project, prepared by Dennis Murphey, Administrator of DEQ's Umatilla Chemical Demilitarization Program, for Ken Williamson, our new EQC member. Dennis prepared extra copies of the materials for each of you, for your information.

If you have any questions about the meeting or these materials, please contact me at 503-229-5301, or toll-free at 1-800-452-4011 ext. 5301 in the state of Oregon.

I look forward to seeing you soon.

State of Oregon

Department of Environmental Quality — Memorandum

To: Environmental Quality Commission **Date:** February 4, 2004

From: Mikell O'Mealy, Assistant to the Commission and Director

Subject: Meeting materials

Enclosed are additional materials for the EQC meeting, including:

- The Director's Dialogue for Agenda Item G, which Stephanie will present to you on Friday morning.
- A recent article from *The Oregonian* on DEQ's proposed changes to Oregon's environmental enforcement rules and penalties. You will hear more about these rules from Anne Price, DEQ Administrator of the Office of Compliance and Enforcement, on Thursday afternoon.
- Travel expense forms
- Paper and pencil

Please let me know if you have any needs or questions. Thanks.

1-28-04

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lion, or 28 cents, a year earlier. Sales rose to $201.9 million from $180.1 million, the Wilsonville-based company said in a statement.

Shares of Mentor Graphics rose 48 cents in extended trading after the announcement. The stock dropped 59 cents to $17.40, Tuesday on the Nasdaq Stock Market and has more than doubled in the past 12 months.

— Bloomberg News

Micron Technology benefits from analysts' boost in ratings

Shares of Micron Technology Inc., the world's second-biggest maker of computer memory chips, rose 4.7 percent after two analysts said investors should buy the stock because increasing demand is boosting product prices.

Smith Barney analyst Clark Westmont raised his rating on the stock to "buy" from "hold," and Thomas Thornhill at UBS boosted his to "buy 2" from "neutral 2."

Prices for Micron's main line of memory chips have stabilized, and the company's cost-cutting measures may lead to profitability as soon as next quarter, Westmont wrote to clients. Chip prices will rise in the next three months, driving Micron's stock price higher, according to Thornhill.

Micron rose 71 cents, to $15.71, Tuesday on the New York Stock Exchange. The stock has almost doubled in the past 12 months.

Shares of Boise-based Micron may rise to $21 in the next 12 months, Westmont said, instead of $15 as he predicted earlier. Thornhill said the stock may increase to $18.

Samsung Electronics Co. is the world's biggest maker of computer memory chips.

— Bloomberg News

Oregon DEQ proposes changes in assessing pollution penalties

BEND — More polluters could wind up paying larger penalties under a new proposal backed by the state Department of Environmental Quality.

Meanwhile, small cities and minor offenders would pay less than they do now.

Oregon assessed $1.9 million in pollution fines during the 2003 calendar year that came from roughly 200 separate cases, said Les Carlough, a senior policy adviser in the agency's compliance and enforcement office in Portland.

Only the most serious polluters or chronic offenders — roughly one of every seven polluters — are fined, he said.

The proposed changes were prompted by concerns that the penalty process is confusing and that fines don't always reflect the severity of the violations, he said.

In addition, current rules sometimes treat offenders under a one-size-fits-all system that doesn't recognize the size of the polluter, he said.

The state's maximum fine of $10,000 a day for serious violations wouldn't change. But more polluters could draw the maximum fine, Carlough said.

The revamped rules also set up a two-tiered notification process in which offenders would receive either a letter of warning — with no threat of a fine — or a notice that a penalty is likely.

— The Associated Press

Albany-based Synthetech Inc. posts loss in its third quarter

Synthetech Inc. said it lost $350,000, or 2 cents a diluted share, on sales of $2.91 million in its fiscal third quarter ended Dec. 31.

That compares to a profit of $838,000, or 6 cents a share, on sales of $3.99 million in the same period last year.

The Albany-based chemical company did not provide a balance sheet with its earnings numbers.

The company's earnings were released after the close of trading Tuesday. Its stock, traded on the Nasdaq Stock Market, closed at $2.20 down 20 cents.

— Ted Sickinger

Pixelworks reports soaring revenues, plummeting net loss

Pixelworks revenues jumped 40 percent in the fourth quarter, driven by hot demand for its image control chips that go into advanced televisions.

Hospital: Neighbors' views on cha[...]

Continued from Page D1

[...]oney-losing hospitals less than [...]o weeks ago, did not return [...]

two for-profit hospitals in the Portland area.

On Monday, Perry told The Ore-[...]

Reed could easily raze the hosp[...]tal and build dorms or classroom[...] without harming access to healt[...] care in the Portland area, said Ke[...]

2/5/04 EQC Meeting Item A Handout

State of Oregon
Department of Environmental Quality

FACT SHEET

Proposed Modification of the
Hazardous Waste Storage and Treatment Permit
for the
Umatilla Chemical Agent Disposal Facility
(Permit No. ORQ 000 009 431)

Permit Modification No. UMCDF-03-041-PFS(3) "Change in Incinerator Emissions Compliance Point"

Table of Contents

1. Introduction

In February 1997 the Oregon Environmental Quality Commission (EQC or Commission) and the Oregon Department of Environmental Quality (Department or DEQ) issued a Hazardous Waste Storage and Treatment Permit (HW Permit) to the United States Army[1] to build and operate the Umatilla Chemical Agent Disposal Facility (UMCDF). Construction of UMCDF was completed

[1] There are three "Permittees" named on the UMCDF HW Permit. The U.S. Army Umatilla Chemical Depot and the U.S. Army Project Manager for Chemical Stockpile Disposal (PMCSD) (now known as Program Manager for Elimination of Chemical Weapons) are named as Owner and Operator of UMCDF. Washington Demilitarization Company (the Army's construction and operations contractor) is named as a co-operator of UMCDF.

in 2001 and the facility is currently testing its systems in preparation for the anticipated start of chemical agent disposal operations some time in 2004.

On September 16, 2003 the United States Army's Program Manager for Elimination of Chemical Weapons (PM ECW) submitted a Class 3 Permit Modification Request (PMR) UMCDF-03-041-PFS(3), "Change in Incinerator Emissions Compliance Point." UMCDF is requesting that the DEQ determine compliance with HW Permit limits using the air pollutant levels as measured after the carbon filter system,[2] the final stage of each incinerator's pollution abatement systems. As originally issued, the UMCDF HW Permit required that emissions compliance be determined before gases passed through the carbon filters. In effect, the change will allow UMCDF to "take credit" for the ability of the carbon filters to remove additional pollutants from the incinerator gas streams.

This Fact Sheet describes the proposed modification and provides background information about the UMCDF and the basis for the proposed modification. Because the Department has made a tentative decision to recommend to the EQC that the PMR be approved, this Fact Sheet also includes a discussion of the significant factual, legal, and policy questions the Department considered in reaching its tentative decision. Information on how to provide comment on the proposed modification is provided on Page 9 and in Attachment A.

Attachment A is the Public Notice that was mailed on January 14, 2004 to persons on the Department's mailing list that have indicated an interest in the Umatilla Chemical Demilitarization Program. The Public Notice contains detailed information concerning information repositories and the dates of the scheduled public comment period and public hearings related to the proposed modification. Attachment B includes the actual text changes proposed for specific pages of the HW Permit.

2. Process for a Class 3 Permit Modification Request

Regulations regarding the permitting and operation of hazardous waste treatment, storage, and disposal facilities are known as the "Resource Conservation and Recovery Act" (RCRA) regulations. They are contained in Title 40 of the Code of Federal Regulations (CFR). In accordance with the RCRA regulations, the State of Oregon has been authorized by the U.S. Environmental Protection Agency to implement its own hazardous waste program. Oregon has adopted RCRA regulations as Oregon Administrative Rules.

Because a hazardous waste permit is expected to be modified over the life of a facility, RCRA regulations identify three "classes" of permit modifications, each with its own public notification and/or participation requirements. Class 1 modifications are the least significant of permit modifications and involve only minor changes to a permit, such as correction of typographical errors, updates to addresses or telephone numbers, or an upgrade of equipment. Class 2 modifications are considered significant changes to the permit and are used primarily to address improvements in technology and management of the facility. Class 3 modifications are considered very significant permit modifications and are used only for major changes to the facility or its operation. Both Class 2 and 3 permit modifications require opportunities for public comment.

[2] This Fact Sheet will use term "carbon filter units" to refer to the "Pollution Abatement System Carbon Filtration System," usually identified by the acronym "PFS."

This Permit Modification Request [UMCDF-03-041-PFS(3) "Change in Incinerator Emissions Compliance Point"] was submitted to the DEQ on September 16, 2003 as a Class 3 modification.

As required by the regulations for a Class 3 Permit Modification Request, an initial public comment period of 60 days was held open from September 17 through November 17, 2003. The UMCDF Permittees held a public information meeting on October 21, 2003 in Hermiston, Oregon. The DEQ issued a "Notice of Deficiency" (NOD) on November 5, 2003 requesting additional information from the Permittees. The Permittees responded to the NOD on December 1, 2003. At the close of the comment period DEQ had received eight comments from members of the public expressing opinions on whether UMCDF should be allowed to change the point at which DEQ determines UMCDF's compliance with emission limits in the HW Permit.

After reviewing public comments and the response to the NOD, the DEQ made a tentative decision to recommend that the Environmental Quality Commission approve the proposed modification. Accordingly, the Department has prepared this Fact Sheet and the revised language for the UMCDF HW Permit for public review and comment.

In accordance with the RCRA regulations for Class 3 permit modification requests, DEQ is requesting comments from the public on the proposed revision to the HW Permit. A 45-day public comment period on the proposed modification will be open from January 14 through close of business on March 1, 2004. Two public hearings will be held: February 5 in Portland before the Environmental Quality Commission and February 18 in Hermiston before a DEQ Hearings Officer (you may submit written comments to the DEQ any time during the open comment period). Please see Attachment A for details about the public comment period, the public hearings, and how you can submit comments to the DEQ.

The Environmental Quality Commission (EQC) will make the final decision on this PMR (the EQC is a five-member citizen commission appointed by the Governor that serves as DEQ's policy- and rule-making board.) At the conclusion of this public comment period, the Department will consider all comments received during both the first and second comment period and then prepare a staff report for EQC review. The staff report will discuss the issues identified about the proposed change, offer the EQC alternatives for consideration, and make a final recommendation on whether the UMCDF HW Permit should be modified as proposed. Consideration of this proposed modification and decision by the EQC is anticipated during their meeting scheduled for May 20-21, 2004.

3. Description of the Umatilla Chemical Agent Disposal Facility (UMCDF)

The UMCDF is located in northeastern Oregon at the Umatilla Chemical Depot, about seven miles west of Hermiston, Oregon (about 175 miles east of Portland, Oregon). The address is 78072 Ordnance Road, Hermiston, OR 97838-9544. The UMCDF is a hazardous waste storage and treatment facility that will use four incinerators to destroy a stockpile of about 3717 tons of chemical warfare agents that has been stored at the Umatilla Chemical Depot (UMCD) since 1962. The chemical agents stored at UMCD include nerve agents and blister agents in liquid form. The nerve agents ("GB" and "VX") are contained in munitions, such as rockets, projectiles, and land mines, and in bulk items, such as spray tanks, bombs, and "ton containers."

The blister agent ("HD," also referred to as "mustard") is stored only in ton containers. All of the chemical agents are highly toxic.

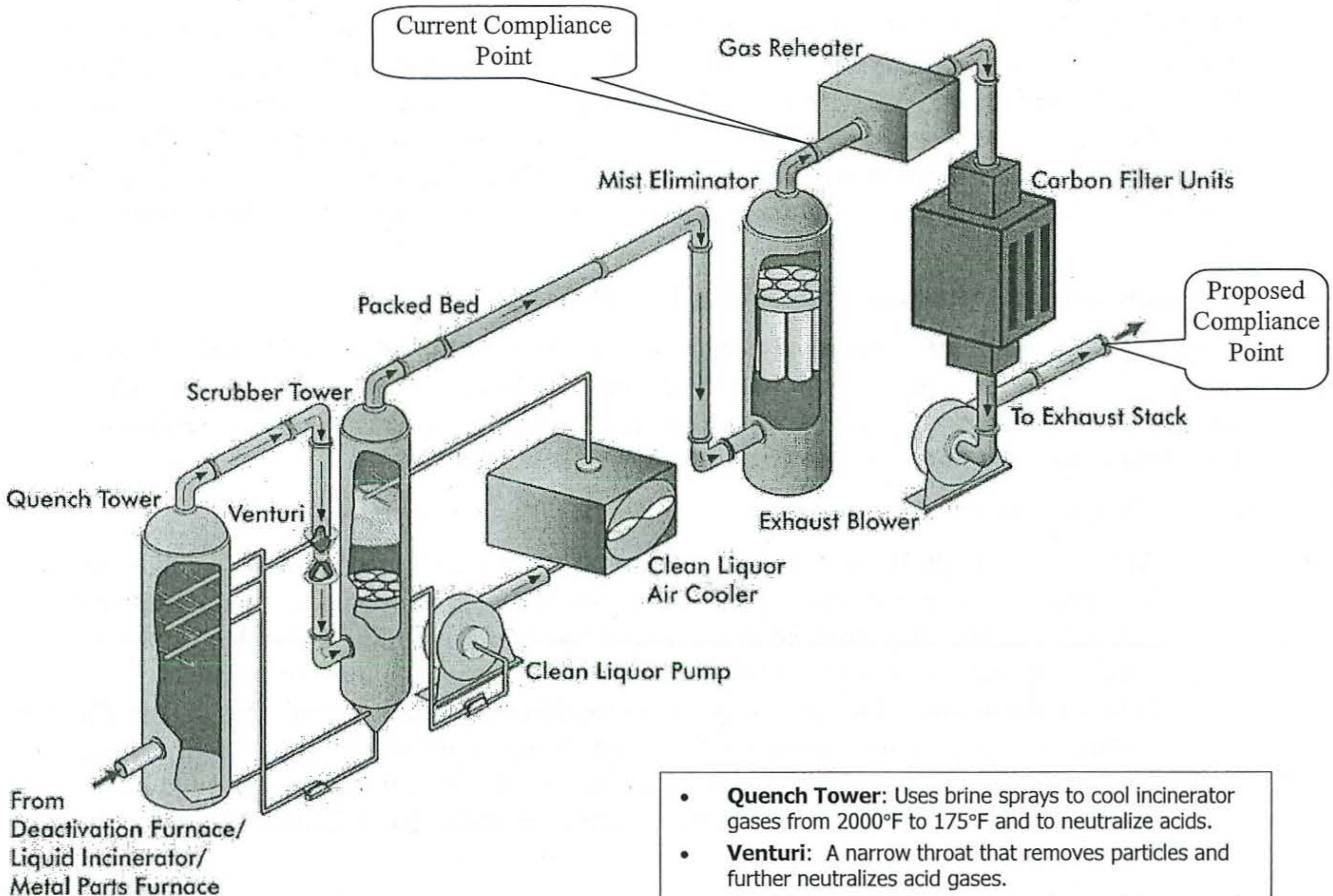
The "demilitarization" process used by UMCDF has four basic steps: 1) transportation of the chemical weapons from the storage areas at the Umatilla Chemical Depot to the UMCDF Container Handling Building; 2) unloading the transport containers and placing the weapons onto a processing line; 3) draining the liquid chemical agent from the weapon; and 4) destroying the chemical agent and explosives and treating the remaining metal parts to destroy any residual chemical agent. UMCDF has four incinerator systems, each with two combustion chambers known as primary and secondary chambers (the secondary chamber is often referred to as an afterburner in some systems). There are two liquid injection incinerators to destroy the liquid nerve and blister agents, a "deactivation furnace" (a specialized type of rotary kiln) to destroy explosives, and a metal parts furnace to treat empty metal munition casings and bulk containers under high temperatures to destroy residual chemical agent. The processing of the munitions and containers will produce a variety of "secondary wastes" that are either stored for later treatment at UMCDF or shipped off-site for final disposal (once they are determined to be completely free of chemical agent).

Each of the four furnace systems has its own pollution abatement system (the systems are identical) to cool the exhaust gases from the incinerators, remove particles, and neutralize the "acid gases." Each pollution abatement system consists of five main components: a quench tower, venturi scrubber, scrubber tower, mist eliminator vessel, and a set of carbon filter banks that serve as a final pollutant removal step. There is a large blower located at the end of the carbon filters that pulls the exhaust gases from the furnaces (called "induced draft") through the pollution abatement system and then exhausts the cleaned gases to the atmosphere through a common stack. The schematic on Page 5 shows the pollution abatement systems and the carbon filter system.

The UMCDF HW Permit issued by the Commission in 1997 required that exhaust gases from each of the furnace be clean enough to meet the permit emission limits at a point after the mist eliminator vessel but before the carbon filters. The permit modification request submitted by UMCDF proposes to revise its permit to move that "point of compliance" from <u>before</u> the carbon filters to <u>after</u> the carbon filters.

4. Description of Permit Modification Request No. UMCDF-03-041-PFS(3) ("Change in Incinerator Emissions Compliance Point")

The proposed modification is to revise two HW Permit Conditions, one in Module VI ("Short Term Incineration - Shakedown, Trial Burn And Post-Trial Burn") and one in Module VII ("Normal Operations"). Each of the two conditions (VI.A.1.vi. and VII.A.8.) contain essentially the same requirement, that "each incinerator shall meet the applicable performance standards ...before entering each incinerator's carbon filter system." The Permit Modification Request proposes to change the phrase "before entering" to "after exiting" the carbon filter system. No other changes to the HW Permit are proposed. Attachment B shows the affected Permit Conditions and the proposed changes.



- **Quench Tower**: Uses brine sprays to cool incinerator gases from 2000°F to 175°F and to neutralize acids.
- **Venturi**: A narrow throat that removes particles and further neutralizes acid gases.
- **Scrubber Tower**: Removes remaining acid gases and excess moisture by directing gas flow through a packed bed scrubber.
- **Mist Eliminator**: Removes large droplets of moisture and metal oxides in gas stream by using fabric filters.
- **Carbon Filter Units**: Includes pre-filters and high-efficiency particulate air filters to capture very small particles and metals and banks of carbon that capture remaining organic pollutants.
- **Exhaust Blower**: A blower that pulls gas flow through the Pollution Abatement System and then pushes the cleaned gases out through the common stack.

NOTE:
Each furnace system has a pollution abatement system as illustrated here. All four systems at UMCDF then exit to a common exhaust stack.

Process Schematic
Incinerator Pollution Abatement System
Umatilla Chemical Agent Disposal Facility

5. DEQ's Tentative Decision to Recommend Approval

DEQ has made a tentative decision to recommend to the Environmental Quality Commission that the Commission approve the Class 3 Permit Modification Request "Change in Incinerator Emissions Compliance Point." If the Commission approves the change, the UMCDF Hazardous Waste Permit will be changed so that UMCDF may demonstrate compliance with emission limits at a point after the pollution abatement system carbon filter system. In effect, UMCDF will be allowed to "take credit" for the pollution reduction provided by the carbon filter units.

6. Significant Considerations in Reaching Tentative Decision

The DEQ made its tentative approval decision after consideration of the permit modification request, the Permittee's response to the Department's "Notice of Deficiency," and the public comments received during the first 60-day public comment period. The most significant issues that DEQ considered in making its decision are discussed below:

a. *The potential for adverse impacts on human health or the environment.*

Although the UMCDF HW Permit does not allow any additional "credit" be taken for the pollution reduction provided by the carbon filter units, it still includes a requirement that a furnace's carbon filter units be in operation ("on-line") at all times that the furnace is processing hazardous waste. (There are limited exceptions to this requirement—see 6e. below.) Approving or denying this permit modification request would not change the HW Permit requirement that the carbon filter units be operational at all times, so there will be no change (increase or decrease) in actual emissions to the atmosphere through the common stack. In addition, the proposed permit modification will not change the permitted emission limits.

Consequently there would also be no effect on the results of the 1996 Pre-Trial Burn Health and Ecological Risk Assessments, which concluded that operation of UMCDF would not pose unacceptable risks to human health or the environment. The risk assessments conducted by DEQ in 1996 used the permitted emission limits and did not assume any reduction in emissions due to the presence of the carbon filter units (the reality is that the carbon filter units do in fact considerably reduce the levels of some pollutants).

In summary, the proposed permit modification will not change the permitted emission rates (or the conclusions of the 1996 health risk assessment), nor will it change the requirement that the carbon filter units be in operation at all times a furnace is processing hazardous waste. Consequently, the DEQ does not believe that approval of the proposed modification will have an adverse effect on human health or the environment.

b. *The role the carbon filter units had in the 1997 finding of the Commission that incineration represented the "Best Available Technology" for destruction of the chemical weapons stockpile at the Umatilla Chemical Depot.*

The Commission as a whole did not rely on the presence of the carbon filter units in making its 1997 finding that incineration represented the "Best Available Technology" for destruction of the chemical weapons stockpile at the Umatilla Chemical Depot. This was reinforced through a "Clarifying Order" issued in March 1999 that stated the carbon filters were "an additional pollution control component of the baseline incineration technology." Consequently, because the carbon filter units were not considered in the finding that incineration was the "Best Available Technology," approval of this permit modification would not affect the finding of the Commission in 1997.

c. *The ability of the UMCDF furnaces to comply with emission limits, with or without "taking credit" for the carbon filter units.*

The Clarifying Order issued by the Commission in 1999 reiterated that the UMCDF incinerators "are designed to meet all applicable regulatory criteria without the PAS [pollution abatement system] carbon filters," and made specific reference to the requirement that emission limits be met before furnace gases pass through the carbon filters. As evidenced by the language in the Clarifying Order, and review of transcripts of meetings held in 1996 before the UMCDF HW Permit was approved, the Commission had every expectation that UMCDF would be able to meet the regulatory criteria without taking credit for the carbon filters. At the time the HW Permit was approved in 1997 the carbon filter units were in a preliminary design phase and had not ever been constructed or used on a combustion facility in the United States. No "credit" could be given to the ability of the carbon filters to reduce emissions because there were no data demonstrating that carbon filtration of incinerator exhaust gases was feasible.

Data have since been gathered (through testing at UMCDF and one other chemical demilitarization facility with an identical carbon filtering system) that demonstrate the effectiveness of the carbon filter units in reducing emissions of many pollutants to a level considerably lower than would be achieved by use of the standard pollution abatement system alone. Surrogate testing of the first liquid incinerator at UMCDF in early 2003 was successful, and the incinerator was able to demonstrate compliance with the existing permit conditions that require emission limits be met before the carbon filters. This is also expected to be the case when the second liquid incinerator undergoes testing.

However, surrogate testing conducted in 2003 of the deactivation furnace system has shown that UMCDF will not be able to demonstrate the deactivation furnace's compliance with existing HW Permit requirements at originally expected feed rates, at least not for a limited number of regulated compounds (such as the metals mercury and cadmium). To meet the current emission limits "before" the carbon filters, the feed rate of munitions to the deactivation furnace would have to be significantly reduced, greatly extending the time it will take to destroy the stockpile.

Reducing the feed rate of munitions (with the subsequent impact on operation duration) to meet the current emission limits before the carbon filters would not reduce the actual emissions to the atmosphere because the carbon filters must be operational at all times. The long-term effect of dramatically reduced feed rates to the deactivation furnace system actually has the potential to increase the overall emissions to the atmosphere during the lifetime of the facility because it would necessitate additional years of operation. In addition, there would be additional risk to the community from the continued storage of the stockpile.

The DEQ believes that the carbon filter units have now demonstrated their effectiveness in reducing emissions to the atmosphere from the UMCDF incinerators and can be relied upon to provide additional emissions control. Extending UMCDF's operation duration by reducing feed rates to the deactivation furnace would increase overall emissions to the atmosphere over the lifetime of the facility and would increase storage risk.

d. *The impact of having different compliance points for the original HW Permit emission limits and the 1999 "Maximum Achievable Control Technology" (MACT) emission limits.*

The Permit Modification Request from UMCDF stated that one of the purposes of the proposed change is to "provide a consistent approach for complying with two sets of regulations." The reference to the "two sets of regulations" is the requirement that UMCDF comply not only with regulations related to hazardous waste combustion facilities under the RCRA program, but also with regulations related to the Clean Air Act. UMCDF's Air Contaminant Discharge Permit was issued as the same time as the HW Permit and at the time of issuance the emission standards in the two permits (for those compounds regulated under both programs) were the same.

In 1999 the U.S. Environmental Protection Agency promulgated new standards under the Clean Air Act called the "Maximum Achievable Control Technology" (MACT) standards. Demonstration of compliance with the MACT standards is at a point just before emissions are discharged to the atmosphere (in UMCDF's case that is after the carbon filters). UMCDF must now meet some emission standards before the carbon filters and some emission standards after the carbon filter. This poses some difficulties because of the need to bypass the filter units during testing (see 6e. below), making it difficult, if not impossible in some cases, for UMCDF to meet all of the MACT emissions standards (which makes no "exceptions" for the purposes of testing).

Approval of this permit modification would eliminate the need to comply with different standards at different points in the pollution abatement system. As noted above, whether or not compliance is measured "before" or "after" the carbon filter units has no practical effect on the actual emissions to the atmosphere from UMCDF because the carbon filter units must be on line regardless (except as discussed in 6e. below).

e. *The impact of the proposed modification on the UMCDF surrogate and agent trial burn process, including the need to conduct tests with the carbon filters taken off-line.*

When UMCDF is conducting the tests needed to demonstrate that furnace emissions comply with permit limits "before" the carbon filter units, it must conduct the actual test sampling with the carbon filter units off-line, in what is called the "bypass" mode. (Emergency bypass of the carbon filter units is also allowed in certain conditions, but hazardous waste feed to the furnace must be stopped immediately if an emergency bypass of the carbon filter units is initiated.) The need to conduct tests with the carbon filters bypassed was not anticipated when the HW Permit was approved in 1997.

The permit conditions as originally written assumed that during compliance testing the carbon filters would be operating and that during compliance tests the actual sampling would be conducted by simply inserting the sampling probes in the ductwork leading to the carbon filters. However, in actual operation it was found that when the carbon filters are in operation it is not possible to conduct sampling at that location because of extreme pressure differences caused by the filters. Consequently, during the tests to demonstrate compliance with the existing HW Permit limits the carbon filter units must be taken off-line. Although testing operations represent minimal risk because of tightly controlled conditions and short test durations, approval of the permit modification will eliminate the need to conduct testing with the filters bypassed when actual chemical agent operations begin.

7. How to Submit Your Comments on the Proposed Permit Modification to the DEQ

The Department, on the behalf of the Environmental Quality Commission, is inviting public comment on this proposed modification to the UMCDF HW Permit. The **public comment period** on this proposed Permit Modification will remain open from **January 14 through close of business (5:00 p.m.) on March 1, 2004**. Written comments may be submitted by e-mail, fax, or regular mail any time during the comment period, provided the comment is received by the Department no later than 5:00 p.m. on March 1, 2004. E-mail comments should be submitted to ingram.shelly@deq.state.or.us and include the words "Public Comment" in the subject line. Comments submitted by facsimile transmission should be sent to (541) 567-4741. Comments sent by regular mail should be addressed to Mr. Dennis Murphey, Administrator, Chemical Demilitarization Program, 256 E. Hurlburt, Hermiston, Oregon 97838.

There will be **two opportunities for the public to provide oral comments** on the proposed modification: During the Environmental Quality Commission meeting on February 5, 2004 in Portland, Oregon (1:00 p.m., 811 S.W. Sixth, Room 3A) and at a public hearing to be held February 18, 2004 in Hermiston, Oregon at the Good Shepherd Hospital's Conference Room 1 (610 N.W. 11th) beginning at 7:00 p.m. Please see Attachment A for meeting details.

8. What Happens Next?

The Department will review and consider all oral and written comments received during the comment period. Department staff will then prepare a report with a recommendation to the Environmental Quality Commission. The report will include the Department's response to all significant comments received during both public comment periods. The Commission is anticipated to make a final decision on the proposed modification to the UMCDF HW Permit in May 2004 at its regularly scheduled meeting. The Commission may decide to modify the HW Permit as proposed or with changes, or may decide against modifying the HW Permit.

9. For More Information

For more information about this Permit Modification, or for other information on the Umatilla Chemical Agent Disposal Facility, please contact Shelly Ingram, Chemical Demilitarization Program, Hermiston office of the DEQ [Phone 541-567-8297 (ext. 25) or toll free in Oregon (800) 452-4011], or e-mail to ingram.shelly@deq.state.or.us. The Department's Chemical Demilitarization Program has prepared numerous fact sheets about the chemical weapons destruction process at the Umatilla Chemical Depot that are available upon request.

Attachments

A Public Notice: Request for Comments and Notice of Public Hearing

B Change Pages for the Proposed Modification of the UMCDF HW Permit

ATTACHMENT B
Change Pages for the Proposed Modification of the HW Permit Permit Modification Request No. UMCDF-03-041-PFS(3) ("Change in Incinerator Emissions Compliance Point")

Permit Module	Comments
MODULE VI ("Short Term Incineration - Shakedown, Trial Burn And Post-Trial Burn")	
Condition VI.A.1.vi. (Construction and Maintenance)	Change the phrase "before entering" to "after exiting"
Module VII ("Incineration – Normal Operations")	
Condition VII.A.8 (General Operation))	Change the phrase "before entering" to "after exiting"

Change Pages for the Proposed Modification of the HW Permit
Permit Modification Request No. UMCDF-03-041-PFS(3)
("Change in Incinerator Emissions Compliance Point")

Text proposed for deletion is ~~struckout~~
Text proposed for addition is <u>underlined</u>

Proposed Change to:
MODULE VI - SHORT TERM INCINERATION - SHAKEDOWN, TRIAL BURN AND POST-TRIAL BURN

VI.A. **GENERAL CONDITIONS DURING SHAKEDOWN, TRIAL BURN AND POST-TRIAL BURN FOR ALL INCINERATORS AT THE UMCDF SITE**

V1.A.1. <u>Construction and Maintenance</u> [40 CFR §264.31]

i. – v. (Not shown here.)

vi. The Permittee shall maintain and operate each incinerator during shakedown, trial burn and post-trial burn periods in accordance with the operating requirements specified in this permit. Each incinerator shall meet the applicable performance standards specified in Permit Conditions VI.B.1., VI.C.1., VI.D.1., and VI.E.1. ~~before entering~~ <u>after exiting</u> each incinerator's carbon filter system.

Proposed Change to:
MODULE VII - INCINERATION - NORMAL OPERATION

VII.A. **GENERAL CONDITIONS FOR ALL INCINERATORS AT THE UMCDF SITE**

VII.A.1 – VII.A.7 (Not shown here.)

VII.A.8. <u>General Operation</u>

The Permittee shall maintain and operate each incinerator during shakedown, trial burn and post-trial burn periods in accordance with the operating requirements specified in this Permit. Each incinerator shall meet the applicable performance standards specified in Permit Conditions VII.B.2., VII.C.2., VII.D.2., and VII E.2. ~~before entering~~ <u>after exiting</u> each incinerator's carbon filter system.

2/5/04 - EQC Meeting, Item A, Public Comment Handout.

CTUIR Technical Perspective on PMR UMCDF-03-041-PFS(3)

Presented by:
Confederated Tribes of the Umatilla Indian Reservation
Environmental Science and Technology Program

Presented to:
Oregon Environmental Quality Commission

February 2004

CTUIR Technical Staff Supports UMCDF-03-041-PFS(3)

- Comments provided on 29 October 2003 state:
  - "...our staff have reviewed the document and concur with the Permitee's conclusions presented on page 15; namely that '*There will be no detrimental human health or environmental impacts resulting from implementation of this PMR.*'"
- <u>Board of Trustees supported this opinion</u> at both a meeting on 27 October 2003 with Mr. Don Barclay (UMCDF) and a meeting on 12 November 2003 with Mr. Dennis Murphey (Oregon DEQ)

Reasons for Opinion (1 of 3)

- Meeting emissions standards at the exhaust stack (post carbon filters) is protective of human health and the environment
  - Permitted Emission concentrations are set based on accepted human health and ecological risk modeling
    - Evaluates long-term health risks (resulting from recalcitrant compounds accumulating in the environment)
    - Evaluates short-term health risks (resulting from inhalation of 1-hour maximum concentrations from the UMCDF during worst case conditions)
  - UMCDF Risk Assessment includes a Native American Subsistence Scenario which restricts emissions more than typical urban scenarios

Reasons for Opinion (2 of 3)

- Moving the compliance point will not result in an increase in UMCDF emissions over the lifetime of the plant
  - Total emissions $\propto$ (Concentration) x (Flow rate) x (Time)
  - Stack flow rate is same for both cases
  - <u>Concentration increases</u> if compliance point is moved
  - Total <u>operating time decreases</u> if compliance point is moved

Total Emissions Are Set By Processing Characteristics

- Total amount of a compound (i) emitted during incineration <u>of a given munition type</u> for both compliance points is given by:

$$M_i = N(a_i)(1 - DRE_i)(1 - \xi_i)(1 - \varepsilon_i)$$

- Where:
  - M_i = Mass of i^{th} contaminant emitted over life of UMCDF
  - N = Number of munitions of that type at UMCDF
  - a_i = Amount of i^{th} contaminant per munition
  - DRE_i = Furnace system DRE for i^{th} contaminant
  - ξ_i = PAS removal efficiency for i^{th} contaminant
  - ε_i = PFS removal efficiency for i^{th} contaminant
- <u>Parameters are same for both cases</u> except ε_i which may increase at higher concentrations (i.e. better removal efficiency)

Reasons for Opinion (3 of 3)

- Moving the compliance point <u>reduces public and environmental risk</u> resulting from weapons storage
  - REMEMBER: Storage risk is proportional to the length of time the munitions are stored

Contact Information

- Mr. Ted Haigh, Air Quality Specialist
  - Phone: (541) 966-2414
  - Email: tedhaigh@ctuir.com
- Dr. Rodney Skeen, Chemical Engineer
  - Phone: (541) 966-2413
  - Email: rodskeen@ctuir.com

State of Oregon
Department of
Environmental
Quality

Umatilla Chemical Demilitarization Program
Status Update
Environmental Quality Commission
February 5, 2004
(Agenda Item A)

Umatilla Chemical Demilitarization Program

Surrogate Trial Burn (STB) Status

Liquid Incinerator 1 (LIC1)

The Department has received a response to the Notice of Deficiency to the LIC1 Surrogate Trial Burn Report. There appear to be no significant issues remaining.

Deactivation Furnace System (DFS)

The DFS STB Report was submitted by UMCDF in December. Although the furnace was successful in the destruction of the surrogate compounds for chemical agent, it failed to demonstrate compliance with three of the metal emission limits, even at metal spiking conditions intended to be representative of low rocket feed rates during agent operations. The Department has notified UMCDF that it will be necessary for them to repeat a portion of the STB in order to demonstrate compliance with the existing "before the carbon filter" emission limits.

The Army and its contractor, Washington Demilitarization Company (WDC) oppose performing a re-test, but the Army's UMCDF Site Project Manager has indicated that the Permittees will conduct the limited STB re-test of the DFS as required by the Department. The Permittees have filed their formal notification of intent to commence the re-test on March 16, 2003, but continue to evaluate "other options that could be implemented as an alternative to a re-test."

WDC has retained lobbyists in both Washington, D.C. and in Oregon. WDC and its lobbyists have met with staff from the Washington, D.C. offices of U.S. Senator Ron Wyden, U.S. Senator Gordon Smith, and U.S. Representative Greg Walden, in addition to meeting with the staff of Governor Kulongoski in Salem. State Representative Robert Jenson and State Senator David Nelson have also been contacted. It is the Department's understanding that the message our Congressional and state officials are receiving is that the Department is not being "flexible" enough in its dealings with UMCDF and is imposing unreasonable requirements upon the Permittees. The requirement to conduct the DFS re-test has been mentioned specifically as an example of WDC's concerns.

Metal Parts Furnace (MPF)

The STB for the MPF started on January 15 and, as of the preparation date of this report, the facility expects to complete the trial burn by January 31. Thus far, two test runs of this STB were aborted because of sampling issues and another was aborted because of furnace operational problems (resulting in a four-day delay to prepare and process a permit modification request to continue with the trial burn). The STB report must be submitted to the Department within 90 days of completion of the on-site testing.

Liquid Incinerator 2 (LIC2)

UMCDF plans to conduct the STB for the LIC2 in the Spring of 2004, following the re-test of the DFS.

Brine Reduction Area (BRA) Shakedown and Testing

The Department has approved the last PMR needed to support the start of BRA shakedown. It is anticipated that shakedown will begin in February. The BRA Performance Test is planned for Spring 2004. UMCDF is currently reinstalling the protective lining in the BRA storage tanks in response to the liner failures noted in the Department's August 15, 2003 Umatilla Update to the EQC. The Department has informed UMCDF that the permit requirement for the BRA to be fully operational prior to the start of agent operations includes completion of the BRA Performance Test and installation of adequate corrosion protection to ensure that all of the BRA storage tanks are operational. The Department will also be evaluating whether the Permittees have taken reasonable measures to maximize the processing capacity of the BRA and to minimize generation of brine from the pollution abatement systems.

Permit Modification Requests:

"Taking Credit" for the Carbon Filters

On September 16, 2003 the Umatilla Chemical Agent Disposal Facility (UMCDF) submitted a Class 3 Permit Modification Request (PMR) to change the point of compliance for its air emissions from the inlet of the carbon filters in the pollution abatement systems to the exit of the carbon filters.

After consideration of the PMR, the Permittees' response to the Department's Notice of Deficiency, and public comments received during the first 60-day public comment period, the Department has made a tentative decision to recommend approval of the requested permit modification. On January 14, 2004, the Department issued the draft permit language and initiated a second public comment period that will remain open through March 1, 2004. The Department has distributed copies of draft permit language, fact sheets, and a notice of public hearings in Portland (as a part of today's EQC meeting) and in Hermiston at 7:00 p.m. on February 18, 2004.

The Department intends to provide its final recommendation to the EQC for consideration at the May 21, 2004 meeting. The time frame for submittal of the Department's staff report on the PMR is dependent upon when the DFS re-test results are provided to the Department by UMCDF.

Other PMRs Under Review

- UMCD Secondary Waste – This PMR incorporates the remaining Depot secondary waste streams into the UMCDF hazardous waste permit and establishes feed rates for each waste stream. A final decision by the Department is expected by March 29, 2004
- BRA (Brine Reduction Area) Performance Test Plan
- LIC1 (Liquid Incinerator # 1) GB Agent Trial Burn Plan

Appeal of UMCDF-03-015-CHB(2) "Processing Enhanced On-Site Containers [EONCs] and Spray Tank Overpacks Containing Leaking Munitions in the Container Handling Building Unpack Area [CHB UPA]"

In November 2003 the Department denied a Class 2 PMR that requested approval for UMCDF to be allowed to process leaking munitions in the Unpack Area. Transport containers ("EONCs) are monitored in the Unpack Area before they are opened. If chemical agent is detected within the container, it is normally moved to the "Toxic Maintenance Area" and opened under rigorously controlled conditions by workers in full protective suits. UMCDF proposed to change this requirement so that, if the concentration of chemical agent within the EONC was below "40 TWA" (i.e. 40 times the time-weighted average concentration allowed for unprotected workers), the EONC could be opened and processed in the Unpack Area (by workers in a higher level of protective clothing than is normally required in the Unpack Area).

The Department issued a Notice of Deficiency requesting the Permittees to provide significantly more supporting documentation than had been included in the original submittal. The Permittees failed to provide the requested information in their response and the Department subsequently denied the PMR. In December, 2003, the Permittees filed an Appeal of the Department's decision. The matter is being referred to the Hearing Officer Panel for a contested case hearing.

Chemical Agent Operations Authorization Process

The Army is hopeful of being prepared to begin agent destruction in Summer 2004. As we have conveyed to the Army, WDC, the Confederated Tribes of the Umatilla Indian Reservation, local residents who live near UMCDF, and the many other interested stakeholders, the Department will recommend that EQC authorize the start of chemical agent operations only when the facility has demonstrated readiness to safely process chemical agents and munitions and has satisfied all permit requirements to protect human health and the environment.

The Department will begin the agent start-up approval process by drafting an initial "Compliance Assessment," probably in mid-April. However, we would like to alert you to the fact that the Department will be requesting the EQC to hold a public hearing in

Hermiston to hear comments regarding the authorization for the start of chemical agent operations. We will provide the EQC with as much advance notice as possible regarding the requested date for this special meeting, dependent upon progress in completion of the activities at UMCDF and the Department's compliance assessment. Actual EQC authorization of agent operations would be considered at a later meeting, also to be held in Hermiston, if possible.

Health Risk Assessment (HRA) Work Plan

The Department received four sets of public comments on the HRA Work Plan and is working with the Technical Workgroup to resolve the comments and finalize the Work Plan by the end of March.

Enforcement Actions

The Permittees and DEQ have signed a Mutual Agreement and Order related to the Notice of Violation and Assessment of Civil Penalty for the incident that occurred in September 2002, where a laboratory technician at UMCDF left the facility with a septum vial of dilute GB chemical agent in his pocket.

Four other referrals of enforcement actions against the Permittees are pending in the DEQ Office of Compliance and Enforcement.

Federal Fiscal Year 2005 Funding for the Demilitarization Program

Reliable sources have indicated that the President's budget for federal fiscal year 2005 will contain a major shortfall in funding for the Army's eight chemical demilitarization facilities (likely to be in excess of $200 million). If this proves true, DEQ will work with the Governor's Office and the Oregon's Washington delegation to seek Congressional approval of full funding for the operation of UMCDF and the Department's oversight of UMCDF in the next federal fiscal year.

Other Topics of Interest

Legal Proceedings

In the GASP III trial, the hearing for oral arguments on the Petitioner's Motion for Sanctions against the U.S. Department of Justice attorney has been scheduled for February 26. The briefing schedule for written closing arguments has been tolled until Judge Marcus rules on the Motion for Sanctions. Therefore, the time frame for a decision in the GASP litigation remains uncertain, but is unlikely before late spring or early summer 2004.

In the National Environmental Policy Act (NEPA) litigation filed against the Army in federal district court in Washington, D.C., the State of Oregon and the Confederated Tribes of the Umatilla Indian Reservation jointly filed an *amicus brief*, requesting the court not to grant the remedy sought by the plaintiffs related to the Umatilla site. The plaintiffs requested that, pending completion of new Environmental Impact Statements, the Court order the cessation of all activities at the Oregon, Utah, Alabama, and Arkansas demilitarization facilities that require the use of federal funds.

CSEPP (Chemical Stockpile Emergency Preparedness Program) Status
FEMA (the Federal Emergency Management Agency) recently announced that Oregon CSEPP will receive $12.7 million in the current fiscal year, as requested by the state CSEPP representatives. This is $7.1 million in supplemental funding above Oregon's "baseline FFY04 funding of $5.6 million" (as identified by FEMA). This includes $3 million for Phase II of the Hermiston Evacuation Plan. Much credit goes to Governor Kulongoski, U.S. Senators Smith and Wyden, and U.S. Representative Walden who pressed hard for the additional funding from FEMA and the Army. Award of this funding prior to the start of chemical agent operations at UMCDF was a significant issue for local first responders, in addition to completion of the installation of the 450 MHz tactical radio system, which should be accomplished by May 2004.

Leaking Munitions in Igloo K-1841
On December 8 and December 20, the Umatilla Chemical Depot (UMCD) detected low levels of the chemical agent GB (Sarin) in the ambient air outside of igloo K-1841, a storage unit for 750 lb. bombs. [It should be noted that the bombs are, in reality, bulk containers of chemical agent since they contain no explosive components.]

These were the first detections of chemical agent in the ambient air outside the storage igloos and they occurred during UMCD's response to two leaking bombs that required entry to igloo K-1841 by site personnel, identification and isolation of the leaking bombs, and "overpack" of the bombs prior to the relocation to another igloo utilized specifically for storage of overpacked munitions. On December 8, GB was detected 20 ft. downwind from the door of igloo K-1841 at a concentration of 0.073 micrograms/ cubic meter of air (this is 73% of the acceptable 8-hour exposure level for a healthy worker not wearing personal protective gear). On December 20, GB was detected 100 ft. downwind from the door of igloo K-1841 at a concentration of 0.193 micrograms/cubic meter of air (i.e. nearly twice the acceptable 8-hour exposure level for a healthy, unprotected worker). Additional downwind sampling detected no measurable levels and there have been no further detections of chemical agent in the ambient air.

On December 23 the Department sent a letter requiring UMCD "to institute additional control measures prior to and during any additional entry activities at Igloo K-1841. These additional control measures must be initiated to prevent the potential for migration of chemical agent vapors outside of engineering controls." UMCD has provided the Department an interim report regarding these incidents and the Army's response activities to identify and isolate the leaking munitions. UMCD also will provide a final report of their investigation and findings, including the cause of the ambient air releases and identification of preventative measures that must be initiated to avoid recurrences of these events.

New Staff Liaison in the Governor's Office for the Umatilla Project
As a result of a realignment of responsibilities within the Governor's Office, David Van't Hof has accepted a new assignment as the Governor's Sustainability Advisor. Craig Campbell, Senior Policy Advisor to Governor Kulongoski re Public Safety, has assumed the responsibility of serving as the Governor's liaison and point-of-contact for the Umatilla

Chemical Agent Disposal Facility and CSEPP. Mr. Campbell previously served as an Assistant Attorney General with then-Attorney General Kulongoski.

Mr. Campbell has quickly oriented himself to the Umatilla project. In January he spent two days in Hermiston, meeting with the Board of Trustees of the Confederated Tribes of the Umatilla Indian Reservation (CTUIR), local government elected officials, the CSEPP Governing Board, and the Chemical Demilitarization Citizens' Advisory Commission. He also toured the Depot's Emergency Operations Center and UMCDF. Mr. Campbell has expressed a desire to attend a future meeting of the EQC, maintain close contact with Umatilla project stakeholders, and participate in the 2004 Annual CSEPP Exercise.

Visit by Mike Parker, Director of the Army's Chemical Materials Agency
In mid-January, Mike Parker visited the Hermiston area and met with many of the same local stakeholders as Craig Campbell. Mr. Parker has responsibility for the storage of chemical weapons at the various depots and the operation of the chemical demilitarization facilities. His visit occurred at a time when many local officials and CTUIR representatives were expressing a desire for senior Army management to be a more visible and accessible presence in the Hermiston area to provide an opportunity for face-to-face communication between key Army decision-makers and local stakeholders.

State of Oregon

Department of Environmental Quality — Memorandum

Date: January 23, 2004

To: Environmental Quality Commission

From: Anne R. Price, Administrator, Office of Compliance and Enforcement

Subject: Agenda Item B: Presentation Materials For Update on Revisions to Environmental Enforcement Rules, February 5-6, 2003 EQC Meeting

Enclosed is a set of overview slides that may change slightly prior to our discussion on the 5th, but I wanted to get a few items to you in advance in case you would like to prepare some thoughts ahead of time. The proposed Division 12 rulemaking package and draft rule are included for your information only. You need not read those before our meeting! If you have any questions in advance, please do not hesitate to call me at (503)-229-6585. Thank you!

Update on Enforcement Process, Rules, and Guidance

Presentation to the Environmental Quality Commission on February 5, 2004

Today's presentation –

- Overview of the current enforcement process
- Overview of the proposed Division 12 rules

Enforcement process is an agency-wide effort

- Starts with compliance priorities
- Then select compliance approach
- Implement compliance
- Enforcement follow-up

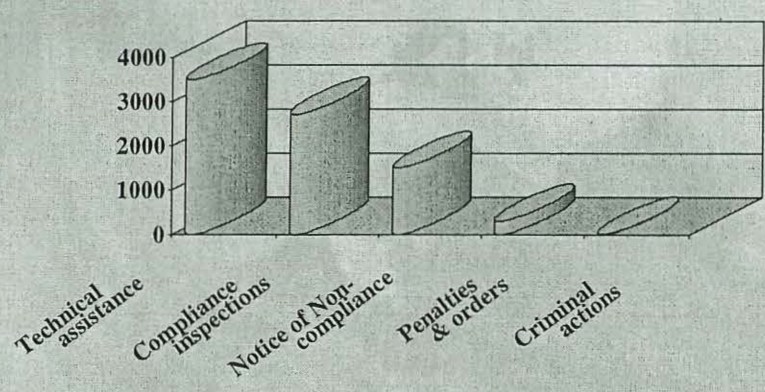
Compliance priorities

- Selected by each program
- Informed by EPA priorities & DEQ strategic directions

Compliance tools

- Education
- Technical/compliance assistance
- Inspections
- Enforcement

Distribution of Cases per year



Enforcement Guidance

- Outlines Director's expectations on process
- Creates consistency in:
  - NON response language
  - which cases are referred
  - which cases are not
- Allows for reasonable flexibility to consider mitigating or aggravating circumstances

Notices of Non-Compliance (NONs)

- Regions draft according to guidance
- States whether a case is being referred for formal enforcement

Referral documents

- Drafted by regional inspector
- All relevant data attached
- Routed through regional management to Office of Compliance and Enforcement (OCE)

Case assignment

- Done by OCE Administrator
- First come, first served—unless high priority
- Cases go to Environmental Law Specialist (ELS) based on experience

Enforcement goals

- To create "specific" deterrence
- To create "general" deterrence
- To ensure economic fairness
- To motivate voluntary initiative

Specific Deterrence

- The environmental problem must be corrected
- Get the attention of the person or company leadership to explain the problem
- Establish a formal process where the person is compelled to sit down and listen

General Deterrence

- People make operational decisions through risk analysis and "bean counting" to decide what is easiest and will make the most money
- Enforcement's penalties, economic benefit, and consequent bad publicity tip the risk scales toward compliance

Economic Fairness

- Compliance costs money -- or at least people think it will
- Violators can make money by avoiding the costs of compliance
- Compliers expect DEQ to ensure that violators are not allowed to save money through noncompliance because this puts compliers at an economic disadvantage

Motivating Voluntary Initiative

- People are busy and procrastinate
- Without some incentive, even those who want to comply may delay finding out how
- Hearing about other people receiving enforcement creates that incentive and stimulates voluntary compliance

Drafting the Notice and Order

An environmental law specialist will review the referral, evidence, law, and other cases to determine:

- whether the laws give DEQ authority to take the recommended action
- whether the law and evidence exist to be reasonably sure we can meet our burden of proof on the elements that the violations occurred
- whether there are other violations not addressed by the referral – especially secondary media issues
- How to use the information you provided to calculate a penalty and a reasonable estimate of economic benefit

Finalizing the document

- The ELS shepherds the document through the approval process then sends it to the Director's office for signature
- The Director signs and sends it back to Enforcement for dating and copying
- Copies are sent to regional inspector, related program at HQ, DOJ, EPA, EQC, the county DA, the state senator and house representative for the locality, and other cc's the inspector has specified such as the facility manager

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- The document is sent via certified mail to the registered agent for a corporation or to a responsible individual. In difficult cases we hire a private investigator to serve it personally
- The Respondent has 20 days in which to send in payment or a written Request for Appeal
- During this time the Region may be in contact with the Respondent, directing compliance with the order

Informal Discussion

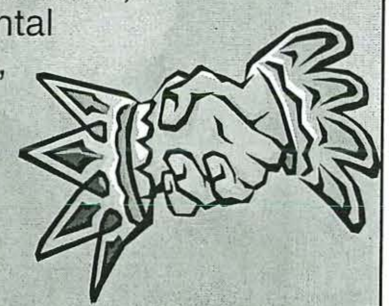
We meet with the Respondent to review the facts and evidence and to hear and weigh any mitigating information we have not previously heard

Reasons for Settlement

- Conforming to the facts
- Supplemental Environmental Projects
- Payment Plan
- Extraordinary compliance
- Self-Disclosure Policy
- Financial Hardship
- "Litigation" risk

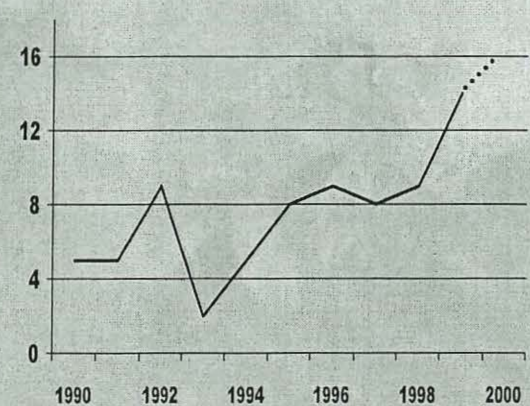
Mutual Agreement and Order

- Agreement to settle
- Details of conditions (*e.g.*, new facts, mitigated penalty, Supplemental Environmental Project (SEP), payment plan, etc.)
- Waiver of appeal rights
- Acknowledgment that these violations constitute prior history for future penalties
- Final Order for penalty which generally must be submitted with the MAO



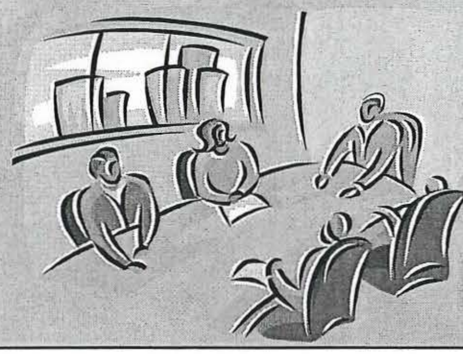
Contested-case hearings are on the increase

(Graph will be updated prior to presentation.)



Contested-case Hearing Process

- Similar to a court trial, but less formal
- Attended by an administrative law judge, respondent, ELS, and witnesses



How do we win or lose?

- The ELS must demonstrate that "more likely than not" DEQ's action is supported by true alleged facts and the law.
- The administrative law judge drafts a "Proposed Final Order" that outlines whether we have met that burden on all the elements.
- That "Proposed Final Order" becomes a Final Order if no appeal to the EQC.

Appeal to EQC

- Option available to either DEQ or Respondent
- Both may appeal on separate issues

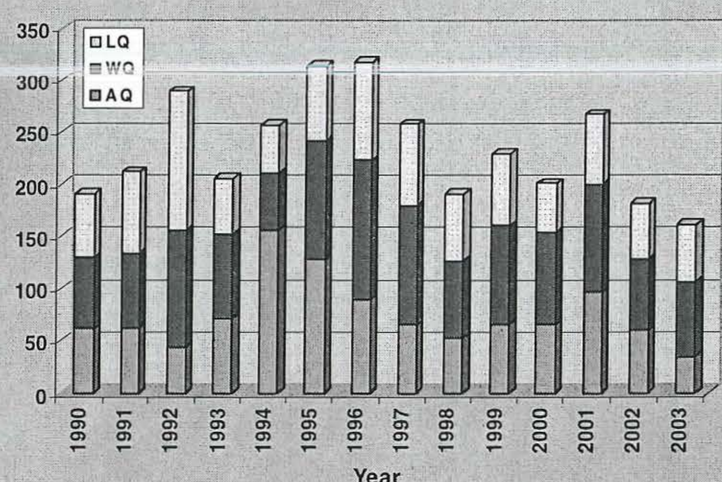
Appeal to Court of Appeals

- Available to Respondent after EQC appeal

Collecting the Penalty

- Once all the appeals have run, DEQ will take the following steps to collect the penalty:
- File liens on property owned by the respondent
- File claims with the Oregon Department of Revenue or DOJ for large amounts
- Refer the account to private collection agencies for collection

Number of Cases by Program Area



Number of cases issued by year and by program area (as of 12/17/03)

Year	AQ	WQ	LQ	Total Cases Issued
1990	61	68	62	191
1991	62	72	78	212
1992	44	112	133	289
1993	71	81	53	205
1994	156	55	46	257
1995	128	114	72	314
1996	90	133	94	317
1997	65	115	78	258
1998	52	74	65	191
1999	66	94	69	229
2000	65	89	47	201
2001	96	104	67	267
2002	59	69	53	181
2003	34	72	55	161

Publicly Available Information

- Search the Enforcement Database - A database of formal enforcement actions (i.e., department orders or civil penalties) that includes the date, respondent name, location, inspector, penalty and description of violation.
- Search the Notice of NonCompliance Database - A database of Notices of Noncompliance (i.e., a notice from DEQ stating that a violation has been observed) that includes the source, name of alleged violator, location, violation date and a description of the violation.
- Summary of Enforcement Actions
- Overview of Enforcement Process - (Guidelines if you receive a Notice of Assessment of Civil Penalty and/or Department Order.)

http://www.deq.state.or.us/programs/enforcement/

Enforcement Actions Initiated By Inspector and Issued to Source, 1998 to present (Sample Search)

Enforcement Number	Program/Region	Source Name and Location	Inspector	Enforcement Staff	Enforcement Type	Violations	Issued	Penalty Paid
1998-033B	Water Quality, Industrial Eastern Region	BOISE CASCADE CORPORATION @	NADLER	BACHMAN	Notice of Permit Violation	NPDES-Permit Requirements	5/6/1998	
1998-033A	Water Quality, Industrial Eastern Region	BOISE CASCADE CORP @	NADLER	BACHMAN	Notice of Civil Penalty Assessment	NPDES-Permit Requirements	5/6/1998	$4,800
1999-032	Air Quality, Title V Eastern Region	BOISE CASCADE CORPORATION @ ISLAND CITY OR	WELCH	ROOT	Notice of Civil Penalty Assessment	ACDP-Opacity and Emission Limits	6/7/1999	$5,743

Total Records: 3

Notice of Noncompliance Database – Sample Search

es of NonCompliance issued 1998 to present

am/Regio	Source Name	Staff Initials	Violation Date	NON Date	County	Location	Description	NON Clas
ER LITY, STRIAL TERN ON-M	TAYLOR LUMBER AND TREATING	BAT	3/9/1999	3/9/1999	YAM HILL	22125 SW ROCK CREEK ROAD, SHERIDAN	EXCEEDING PERMIT DISCHARGE LIMITATIONS	Clas 2
ER LITY, STRIAL TERN ON-M	TAYLOR LUMBER AND TREATING	BAT	3/9/1999	3/9/1999	YAM HILL	22125 SW ROCK CREEK ROAD, SHERIDAN	DMR'S FOR JUNE 98 AND JULY 98 SUBMITTED LATE	Clas 3

Records: 2

Penalty Calculation System

- Base Penalty
- Aggravating or Mitigating Factors
- Economic Benefit

Base Penalty

- Class of Violation
- Magnitude of Violation
- Penalty Matrix

Penalty Matrix

- Class of Violation
  - Each Program Identifies Class for Specific Violations
- Magnitude of Violation
  - Identify Specific Criteria

Penalty Matrix

Magnitude	Major	Moderate	Minor
Class			
I	$8,000	$4,000	$2,000
II	$4,000	$2,000	$1,000

III $750 Not under a magnitude.

Aggravating or Mitigating Factors

- Prior Significant Actions
- Prior Correction History
- Repeated or Ongoing Violation
- Mental State
- Efforts to Correct

Economic Benefit

- Avoided Costs
- Delayed Costs
- Wrongful Profits

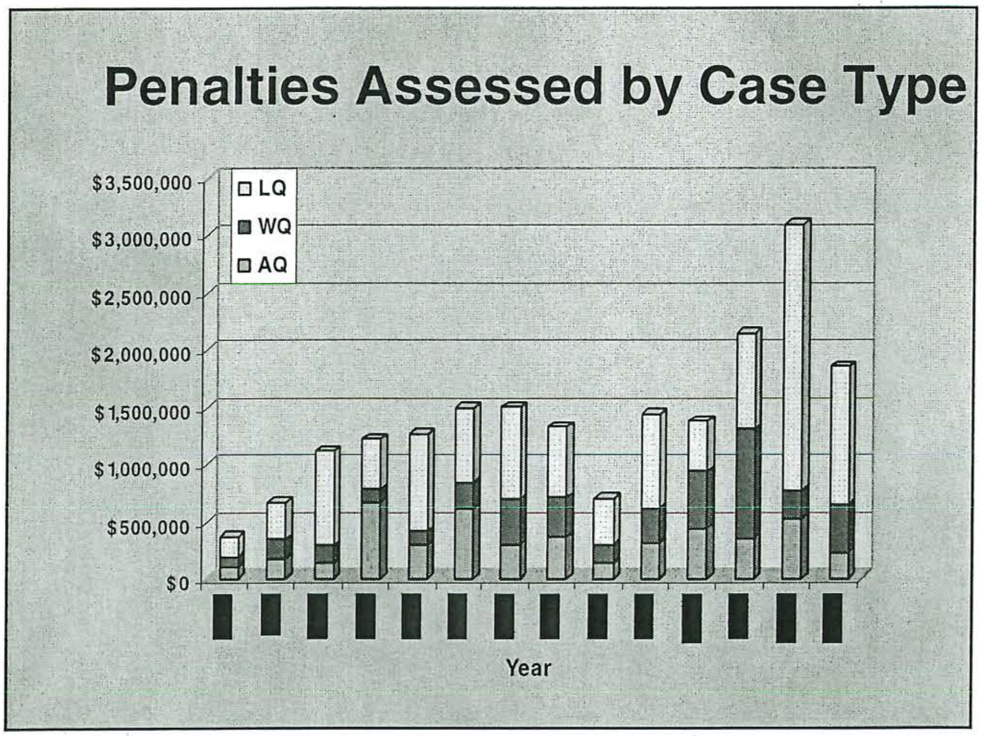
Penalty Calculation Formula

BP = [(.1x BP) x (P + H + O + M + C)] + EB

- BP - Base Penalty
- P - Prior Significant Actions
- H - Prior Correction History
- O - Repeated or Ongoing Violation
- M - Mental State
- C - Efforts to Correct
- EB - Economic Benefit

Additional Penalty Policies

- Daily Penalties
- Extraordinary Circumstances
- Ability to Pay
- Self-Disclosure
- Supplemental Environmental Projects



Penalties assessed by year and by program area (as of 12/17/03)

Year	AQ	WQ	LQ	Total Penalties Assessed
1990	$109,665	$89,850	$170,040	$369,555
1991	$179,870	$163,640	$326,130	$669,640
1992	$137,797	$155,970	$822,521	$1,116,288
1993	$669,708	$114,125	$442,703	$1,226,536
1994	$303,875	$113,944	$847,432	$1,265,251
1995	$622,239	$218,881	$651,543	$1,492,663
1996	$304,337	$389,703	$812,609	$1,506,649
1997	$364,274	$352,605	$609,281	$1,326,160
1998	$139,686	$162,751	$408,018	$710,455
1999	$319,583	$302,272	$826,347	$1,448,202
2000	$447,438	$494,859	$439,897	$1,382,194
2001	$354,013	$957,043	$837,721	$2,148,777
2002	$533,929	$245,949	$2,315,941	$3,095,819
2003	$231,493	$421,230	$1,203,520	$1,856,243

Criminal vs. Civil – Who decides?

- Discover the problem
- Investigate the situation
- Proof issues
- Coordinated effort between EPA and the State
- District Attorney decision

Overview of Proposed Division 12 Rules

DEQ's Strategic Directions -- Ensure that DEQ implements an effective compliance and enforcement program; one that is:

- **understandable,**
- **encourages compliance,**
- **is equitable, and**
- **appropriately reflects the severity of the violation**

Division 12 Rulemaking Scope

- Review existing violations
- Review classification of violations
- Review violation magnitudes
- Review penalty matrices
- Review penalty equation, factors and economic benefit

Main Division 12 Changes:

- Reorganized to mirror process flow
- NONs now called Warning Letters and Pre-Enforcement Notices
- Penalty Matrices more clearly tailored to specific deterrence effect
- Discretion to increase penalty to 10K/day
- Magnitudes and aggravating/mitigating factors modified

Penalty Calculation Process

Class
I
II
III

Magnitude
Major
Moderate
Minor

Matrix
10,000
2,5000
1,000
500
100,000

Aggravating & Mitigating Factors
Past Occurrences (P=0-10)
History (H=-2 or 0)
One-Time (O=0 or 2)
Responsibility (R=0,2,6 or 10)
Cooperativeness (C=-2,0 or 2)

Economic Benefit
EB

= Total Penalty

Ability to Pay

SEP

Class → Magnitude → Matrix → *Base Penalty+ [(.1X(P+H+O+R+C)]+EB = Total Penalty*

Definitions

Class:

Classification addresses the nature of the violation itself. The purpose of classifications is to separate the violations so that similar types of violations are treated with the same level of severity.

Class I represents those violations that have the potential to cause the greatest environmental or HH harm or are most critical to the structure of the program.

Magnitude:

Magnitudes are intended to differentiate between actual violation incidents on the basis of their specific impact. Thus violations creating a similar degree of environmental or human health impact are at the same magnitude, or violations with equally "nasty" impacts are treated equally.

Matrix:

The matrices can allow the type of violator to be weighed against the level of penalty needed to get deterrence. It's where the "who is the violator" factor.

Options
•Send Individuals, Small Businesses and/or small Municipalities to a lower matrix. Always? Or by violator type?
•Send all violators to the appropriate matrix by violator type; use a mitigation factor to address <u>who</u> the violator is.

Aggravating & Mitigating Factors:

Aggravating and mitigating factors allow case specific facts, other than the type of violation or magnitude of the violation to be considered. These factors are intended to aggravate or mitigate penalties similarly, given similar facts.

Options
•Add a mitigating factor for violator size.

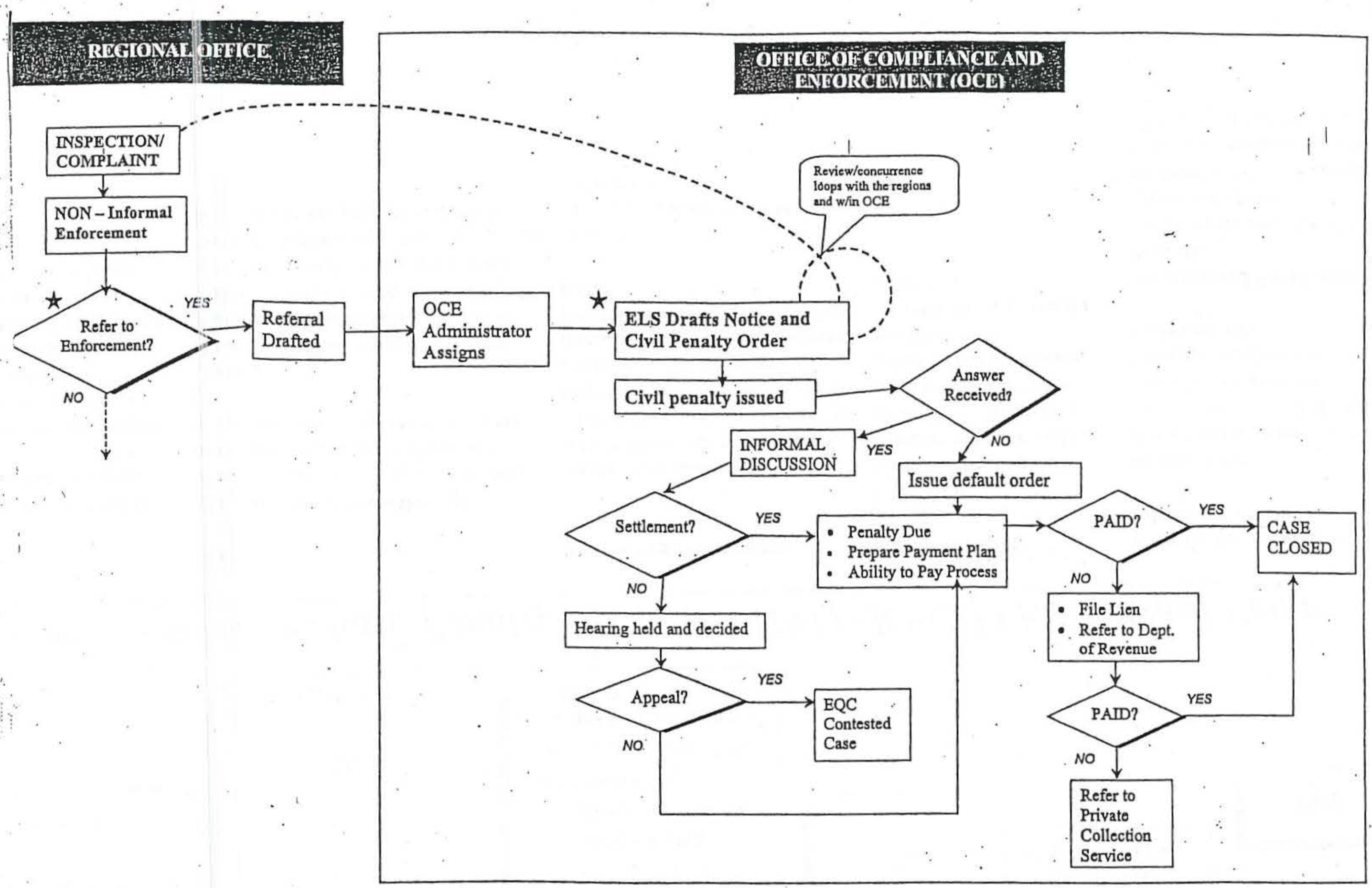
Economic Benefit:

Intended to level the economic playing field based on what the violator should have invested or spent in order to have achieved and maintained compliance. No consideration for who the violator is.

After the total penalty is calculated:

Ability to Pay:
Procedures to determine actual ability to pay by the specific violator. Information is taken into consideration for settlement offer.

Supplemental Environmental Projects:
For penalties over $2,000, the opportunity to do environmental enhancement projects to mitigate penalty amount, if approved by DEQ.


REGIONAL OFFICE
OFFICE OF COMPLIANCE AND ENFORCEMENT (OCE)
INSPECTION/ COMPLAINT
NON – Informal Enforcement
Refer to Enforcement?
YES
NO
Referral Drafted
OCE Administrator Assigns
ELS Drafts Notice and Civil Penalty Order
Review/concurrence loops with the regions and w/in OCE
Civil penalty issued
Answer Received?
YES
NO
INFORMAL DISCUSSION
Issue default order
Settlement?
YES
NO
Penalty Due
Prepare Payment Plan
Ability to Pay Process
PAID?
YES
NO
CASE CLOSED
Hearing held and decided
File Lien
Refer to Dept. of Revenue
Appeal?
YES
NO
EQC Contested Case
PAID?
YES
NO
Refer to Private Collection Service

Underground Storage Tank Expedited Enforcement Rule Revision

340-150-0250

Expedited Enforcement Process

(1) Nothing in this rule shall affect the department's use of OAR chapter 340, division 12 "Enforcement Procedures and Civil Penalties" for compliance with the UST regulations, except as specifically noted. The field penalty amounts assigned in section (4) of this rule are only applicable to actions taken by the department under this rule. Nothing in this rule requires the department to assess any particular penalty amount for any particular violation.

(2) An owner and permittee is excluded from participation in the expedited enforcement process if:

(a) The total field penalty amount for all violations identified during a single inspection or file review would exceed $300;

(b) The department documents one or more class I violation, as defined in OAR 340-012-0067(1);

(c) The department has issued a field penalty or civil penalty to the owner or permittee for the same violation at the same UST facility within the previous three years; or

(d) At its discretion, the department determines that an owner and permittee is not eligible for the expedited process. This determination will be done on a case by case basis. [One example may be when an owner and permittee of multiple UST facilities has received multiple field citations for the same or similar violations, but has not made corrections at all facilities.]

(3) For any owner and permittee with documented violations or conditions that exclude participation in the expedited enforcement process of this rule, the department will take appropriate enforcement action in accordance with OAR chapter 340, division 12.

(4) Each class II UST violation listed in OAR 340-012-0067(2) is assigned a field penalty amount of $50~~,~~. ~~except for class II violations meeting the following circumstances, which are assigned a field penalty amount of $75:~~

~~(a) Failure to conform to performance standards and requirements and third party evaluation and approval for UST system release detection methods by using a release detection method that does not have third party evaluation and approval;~~

~~(b) Use of a method or methods of release detection as the primary release detection method after the period allowed for such use by rule has expired;~~

~~(c) Failure to conduct required release detection monitoring and testing activities for USTs or piping by not monitoring or testing for the presence of a release every 30 days or daily as required;~~

~~(d) Failure to conduct the required release detection monitoring and testing activities for USTs by not performing a tank tightness test in accordance with required schedule for a release detection method or as necessary for confirmation of a suspected release;~~

~~(e) Failure to conduct required release detection monitoring and testing activities for USTs or piping by failing to ensure that groundwater and vapor monitoring release detection systems are functioning properly to detect a release from all portions of the system that contain a regulated substance;~~

~~(f) Failure to conform to performance standards and requirements and third party evaluation and approval for UST system release detection methods or equipment by using the manual tank gauging release detection method for an UST larger than 2,000 gallons capacity;~~

~~(g) Failure to conform to performance standards and requirements and third party evaluation and approval for UST system release detection methods or equipment by not having a line leak detection device that is operational or able to detect a leak in underground piping;~~

~~(h) Failure to conduct required corrosion protection monitoring and testing activities for USTs or piping, by not conducting an inspection after the first six months of operation or subsequent tests according to schedule;~~

~~(i) Failure to conduct required corrosion protection monitoring and testing activities for USTs or piping by not conducting an initial tank integrity inspection or periodic internal lining inspections;~~

~~(j) Failure to have an operating certificate for all compartments or chambers of a multichambered or multicompartment UST when at least one compartment or chamber has an operating certificate;~~

~~(k) Failure to apply for a modified operation certificate when a change in tank ownership, permittee or property owner has occurred;~~

~~(l) Failure to provide complete documentation to demonstrate financial responsibility coverage; and~~

~~(m) Failure to have a trained UST system operator for an UST facility by FebruaryMarch 1, 2004.~~

(5) Each class III violation listed in OAR 340-012-0067(3) is assigned a field penalty amount of $50 when an owner or permittee has received prior notice of the violation through a field citation and has not corrected the violation. Any violation of UST rules that also violates a final order incorporated into a field citation may be excluded from the expedited process at the department's discretion.

(6) An owner or permittee issued a field citation has 30 calendar days from the date of issuance to submit payment for the total field penalty amount. Payment is deemed submitted when received by the department. A check or money order in the amount of the field penalty must be submitted to: Department of Environmental Quality - Business Office, 811 SW Sixth Avenue, Portland, OR 97204. Participation in the expedited enforcement process is voluntary -- by submitting payment, the owner and permittee agree to accept the field citation as the final order by the commission and to waive any right to an appeal or any other judicial review of the determination of violation, compliance schedule or assessment of the field penalty in the field citation.

Stat. Auth.: ORS 466.706 - ORS 466.835, ORS 466.994 & ORS 466.995
Stats. Implemented: ORS 466.746 & ORS 466.835

The baseline Oregon Administrative Rules used for this redlined version contain OARs filed through July 15, 2003

DEPARTMENT OF ENVIRONMENTAL QUALITY

DIVISION 12

340-012-0026 ***(Amended, same #)***
Policy
{Changes to section: Added explanations of the purposes behind the different components of the civil penalty equation.
Purpose: To make penalty assessments more understandable.}

(1) The goals of enforcement ~~is~~ are to:
(a) Protect the human health and the environment;
~~Obtain and maintain compliance with the Department's statutes, rules, permits and orders;~~
(b) Obtain and maintain compliance with statute, commission rules, permits and orders;~~Protect the public health and the environment;~~
(c) Deter future violators and violations; and
(d) Ensure an appropriate and consistent statewide enforcement program.
(2) The department endeavors by conference, conciliation and persuasion to solicit compliance.~~The Department shall endeavor by conference, conciliation and persuasion to solicit compliance.~~
(3) The department endeavors to address all documented violations in order of priority, based on the actual or potential impact to human health or the environment, using increasing levels of enforcement necessary to achieve the goals set forth in section (1) of this rule.~~The Department shall address all documented violations in order of seriousness at the most appropriate level of enforcement necessary to achieve the goals set forth in section (1) of this rule.~~
(4) The department subjects violators who do not comply with an initial enforcement action to increasing levels of enforcement until they come into compliance. ~~Violators who do not comply with an initial enforcement action shall be subject to increasing levels of enforcement until compliance is achieved.~~
(5) The department assesses civil penalties based on the class of violation, the magnitude of violation, the application of the penalty matrices and aggravating and mitigating factors, and the economic benefit realized by the respondent:
(a) Classification of Violation. Each violation is classified as Class I, Class II or Class III. The classifications distinguish among violations based on whether noncompliance is more or less likely to result in actual or potential impact to human health or the environment. Class I violations have the greatest likelihood of actual or potential impact to human health or the environment or are of the greatest significance to the regulatory structure of the given environmental program. Class II violations are less likely than Class I violations to have actual or potential impact to human health or the environment. Class III violations have the least likelihood of actual or potential impact to human health and the environment. (See OAR 340-012-0050 to 340-012-0125.)

(b) Magnitude of Violation. For Class I and Class II violations, the department uses a selected magnitude or determines the magnitude based on the degree of impact to human health and the environment resulting from that particular violation. A magnitude is not determined for Class III violations. (See OAR 340-012-0130 and 340-012-0135.)
(c) Base Penalty Matrices. The department uses the base penalty matrices to determine an appropriate penalty based on the classification and magnitude of the violation. (See OAR 340-012-0140.)
(d) Aggravating and Mitigating Factors. The department uses the aggravating and mitigating factors to adjust the base penalty to reflect additional characteristics of the specific respondent and violation. These factors include the duration of the violation, the respondent's past compliance history, the mental state of the respondent, and the respondent's cooperativeness in achieving compliance or remedying the situation. (See OAR 340-012-0145.)
(e) Economic Benefit. The department adds the economic benefit gained by the respondent to the civil penalty to level the playing field between the respondent and those regulated persons who have borne the expense of maintaining compliance. (See OAR 340-012-0150.)
Stat. Auth.: ORS 454, ORS 459~~.995~~, ORS 465, ORS 466, ORS 467, ORS 468, ~~.020, ORS 468.996,~~ ORS 468A & ORS 468B
Stats. Implemented: ORS 183.090, ORS 454.635 - ~~,~~ ORS 454.645, ORS 459.376, ORS 459.995, ORS 465.900, ORS 466.210, ORS 466.990 - ORS 466.994, ORS 467.050, ORS 467.990, ~~ORS 466.880 - ORS 466.895,~~ ORS 468.090 - ORS 468.140, ORS 468.996, ORS 468A.990, ORS 468A.992, ~~ORS 468.992,~~ ORS 468B.025, ORS 468B.220 & ORS 468B.450

~~340-012-0028~~ ***(Repealed)***
~~Scope of Applicability~~
~~Amendments to OAR 340-012-0028 to 340-012-0090 shall only apply to formal enforcement actions issued by the Department on or after the effective date of such amendments and not to any contested cases pending or formal enforcement actions issued prior to the effective date of such amendments. Any contested cases pending or formal enforcement actions issued prior to the effective date of any amendments shall be subject to OAR 340-012-0028 to 340-012-0090 as prior to amendment. The list of violations classified in these rules is intended to be used only for the purposes of setting penalties for violations of law and for other rules set forth in OAR Chapter 340.~~
~~Stat. Auth.: ORS 454, ORS 459.995, ORS 466, ORS 467, ORS 468.020 & ORS 468.996~~
~~Stats. Implemented: ORS 183.090, ORS 454.635, ORS 454.645, ORS 459.376, ORS 459.995, ORS 465.900, ORS 466.210, ORS 466.880 - ORS 466.895, ORS 468.090 - ORS 468.140, ORS 468A.990, ORS 468.992, ORS 468B.025, ORS 468B.220 & ORS 468B.450~~

340-012-0030 ***(Amended, same #)***
Definitions
{Changes to section: Clarifies the meaning of "formal enforcement action" and changes name of "Notice of Noncompliance" to "Warning Letters" and "Pre-Enforcement Notices." Clarifies definition and applicability of "prior significant action" to provide that when a Respondent settles a formal enforcement action by paying a civil penalty, or pays a civil penalty without settlement, for one or more violations cited in a Notice, the remaining violations for which a civil penalty was not assessed or paid will be considered as an

aggravating factor in any future formal enforcement actions. Changes the definition of "formal enforcement action" to include all proceedings to which a person is entitled to a contested case hearing. Adds a definition for "willful" which currently is used in the rules, but is not defined. Adds a definition for "residential owner-occupant," a category of violators that will be subject to a lower penalty matrix for some program violations.
Purpose of section: To avoid confusion by people who receive Warning Letters and Pre-Enforcement Notices and mistakenly assume they are party to a formal enforcement action. Changes mental state so penalty can be aggravated in a manner consistent with the type of proof available in civil cases.}

~~Unless otherwise required by context, as used in this Division:~~ All terms used in this division have the meaning given to the term in the appropriate statute or OAR chapter 340, or in the absence of such definition, their common and ordinary meaning, unless otherwise required by context or defined below:

(1) "Class I Equivalent" or "Equivalent", which is used ~~only for the purposes of~~ to determin~~ing~~e the value of the "P" factor in the civil penalty formula, means two Class ~~Two~~ II violations, one Class ~~Two~~ II and two Class ~~Three~~ III violations, or three Class ~~Three~~ III violations.

(2) "Commission" means the Environmental Quality Commission.

(3) "Compliance" means meeting the requirements of the applicable statutes, ~~Commission's and Department's statutes,~~ commission rules, permits or orders.

(4) "Conduct" means an act or omission.

(4~~5~~5) "Director" means the d~~D~~irector of the d~~D~~epartment or the d~~D~~irector's authorized de~~puties or officers.~~legate.

(6~~5~~) "Department" means the Department of Environmental Quality.

(7~~6~~) "Documented Violation" means any violation which the Department or other government agency records after observation, investigation or data collection, or for which the department receives independent evidence sufficient to issue a Warning Letter or Pre-Enforcement Notice.

(8~~7~~) "Flagrant" or "flagrantly" means ~~any documented violation where~~ the r~~R~~espondent had actual knowledge ~~of the law~~ that the conduct was unlawful and ~~had~~ consciously set out to commit the violation.

(9~~8~~) "Formal Enforcement Action" means a proceeding initiated by the department that entitles a person to a contested case hearing or that settles such entitlement, including, but not limited to, ~~an action signed by the Director or a Regional Administrator or authorized representatives or deputies which is issued to a Respondent for a documented violation. Formal enforcement actions may require the Respondent to take action within a specified time frame, and/or state the consequences for the violation or continued noncompliance. "Formal enforcement action" includes~~ Notices of ~~Permit~~ Violation, Notices of Assessment of Civil Penalty ~~Assessments~~, department orders, commission orders, Mutual Agreement and Orders, or other consent orders. ~~and other Orders that may be appealed through the contested-case process; but does not include Notices of Noncompliance issued pursuant to OAR 340-012-0041(1).~~

(10~~9~~) "Intentional" means ~~conduct by a person~~ the violator acted with a conscious objective to cause the result of the conduct.

(11~~0~~) "Magnitude of the Violation" means the extent and effects of a ~~violator's~~ respondent's deviation from statutory requirements, rules, standards, permits or orders. The determination of violation magnitude is made according to OAR 340-012-0130. ~~the Commission's and Department's statutes, rules, standards, permits or orders. In determining magnitude the~~

~~Department shall consider all available applicable information, including such factors as: Concentration, volume, percentage, duration, toxicity, and the extent of the effects of the violation. Deviations shall be categorized as major, moderate or minor as set forth in OAR 340-012-0045(1)(a)(B).~~

(12~~1~~) "Negligence" or "Negligent" means the violator fail~~ure~~ed to take reasonable care to avoid a foreseeable risk of ~~committing an act or omission~~conduct constituting or resulting in a violation.

~~(12) "Order" means:~~

~~(a) Any action satisfying the definition given in ORS Chapter 183; or~~

~~(b) Any other action so designated in ORS Chapters 454, 459, 465, 466, 467, 468, 468A, or 468B.~~

(13~~c~~) "Penalty Demand Notice" means a written notice issued to a person by ~~a representative of~~ the d~~D~~epartment ~~to a party~~ demanding payment of a stipulated penalty pursuant to the terms of an agreement entered into between th~~e party~~at person and the d~~D~~epartment.

(14) "Pre-Enforcement Notice" means a written notice of a documented violation that will be considered for formal enforcement.

~~(13) "Person" includes, but is not limited to, individuals, corporations, associations, firms, partnerships, joint stock companies, public and municipal corporations, political subdivisions, states and their agencies, and the Federal Government and its agencies.~~

(15~~4~~) "Prior Significant Action" means any violation cited in a formal enforcement action that becomes final by payment of a civil penalty or by a final order of the commission or the department, or by judgment of a court. Each of the violations cited in that formal enforcement action is a prior significant action unless otherwise provided in a commission or department final order or court judgment.~~established either with or without admission of a violation by payment of a civil penalty, or by a final order of the Commission or the Department, or by judgment of a court.~~

(16~~5~~) "Reckless" or "Recklessly" means the respondent ~~conduct by a person who is aware of and~~ consciously ~~disregards~~ disregarded a substantial and unjustifiable risk that the result will occur or that the circumstance exists. The risk must be of such a nature and degree that disregard ~~thereof~~ing that risk ~~constitutes~~ constituted a gross deviation from the standard of care a reasonable person would observe in that situation.

~~(16) "Residential Open Burning" means the open burning of any domestic wastes generated by a single family dwelling and conducted by an occupant of the dwelling on the dwelling premises. This does not include the open burning of materials prohibited by OAR 340-023-0042(2).~~

(17) "Residential Owner-Occupant" means the person who owns or otherwise possesses a single family dwelling, who occupies that dwelling at the time of violation, and the violation is related to the normal uses of the dwelling.

(1~~7~~8) "Respondent" means the person to whom a formal enforcement action is issued.

~~(18) "Risk of Harm" means the individual or cumulative possibility of harm to public health or the environment caused by a violation or violations. Risk of harm shall be categorized as major, moderate or minor.~~

(19) "Systematic" means any documented violation ~~which~~ that occurs on a regular basis.

(20) "Violation" means a transgression of any statute, rule, order, license, permit, or any part thereof and includes both acts and omissions. ~~Violations shall be categorized as Class One (or I), Class Two (or II) or Class Three (or III), with Class One designating the most serious class of violation.~~

(21) "Warning Letter" means a written notice of a documented violation for which formal enforcement is not anticipated.
(22) "Willful" means the respondent had a conscious objective to cause the result of the conduct and respondent knew or had reason to know that the result was not lawful.
Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 459.376, ORS 459.995, ORS 465.900, ORS 468.005, ORS 468.090 – ORS 468.140, ORS 466.990- ORS 466.994, ~~ORS 466.880 – ORS 466.895,~~ ORS 468.996 – ORS 468.997, ORS 468A.990 – ORS 468A.992 & ORS 468B.220 & ORS 468B.450

~~340-012-0035~~ ***(Repealed; moved to OAR 340-011-0450)***
~~Consolidation of Proceedings~~
~~Notwithstanding that each and every violation is a separate and distinct offense, and in cases of continuing violations, that each day's continuance is a separate and distinct violation, proceedings for the assessment of multiple civil penalties for multiple violations may be consolidated into a single proceeding.~~
~~Stat. Auth.: ORS 468.020~~
~~Stats. Implemented: ORS 468.997~~

340-012-0038 ***(Amended and renumbered from -0040)***
Warning Letters, Pre-Enforcement Notices and Notices of Permit Violation
{Changes: Divides the former Notice of Noncompliance into two types of informal enforcement notices. Specifies the purpose of each notice and the instances where each will be issued. Makes clear that Warning Letters, Pre-Enforcement Notices and Notices of Permit Violation are informal enforcement actions. Modifies the instances where a Notice of Permit Violation will be issued to include only violations of non-federal requirements and programs that are not federally delegated.
Purpose: To make the enforcement process more understandable and predictable.}
(1) The department may send a Warning Letter to a person notifying them of documented violations for which formal enforcement is not anticipated. Warning Letters may contain an opportunity to correct noncompliance as a means of avoiding formal enforcement. At a minimum, a Warning Letter will identify any violations found, what needs to be done to comply, and the consequences of further noncompliance. A person receiving a Warning Letter may provide information to the department to clarify the facts surrounding the documented violation(s). A Warning Letter is not a formal enforcement action and does not afford the violator a right to a contested case hearing.
(2) The department may send a Pre-Enforcement Notice to a person notifying them of documented violations that will be considered for formal enforcement. At a minimum, a Pre-Enforcement Notice will identify the violations found, what needs to comply, the consequences of further noncompliance, and the formal enforcement process that may occur. A person receiving a Pre-Enforcement Notice may provide information to the department to clarify the facts surrounding the documented violations. Failure to send a Pre-Enforcement Notice does not preclude the department from taking formal enforcement action. A Pre-Enforcement Notice is not a formal enforcement action and does not afford the violator a right to a contested case hearing.
(3) Notice of Permit Violation (NPV): ***[moved from -0040]***

(a) Except as provided in subsection (3)(g), before assessing a civil penalty for a violation of permit terms or conditions that do not implement federally delegated program requirements in a Water Pollution Control Facilities Permit, an Air Contaminant Discharge Permit or a Solid Waste Disposal Permit, the department shall issue a Notice of Permit Violation to the permittee.
(b) An NPV will be issued for the first occurrence of a documented Class I violation that is not excepted under subsection (3)(g) below, or for repeated or continuing documented Class II or Class III violations when a Warning Letter has failed to achieve compliance or satisfactory progress toward compliance.
(c) The NPV is in writing, specifies the violation and states that a civil penalty will be imposed for the permit violation unless the department receives, within five working days following receipt of the NPV, one of the following:
(A) A written response from the permittee certifying that the permittee is complying with all terms of the permit from which the violation is cited. The response must include a sufficient description of the information on which the permittee is certifying compliance to enable the department to determine that compliance has been achieved;
(B) For a water quality permit violation, a request in writing to the department that the department follow procedures prescribed under ORS 468B.032. Notwithstanding the requirement for a response to the department within five working days, the permittee may file a request under this paragraph within 20 days from the date of service of the notice; or
(C) A written proposal, acceptable to the department, describing how the permittee will bring the facility into compliance with the permit. At a minimum, an acceptable proposal must include the following:
(i) A detailed plan and time schedule for achieving compliance in the shortest practicable time;
(ii) A description of the interim steps that permittee will take to reduce the impact of the permit violation until permittee is in compliance with the permit; and
(iii) A statement that the permittee has reviewed all other conditions and limitations of the permit and no other violations of the permit were discovered.
(d) If a compliance schedule proposed and approved by the department under paragraph (3)(c)(B) provides for a compliance period of more than six months, the compliance schedule must be incorporated into a final order that provides for stipulated penalties in the event of any failure to comply with the approved schedule. The stipulated penalties may be set at amounts equivalent to the base penalty amount appropriate for the underlying violation as set forth in OAR 340-012-0140;
(e) If the NPV is issued by a regional authority, the regional authority may require that the permittee submit information in addition to that described in subsection (3)(c).
(f) The certification allowed in paragraph (3)(c)(A) of this rule must be signed by a Responsible Official based on information and belief after making reasonable inquiry. For purposes of this rule, "Responsible Official" means one of the following:
(A) For a corporation: a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation; or the manager of one or more manufacturing, production, or operating facilities if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
(B) For a partnership or sole proprietorship: a general partner or the proprietor, respectively.

(C) For a municipality, state, federal, or other public agency: either a principal executive officer or appropriate elected official.
(g) The department may assess a penalty without first issuing an NPV if:
(A) The violation is intentional;
(B) The water or air permit violation would not normally occur for five consecutive days;
(C) The permittee has received a Notice of Permit Violation, or a formal enforcement action with respect to any violation of the permit within 36 months immediately preceding the date of the violation; or
(D) The requirement to provide a Notice of Permit Violation or similar notice would disqualify a state program from federal approval or delegation, for example, permit conditions in a Water Pollution Control Facility permit that implement the federal underground injection control program, permit conditions of an Oregon Title V operating permit, permit conditions of an Air Contaminant Discharge permit that implement the State Implementation Plan under the federal Clean Air Act, and municipal and other Solid Waste Disposal permits that implement the federal Solid Waste Disposal Act.
(h) For purposes of section (3), a "permit" includes permit renewals and modifications. No such renewal or modification shall result in the requirement that the department provide the permittee with an additional advance warning before additional formal enforcement if the permittee has received a Notice of Permit Violation, or other formal enforcement action, with respect to the permit within 36 months immediately preceding the documented violation.
Stat. Auth.: ORS 454.625, ORS 465.400, ORS 466.625, ORS 468.020, ORS 468A.310, ORS 468A.640, & ORS 468B.035
Stats. Implemented: ORS 454.635, ORS 454.645, ORS 459.376, ORS 459.995, ORS 465.900, ORS 466.210, ORS 466.880 - ORS 466.895, ORS 468.090 - ORS 468.140, ORS 468.992, ORS 468A.990, ORS 468B.025, ORS 468B.220 & ORS 468B.450

~~340-012-0040~~ *(Renumbered to -0038)*
~~Notice of Permit Violations and Exceptions~~
~~(1) Prior to assessment of a civil penalty for a violation of the terms or conditions of a National Pollutant Discharge Elimination System Permit, Water Pollution Control Facilities Permit, or Solid Waste Disposal Permit, the Department shall provide a Notice of Permit Violation to the permittee. The Notice of Permit Violation shall be in writing, specifying the violation and stating that a civil penalty will be imposed for the permit violation unless the permittee submits one of the following to the Department within five working days of receipt of the Notice of Permit Violation:~~
~~(a) A written response from the permittee acceptable to the Department certifying that the permitted facility is complying with all terms of the permit from which the violation is cited. The certification shall include a sufficient description of the information on which the permittee is certifying compliance to enable the Department to determine that compliance has been achieved; or~~
~~(b) A written proposal, acceptable to the Department, to bring the facility into compliance with the permit. An acceptable proposal under this rule shall include at least the following:~~
~~(A) A detailed plan and time schedule for achieving compliance in the shortest practicable time;~~
~~(B) A description of the interim steps that will be taken to reduce the impact of the permit violation until the permitted facility is in compliance with the permit;~~

~~(C) A statement that the permittee has reviewed all other conditions and limitations of the permit and no other violations of the permit were discovered.~~
~~(c) In the event that any compliance schedule to be approved by the Department pursuant to subsection (1)(b) of this rule provides for a compliance period of greater than six months, the Department shall incorporate the compliance schedule into an Order described in OAR 340-012-0041(4)(b)(C) which shall provide for stipulated penalties in the event of any noncompliance therewith. The stipulated penalties shall not apply to circumstances beyond the reasonable control of the permittee. The stipulated penalties shall be set at amounts consistent with those established under OAR 340-012-0048;~~
~~(d) The certification allowed in subsection (1)(a) of this rule shall be signed by a Responsible Official based on information and belief after making reasonable inquiry. For purposes of this rule "Responsible Official" of the permitted facility means one of the following:~~
~~(A) For a corporation, a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation; or the manager of one of more manufacturing, production, or operating facilities if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;~~
~~(B) For a partnership or sole proprietorship, a general partner or the proprietor, respectively;~~
~~(C) For a municipality, State, Federal, or other public agency, either a principal executive officer or appropriate elected official.~~
~~(e) For the purposes of this section, when a regional authority issues an NPV, different acceptability criteria may apply for subsections (a) and (b) of this section.~~
~~(2) No advance notice prior to assessment of a civil penalty shall be required under section (1) of this rule and the Department may issue a Notice of Civil Penalty Assessment if:~~
~~(a) The violation is intentional;~~
~~(b) The water or air violation would not normally occur for five consecutive days; or~~
~~(c) The permittee has received a Notice of Permit Violation, or other formal enforcement action with respect to any violation of the permit within 36 months immediately preceding the documented violation;~~
~~(d) The permittee is subject to the federal operating permit program under ORS 468A.300 to 468A.320 (Title V of the Clean Air Act of 1990) and violates any rule or standard adopted or permit or order issued under ORS Chapter 468A and applicable to the permittee;~~
~~(e) The permittee is a solid waste permit holder subject to federal solid waste management requirements contained in **40 CFR, Part 258** as of the effective date of these rules ("Subtitle D"), and violates any rule or standard adopted or permit or order issued under ORS Chapter 459 and applicable to the permittee;~~
~~(f) The permittee has an air contaminant discharge permit and violates any State Implementation Plan requirement contained in the permit;~~
~~(g) The requirement to provide such notice would disqualify a state program from federal approval or delegation;~~
~~(h) For purposes of this section, "permit" includes permit renewals and modifications and no such renewal or modification shall result in the requirement that the Department provide the permittee with an additional advance warning if the permittee has received a Notice of Permit Violation, or other formal enforcement action with respect to the permit within 36 months.~~

~~[Publications: The publication(s) referred to or incorporated by reference in this rule are available from the agency.]~~
~~Stat. Auth.: ORS 468.020~~
~~Stats. Implemented: ORS 459.376, ORS 468.090 - ORS 468.140, ORS 468A.990 & ORS 468B.025~~

340-012-0041 ***(Amended, same #)***
Formal Enforcement Actions
{Changes to section: Adds explanation of what a Respondent can expect upon receipt of a formal enforcement action. Purpose of section: To clarify which Department actions are formal enforcement actions.}

1) Formal enforcement actions may require that the respondent take action within a specified timeframe, assess civil penalties, or result in revocation of a department- or commission-authorized license or permit.~~Notice of Noncompliance (NON):~~

~~(a) Informs a person of a violation, and the consequences of the violation or continued non-compliance. The notice may state the actions required to resolve the violation and may specify a time by which compliance is to be achieved and that the need for formal enforcement action will be evaluated;~~

~~(b) Shall be issued under the direction of a Manager or authorized representative;~~

~~(c) Shall be issued for all classes of documented violations, unless the violation is a continuing violation for which the person has received a prior NON and the continuing violation is documented pursuant to a Department-approved investigation plan or Order, and the person is in compliance with the Department-approved investigation plan or Order.~~

~~(2) Notice of Permit Violation (NPV):~~

~~(a) Is issued pursuant to OAR 340-012-0040;~~

~~(b) Shall be issued by a Regional Administrator or authorized representative;~~

~~(c) Shall be issued for the first occurrence of a documented Class One violation which is not excepted under OAR 340-012-0040(2), or the repeated or continuing occurrence of documented Class Two or Three violations where a NON has failed to achieve compliance or satisfactory progress toward compliance. A permittee shall not receive more than three NONs for Class Two violations of the same permit within a 36 month period without being issued an NPV.~~

(~~3~~2) Notice of Civil Penalty Assessment (CPA):

(a) May be issued for the occurrence of any class of documented violation that is not limited by the NPV requirement of OAR 340-012-0038(3). ~~Is issued pursuant to ORS 468.130, and OAR 340-012-0042 and 340-012-0045;~~

~~(b) Shall be issued by the Director;~~

~~(c) May be issued for the occurrence of any Class of documented violation that is not limited by the NPV requirement of OAR 340-012-0040(2).~~

(~~4~~3) Order:

(a) ~~Is issued pursuant to ORS Chapters 183, 454, 459, 465, 466, 467, 468, 468A, or 468B;~~ May be issued for any class of violation; and

(b) May be in the form of a ~~Commission~~ commission or ~~Department~~ department ~~Order~~order, ~~or~~ including any written order that has been consented to in writing by the parties ~~adversely affected thereby~~ thereto including, but not limited to, a Mutual Agreement and Order (MAO).~~:~~

~~(A) Commission Orders shall be issued by the Commission, or the Director on behalf of the Commission;~~
~~(B) Department Orders shall be issued by the Director;~~
~~(C) All other Orders:~~
~~(i) May be negotiated;~~
~~(ii) Shall be signed by the Director and the authorized representative of each other party.~~
~~(c) May be issued for any Class of violation.~~
(4) Penalty Demand Notice (PDN) may be issued subject to the terms of any written final order that has been consented to in writing by the parties thereto including, but not limited to, a Mutual Agreement and Order (MAO).
(5) The enforcement actions described in sections (~~1~~2) through (4) of this rule in no way limit the ~~Department~~ department or ~~Commission~~ commission from seeking any other legal or equitable remedies including revocation of any department-issued license or permit, or other ~~as~~ remedies provided by ORS Chapters 183, 454, 459, 465, 466, 467, 468, 468A, and 468B.
Stat. Auth.: ORS 454.625, ORS 459.376, ORS 465.400 - ORS 465.410, ORS 466.625, ORS 467.030, ORS 467.050 ORS 468.020, ORS 468A.025, ORS 468B.030, ~~ORS 468A.045,~~ & ORS 468B.035
Stats. Implemented: ORS 454.635~~,~~ - ORS 454.645, ORS 459.376, ORS 459.995, ORS 465.900, ORS 466.210, ORS ~~466.880 - ORS 466.895,~~ 466.990 – ORS 466.994, ORS 467.050, ORS 467.990, ORS 468.090 - ORS 468.140, ORS 468A.990, ORS 468.992, ORS 468B.025, ORS 468B.220 & ORS 468B.450

~~340-012-0042~~ *(Renumbered to 340-012-0140)*
~~Civil Penalty Schedule Matrices~~
~~In addition to any liability, duty, or other penalty provided by law, the Director may assess a civil penalty for any violation pertaining to the Commission's or Department's statutes, rules, permits or orders by service of a written notice of assessment of civil penalty upon the Respondent. Except for civil penalties assessed under OAR 340-012-0048 and 340-012-0049, the amount of any civil penalty shall be determined through the use of the following matrices in conjunction with the formula contained in OAR 340-012-0045:~~
~~(1)(a) $10,000 Matrix:~~
~~(A) Class I:~~
~~(i) Major — $6000;~~
~~(ii) Moderate — $3000;~~
~~(iii) Minor — $1000.~~
~~(B) Class II:~~
~~(i) Major — $2000;~~
~~(ii) Moderate — $1000;~~
~~(iii) Minor — $500.~~
~~(C) Class III:~~
~~(i) Major — $500;~~
~~(ii) Moderate — $250;~~
~~(iii) Minor — $100.~~

~~(b) No civil penalty issued by the Director pursuant to this matrix shall be less than $50 dollars or more than $10,000 dollars for each day of each violation. This matrix shall apply to the following:~~
~~(A) Any violation related to air quality statutes, rules, permits or orders, except for the selected open burning violations listed in section (3) below;~~
~~(B) Any violation related to ORS 164.785 and water quality statutes, rules, permits or orders, violations by a person having or needing a Water Pollution Control Facility Permit, violations of ORS Chapter 454 and on-site sewage disposal rules by a person performing sewage disposal services;~~
~~(C) Any violation related to underground storage tanks statutes, rules, permits or orders, except for failure to pay a fee due and owing under ORS 466.785 and 466.795;~~
~~(D) Any violation related to hazardous waste management statutes, rules, permits or orders, except for violations of ORS 466.992 related to damage to wildlife;~~
~~(E) Any violation related to oil and hazardous material spill and release statutes, rules, or orders, except for negligent or intentional oil spills;~~
~~(F) Any violation related to polychlorinated biphenyls management and disposal statutes;~~
~~(G) Any violation of ORS Chapter 465 or environmental cleanup rules or orders;~~
~~(H) Any violation of ORS Chapter 467 or any violation related to noise control rules or orders;~~
~~(I) Any violation of ORS Chapter 459 or any violation related to solid waste statutes, rules, permits, or orders;~~
~~(J) Any violation of ORS Chapter 459A, except as provided in section (4) of this rule and except any violation by a city, county or metropolitan service district of failing to provide the opportunity to recycle as required by law; and~~
~~(2) In addition to any other penalty provided by law, any person causing an oil spill through an intentional or negligent act shall incur a civil penalty of not less than $100 dollars or more than $20,000 dollars. The amount of the penalty shall be determined by doubling the values contained in the matrix in section (1) of this rule in conjunction with the formula contained in OAR 340-012-0045.~~
~~(3)(a) $2,500 Matrix:~~
~~(A) Class I:~~
~~(i) Major — $2500;~~
~~(ii) Moderate — $1000;~~
~~(iii) Minor — $500.~~
~~(B) Class II:~~
~~(i) Major — $750;~~
~~(ii) Moderate — $500;~~
~~(iii) Minor — $200.~~
~~(C) Class III:~~
~~(i) Major — $250;~~
~~(ii) Moderate — $100;~~
~~(iii) Minor — $50.~~
~~(b) No civil penalty issued by the Director pursuant to this matrix shall be less than $50. The total civil penalty may exceed $2,500 for each day of each violation, but shall not exceed $10,000 for each day of each violation. This matrix shall apply to the following:~~

~~(A) Any violation related to on-site sewage statutes, rules, permits, or orders, other than violations by a person performing sewage disposal services or by a person having or needing a Water Pollution Control Facility permit;~~
~~(B) Any violation of the Department's Division 23 open burning rules, excluding all industrial open burning violations, and violations of OAR 340-023-0042(2) where the volume of the prohibited materials burned is greater than or equal to twenty-five cubic yards. In cases of the open burning of tires, this matrix shall apply only if the number of tires burned is less than fifteen. The matrix set forth in section (1) of this rule shall be applied to the open burning violations excluded from this section.~~
~~(4)(a) $1,000 Matrix:~~
~~(A) Class I:~~
~~(i) Major — $1000;~~
~~(ii) Moderate — $750;~~
~~(iii) Minor — $500.~~
~~(B) Class II:~~
~~(i) Major — $750;~~
~~(ii) Moderate — $500;~~
~~(iii) Minor — $250.~~
~~(C) Class III:~~
~~(i) Major — $250;~~
~~(ii) Moderate — $150;~~
~~(iii) Minor — $50.~~
~~(b) No civil penalty issued by the Director pursuant to this matrix shall be less than $50 or more than $1,000 for each day of each violation.~~
~~(c) This matrix shall apply to any violation of laws, rules or orders relating to rigid plastic containers; except for violation of the labeling requirements under OAR 459A.675 through 459A.685 and for rigid pesticide containers under OAR 340-109-0020 which shall be subject to the matrix set forth in section (1) of this rule.~~
~~(5)(a) $500 Matrix:~~
~~(A) Class I:~~
~~(i) Major — $400;~~
~~(ii) Moderate — $300;~~
~~(iii) Minor — $200.~~
~~(B) Class II:~~
~~(i) Major — $300;~~
~~(ii) Moderate — $200;~~
~~(iii) Minor — $100.~~
~~(C) Class III:~~
~~(i) Major — $200;~~
~~(ii) Moderate — $100;~~
~~(iii) Minor — $50.~~
~~(b) No civil penalty issued by the Director pursuant to this matrix shall be less than $50 dollars or more than $500 dollars for each day of each violation. This matrix shall apply to the following types of violations:~~

~~(A) Any violation of laws, rules, orders or permits relating to woodstoves, except violations relating to the sale of new woodstoves;~~
~~(B) Any violation by a city, county or metropolitan service district of failing to provide the opportunity to recycle as required by law; and~~
~~(C) Any violation of ORS 468B.480 and 468B.485 and rules adopted there under relating to the financial assurance requirements for ships transporting hazardous materials and oil.~~
~~Stat. Auth.: ORS 468.020 & ORS 468.090 - ORS 468.140~~
~~Stats. Implemented: ORS 459.995, ORS 459A.655, ORS 459A.660, ORS 459A.685 & ORS 468.035~~

340-012-0045 ***(Amended, same # and subject matter, but content changed (much of the original content moved to -0130, -0145, -0150, -0162)***
Civil Penalty Determination Procedure
{Changes to section: Mostly new section. Clarifies the procedure that will be used to calculate a civil penalty. Provides that magnitudes will be pre-determined in the violation language, or will be selected or general. If there is not sufficient evidence to determine which selected magnitude applies, the general magnitude will apply.
Purpose of section: To provide a road map for the penalty calculation process. Resolves current issue of what to do if a selected magnitude is identified in the rules, and the Department has evidence a violation occurred but insufficient evidence to determine which selected magnitude should apply. In these cases, the general magnitude procedures will apply.}
(1) The department may assess a civil penalty for any violation in addition to any other liability, duty, or penalty provided by law, except for civil penalties assessed under OAR 340-012-0155(2). The amount of the civil penalty is determined by the department using the following procedures:
(a) The classification of each violation is determined by consulting OAR 340-012-0050 to 340-012-0105;
(b) The magnitude of the violation is determined as follows:
(i) The selected magnitude categories in OAR 340-012-0135 are used.
(ii) If a selected magnitude is not specified in OAR 340-012-0135 or if insufficient information exists to determine which selected magnitude applies, OAR 340-012-0130 is used to determine the magnitude of the violation.
(c) The appropriate base penalty (BP) for each violation is determined by applying the classification and magnitude of each violation to the matrices in OAR 340-012-0140.
(d) The base penalty is adjusted by the application of aggravating or mitigating factors (P = prior significant actions, H = history in correcting prior significant actions, O = repeated or ongoing violation, M = mental state of the violator and C = efforts to correct) as set forth in OAR 340-012-0145.
(e) The appropriate economic benefit (EB) is determined as set forth in OAR 340-012-0150.
(2) The results of the determinations made in section (1) are applied in the following formula to calculate the penalty: $BP + [(0.1 \times BP) \times (P + H + O + M + C)] + EB$.
(3) In addition to the factors listed in section (1) of this rule, the department may consider any other relevant rule of the commission in assessing a civil penalty and will state the effect that rule had on the penalty amount.

~~(1) When determining the amount of civil penalty to be assessed for any violation, other than violations of ORS 468.996, which are determined according to the procedure set forth below in OAR 340-012-0049(8), the Director shall apply the following procedures:~~
~~(a) Determine the class and the magnitude of each violation:~~
~~(A) The class of a violation is determined by consulting OAR 340-012-0050 to 340-012-0083;~~
~~(B) The magnitude of the violation is determined by first consulting the selected magnitude categories in OAR 340-012-0090. In the absence of a selected magnitude, the magnitude shall be moderate unless:~~
~~(i) If the Department finds that the violation had a significant adverse impact on the environment, or posed a significant threat to public health, a determination of major magnitude shall be made. In making a determination of major magnitude, the Department shall consider all available applicable information including such factors as: The degree of deviation from the Commission's and Department's statutes, rules, standards, permits or orders, concentration, volume, percentage, duration, toxicity, and the extent of the effects of the violation. In making this finding, the Department may consider any single factor to be conclusive for the purpose of making a major magnitude determination;~~
~~(ii) If the Department finds that the violation had no potential for or actual adverse impact on the environment, nor posed any threat to public health, or other environmental receptors, a determination of minor magnitude shall be made. In making a determination of minor magnitude, the Department shall consider all available applicable information including such factors as: The degree of deviation from the Commission's and Department's statutes, rules, standards, permits or orders, concentration, volume, percentage, duration, toxicity, and the extent of the effects of the violation. In making this finding, the Department may consider any single factor to be conclusive for the purpose of making a minor magnitude determination.~~
~~(b) Choose the appropriate base penalty (BP) established by the matrices of OAR 340-012-0042 after determining the class and magnitude of each violation;~~
~~(c) Starting with the base penalty, determine the amount of penalty through application of the formula: BP + [(.1 x BP) x (P + H + O + R + C)] + EB, where:~~
~~(A) "P" is whether the Respondent has any prior significant actions relating to statutes, rules, orders and permits pertaining to environmental quality or pollution control. A violation is deemed to have become a Prior Significant Action on the date of the issuance of the first Formal Enforcement Action in which it is cited. For the purposes of this determination, violations that were the subject of any prior significant actions that were issued before the effective date of the Division 12 rules as adopted by the Commission in March 1989, shall be classified in accordance with the classifications set forth in the March 1989 rules to ensure equitable consideration of all prior significant actions. The values for "P" and the finding which supports each are as follows:~~
~~(i) 0 if no prior significant actions or there is insufficient information on which to base a finding;~~
~~(ii) 1 if the prior significant action is one Class Two or two Class Threes;~~
~~(iii) 2 if the prior significant action(s) is one Class One or equivalent;~~
~~(iv) 3 if the prior significant actions are two Class One or equivalents;~~
~~(v) 4 if the prior significant actions are three Class Ones or equivalents;~~
~~(vi) 5 if the prior significant actions are four Class Ones or equivalents;~~
~~(vii) 6 if the prior significant actions are five Class Ones or equivalents;~~
~~(viii) 7 if the prior significant actions are six Class Ones or equivalents;~~
~~(ix) 8 if the prior significant actions are seven Class Ones or equivalents;~~

~~(x) 9 if the prior violations significant actions are eight Class Ones or equivalents;~~
~~(xi) 10 if the prior significant actions are nine Class Ones or equivalents, or if any of the prior significant actions were issued for any violation of ORS 468.996;~~
~~(xii) In determining the appropriate value for prior significant actions as listed above, the Department shall reduce the appropriate factor by:~~
~~(I) A value of 2 if the date of issuance of all the prior significant actions are greater than three years old; or~~
~~(II) A value of 4 if the date of issuance of all the prior significant actions are greater than five years old.~~
~~(III) In making the above reductions, no finding shall be less than zero.~~
~~(xiii) Any prior significant action which is greater than ten years old shall not be included in the above determination;~~
~~(xiv) A permittee, who would have received a Notice of Permit Violation, but instead received a civil penalty or Department Order because of the application of OAR 340-012-0040(2)(d), (e), (f), or (g) shall not have the violation(s) cited in the former action counted as a prior significant action, if the permittee fully complied with the provisions of any compliance order contained in the former action.~~
~~(B) "H" is Respondent's history in correcting prior significant actions or taking reasonable efforts to minimize the effects of the violation. In no case shall the combination of the "P" factor and the "H" factor be a value less than zero. In such cases where the sum of the "P" and "H" values is a negative numeral the finding and determination for the combination of these two factors shall be zero. The values for "H" and the finding which supports each are as follows:~~
~~(i) -2 if Respondent took all feasible steps to correct the majority of all prior significant actions;~~
~~(ii) 0 if there is no prior history or if there is insufficient information on which to base a finding.~~
~~(C) "O" is whether the violation was repeated or continuous. The values for "O" and the finding which supports each are as follows:~~
~~(i) 0 if the violation existed for one day or less and did not recur on the same day, or if there is insufficient information on which to base a finding;~~
~~(ii) 2 if the violation existed for more than one day or if the violation recurred on the same day.~~
~~(D) "R" is whether the violation resulted from an unavoidable accident, or a negligent, intentional or flagrant act of the Respondent. The values for "R" and the finding which supports each are as follows:~~
~~(i) 0 if an unavoidable accident, or if there is insufficient information to make a finding;~~
~~(ii) 2 if negligent;~~
~~(iii) 6 if intentional; or~~
~~(iv) 10 if flagrant.~~
~~(E) "C" is the Respondent's cooperativeness and efforts to correct the violation. The values for "C" and the finding which supports each are as follows:~~
~~(i) -2 if Respondent was cooperative and took reasonable efforts to correct a violation, took reasonable affirmative efforts to minimize the effects of the violation, or took extraordinary efforts to ensure the violation would not be repeated;~~
~~(ii) 0 if there is insufficient information to make a finding, or if the violation or the effects of the violation could not be corrected;~~
~~(iii) 2 if Respondent was uncooperative and did not take reasonable efforts to correct the violation or minimize the effects of the violation.~~

~~(F) "EB" is the approximated dollar sum of the economic benefit that the Respondent gained through noncompliance. The Department or Commission may assess "EB" whether or not it applies the civil penalty formula above to determine the gravity and magnitude-based portion of the civil penalty, provided that the sum penalty does not exceed the maximum allowed for the violation by rule or statute. "EB" is to be determined as follows:~~
~~(i) Add to the formula the approximate dollar sum of the economic benefit gained through noncompliance, as calculated by determining both avoided costs and the benefits obtained through any delayed costs, where applicable;~~
~~(ii) The Department need not calculate nor address the economic benefit component of the civil penalty when the benefit obtained is de minimis;~~
~~(iii) In determining the economic benefit component of a civil penalty, the Department may use the U.S. Environmental Protection Agency's BEN computer model, as adjusted annually to reflect changes in marginal tax rates, inflation rate and discount rate. With respect to significant or substantial change in the model, the Department shall use the version of the model that the Department finds will most accurately calculate the economic benefit gained by Respondent's noncompliance. Upon request of the Respondent, the Department will provide Respondent the name of the version of the model used and respond to any reasonable request for information about the content or operation of the model. The model's standard values for income tax rates, inflation rate and discount rate shall be presumed to apply to all Respondents unless a specific Respondent can demonstrate that the standard value does not reflect that Respondent's actual circumstance. Upon request of the Respondent, the Department will use the model in determining the economic benefit component of a civil penalty;~~
~~(iv) As stated above, under no circumstances shall the imposition of the economic benefit component of the penalty result in a penalty exceeding the statutory maximum allowed for the violation by rule or statute. When a violation has extended over more than one day, however, for determining the maximum penalty allowed, the Director may treat the violation as extending over at least as many days as necessary to recover the economic benefit of noncompliance. When the purpose of treating a violation as extending over more than one day is to recover the economic benefit, the Department has the discretion not to impose the gravity and magnitude-based portion of the penalty for more than one day.~~
~~(2) In addition to the factors listed in section (1) of this rule, the Director may consider any other relevant rule of the Commission and shall state the effect the consideration had on the penalty. On review, the Commission shall consider the factors contained in section (1) of this rule and any other relevant rule of the Commission.~~
~~(3) In determining a civil penalty, the Director may reduce any penalty by any amount the Director deems appropriate when the person has voluntarily disclosed the violation to the Department. In deciding whether a violation has been voluntarily disclosed, the Director may take into account any conditions the Director deems appropriate, including whether the violation was:~~
~~(a) Discovered through an environmental auditing program or a systematic compliance program;~~
~~(b) Voluntarily discovered;~~
~~(c) Promptly disclosed;~~
~~(d) Discovered and disclosed independently of the government or a third party;~~
~~(e) Corrected and remedied;~~
~~(f) Prevented from recurrence;~~

~~(g) Not repeated;~~
~~(h) Not the cause of significant harm to human health or the environment; and~~
~~(i) Disclosed and corrected in a cooperative manner.~~
~~(4) The Department or Commission may reduce any penalty based on the Respondent's inability to pay the full penalty amount. If the Respondent seeks to reduce the penalty, the Respondent has the responsibility of providing to the Department or Commission documentary evidence concerning Respondent's inability to pay the full penalty amount:~~
~~(a) When the Respondent is currently unable to pay the full amount, the first option should be to place the Respondent on a payment schedule with interest on the unpaid balance for any delayed payments. The Department or Commission may reduce the penalty only after determining that the Respondent is unable to meet a long-term payment schedule;~~
~~(b) In determining the Respondent's ability to pay a civil penalty, the Department may use the U.S. Environmental Protection Agency's ABEL computer model to determine a Respondent's ability to pay the full civil penalty amount. With respect to significant or substantial change in the model, the Department shall use the version of the model that the Department finds will most accurately calculate the Respondent's ability to pay a civil penalty. Upon request of the Respondent, the Department will provide Respondent the name of the version of the model used and respond to any reasonable request for information about the content or operation of the model;~~
~~(c) In appropriate circumstances, the Department or Commission may impose a penalty that may result in a Respondent going out of business. Such circumstances may include situations where the violation is intentional or flagrant or situations where the Respondent's financial condition poses a serious concern regarding the ability or incentive to remain in compliance.~~
Stat. Auth.: ORS 468.020
Stats. Implemented: ~~ORS 454.635, ORS 454.645,~~ ORS 459.376, ORS 459.995, ORS 465.900, ORS 465.992, ORS 466.990 – ORS 466.994 & ~~ORS 466.210, ORS 466.880 - ORS 466.895,~~ ORS 468.090 - ORS 468.140, ~~ORS 468.992, ORS 468A.990, ORS 468B.025, ORS 468B.220 & ORS 468B.450~~, ORS 468.090 – ORS 468.140

~~340-012-0046~~ ***(Repealed)***
~~Written Notice of Assessment of Civil Penalty; When Penalty Payable~~
~~(1) A civil penalty shall be due and payable ten days after the order assessing the civil penalty becomes final and the civil penalty is thereby imposed by operation of law or on appeal. A person against whom a civil penalty is assessed shall be served with a notice in the form and manner provided in ORS 183.415 and OAR Chapter 340, Division 11.~~
~~(2) The written notice of assessment of civil penalty shall comply with ORS 468.135(1) and 183.090, relating to notice and contested case hearing applications, and shall state the amount of the penalty or penalties assessed.~~
~~(3) The rules prescribing procedure in contested case proceedings contained in OAR Chapter 340, Division 11 shall apply thereafter.~~
~~Stat. Auth.: ORS 459.995, ORS 468.020 & ORS 468.996~~
~~Stats. Implemented: ORS 183.090~~

~~340-012-0047~~ ***(Renumbered to 340-012-0170)***
~~Compromise or Settlement of Civil Penalty by Director~~

~~(1) Any time after service of the written notice of assessment of civil penalty, the Director may compromise or settle any unpaid civil penalty at any amount that the Director deems appropriate. Any compromise or settlement executed by the Director shall be final.~~
~~(2) In determining whether a penalty should be compromised or settled, the Director may take into account the following:~~
~~(a) New information obtained through further investigation or provided by Respondent which relates to the penalty determination factors contained in OAR 340-012-0045;~~
~~(b) The effect of compromise or settlement on deterrence;~~
~~(c) Whether Respondent has or is willing to employ extraordinary means to correct the violation or maintain compliance;~~
~~(d) Whether Respondent has had any previous penalties which have been compromised or settled;~~
~~(e) Whether the compromise or settlement would be consistent with the Department's goal of protecting the public health and environment;~~
~~(f) The relative strength or weakness of the Department's case.~~
~~Stat. Auth.: ORS 459.995, ORS 466, ORS 467, ORS 468.~~020 & ORS 468.996
~~Stats. Implemented: ORS 183.090 & ORS 183.415~~

~~340-012-0048~~ ***(Renumbered to 340-012-0165)***
~~Stipulated Penalties~~
~~Nothing in OAR Chapter 340, Division 12 shall affect the ability of the Commission or Director to include stipulated penalties in a Mutual Agreement and Order, Consent Order, Consent Decree or any other agreement issued under ORS Chapters 183, 454, 459, 465, 466, 467, 468, 468A, or 468B.~~
~~Stat. Auth.: ORS 454.625, ORS 459.995, ORS 468.020 & ORS 468.996~~
~~Stats. Implemented: ORS 183.090 & ORS 183.415~~

~~340-012-0049~~ ***(Renumbered to 340-012-0155)***
~~Additional Civil Penalties~~
~~In addition to any other penalty provided by law, the following violations are subject to the civil penalties specified below:~~
~~(1) Any person who willfully or negligently causes an oil spill shall incur a civil penalty commensurate with the amount of damage incurred. The amount of the penalty shall be determined by the Director with the advice of the Director of the Department of Fish and Wildlife. In determining the amount of the penalty, the Director may consider the gravity of the violation, the previous record of the violator and such other considerations the Director deems appropriate.~~
~~(2) Any person planting contrary to the restriction of subsection (1) of ORS 468.465 pertaining to the open field burning of cereal grain acreage shall be assessed by the Department a civil penalty of $25 for each acre planted contrary to the restrictions.~~
~~(3) Whenever an underground storage tank fee is due and owing under ORS 466.785 or 466.795, the Director may issue a civil penalty not less than $25 nor more than $100 for each day the fee is due and owing.~~
~~(4) Any owner or operator of a confined animal feeding operation who has not applied for or does not have a permit required by ORS 468B.050 shall be assessed a civil penalty of $500.~~

~~(5) Any person who fails to pay an automobile emission fee when required by law or rule shall be assessed a civil penalty of $50.~~

~~(6) Any person who has care, custody or control of a hazardous waste or a substance which would be a hazardous waste except for the fact that it is not discarded, useless or unwanted shall incur a civil penalty according to the schedule set forth in this section for the destruction, due to contamination of food or water supply by such waste or substance, of any of the wildlife referred to in this section that are property of the state:~~

~~(a) Each game mammal other than mountain sheep, mountain goat, elk or silver gray squirrel, $400;~~

~~(b) Each mountain sheep or mountain goat, $3,500;~~

~~(c) Each elk, $750;~~

~~(d) Each silver gray squirrel, $10;~~

~~(e) Each game bird other than wild turkey, $10;~~

~~(f) Each wild turkey, $50;~~

~~(g) Each game fish other than salmon or steelhead trout, $5;~~

~~(h) Each salmon or steelhead trout, $125;~~

~~(i) Each fur-bearing mammal other than bobcat or fisher, $50;~~

~~(j) Each bobcat or fisher, $350;~~

~~(k) Each specimen of any wildlife species whose survival is specified by the wildlife laws or the laws of the United States as threatened or endangered, $500;~~

~~(l) Each specimen of any wildlife species otherwise protected by the wildlife laws or the laws of the United States, but not otherwise referred to in this section, $25.~~

~~(7) Any person who intentionally or recklessly violates any provisions of ORS 164.785, 459.205 - 459.426, 459.705 - 459.790, Chapters 465, 466, 467, or 468 or any rule or standard or order of the commission adopted or issued pursuant to ORS 459.205 - 459.426, 459.705 - 459.790, Chapters 465, 466, 467, 468, 468A, or 468B, which results in or creates the imminent likelihood for an extreme hazard to the public health or which causes extensive damage to the environment shall incur a penalty up to $100,000. When determining the civil penalty sum to be assessed under this section, the Director shall apply the following procedures:~~

~~(a) Select one of the following base penalties after determining the cause of the violation:~~

~~(A) $50,000 if the violation was caused recklessly;~~

~~(B) $75,000 if the violation was caused intentionally;~~

~~(C) $100,000 if the violation was caused flagrantly.~~

~~(b) Then determine the civil penalty through application of the formula: BP + [(.1 x BP) (P + H + O + C)] + EB, in accordance with OAR340-012-0045(1)(c).~~

~~Stat. Auth.: ORS 459.995, ORS 466, ORS 467, ORS 468.020 & ORS 468.996~~

~~Stats. Implemented: ORS 466.210, ORS 466.880 - ORS 466.895, ORS 468.996, ORS 468A.990, ORS 468A.992, ORS 468B.220 & ORS 468B.450~~

340-012-0050 ***(Amended, same #)***

Air Quality Classification of Violations

(1) Class I:

(a) Violation of a requirement or condition of a commission or department order;

(b) Failure to install required control equipment or meet performance standards established by the New Source Performance Standards or National Emission Standards for Hazardous Air Pollutant Standards;
(c) Failure to meet Volatile Organic Compound (VOC) emission standards, operational requirements, control requirements, or VOC content limitations as prescribed in OAR 340, Division 232;
(d) Operation of a major source without first obtaining the required permit;
(e) Construction of a new source or modification of an existing source, that requires a New Source Review/Prevention of Significant Deterioration (NSR/PSD) permit before obtaining the required permit;
(f) Construction of a new Major Hazardous Air Pollutant source without complying with Section 112(g) of the federal Clean Air Act or without first obtaining the required permit;
(g) Violation of a compliance schedule in a permit;
(h) Exceedance of an air toxic or hazardous air pollutant emission limitation;
(i) Exceedance of an opacity limit by a federal major source or exceedance of an opacity limit by a nonfederal major source by greater than 20 percent opacity (e.g., opacity greater than 40% when the limit is 20%);
(j) Exceedance of a Plant Site Emission Limit (PSEL);
(k) Exceedance of an opacity or emission limit (including a grain loading standard), or violation of an operational or process standard that was established pursuant to NSR, PSD, or the Western Backstop SO2 Trading Program.
(l) Exceedance of an emission limit or violation of an operational or process standard that was established to limit emissions to avoid classification as a major source as defined in OAR 340-200-0020.
(m) Violation of an emission limit, including grain loading standard, by a major source when the violation was detected during a reference method stack test;
(n) Failure to perform testing or monitoring required to demonstrate compliance with an emission limit;
(o) Failure to provide access to premises or records when required by statute, permit or order;
(p) Submission of an Oregon Title V Semi-Annual Compliance Certification or Oregon Title V Annual Operating Report more than 30 days after the due date;
(q) Failure to file a timely new or renewal application for an Oregon Title V Operating Permit within 30 days of the timeline required by OAR 340 division 218;
(r) Submitting false, inaccurate or incomplete information to the department;
(s) Failure to comply with Emergency Action Plans;
(t) Violation of a work practice requirement for asbestos abatement projects that results in actual or potential public exposure to asbestos or actual or potential release of asbestos into the environment;
(u) Storage or open accumulation of friable asbestos material or asbestos-containing waste material that results in an actual or potential public exposure to asbestos or actual or potential release of asbestos into the environment;
(v) Visible emissions of asbestos-containing material during an asbestos abatement project or during collection, processing, packaging, transportation, or disposal of asbestos-containing waste material (ACWM);

(w) Conduct of an asbestos abatement project by a person not licensed as an asbestos abatement contractor if the project results in actual or potential public exposure to asbestos or actual or potential release of asbestos into the environment;
(x) Violation of a disposal requirement for packaging, storing, transporting, or disposing of friable ACWM that results in actual or potential public exposure to asbestos or actual or potential release of asbestos into the environment;
(y) Requiring a person other than a licensed contractor to conduct an asbestos abatement project if the project results in actual or potential for public exposure to asbestos or actual or potential release of asbestos into the environment;
(z) Open burning two or more passenger tires or the equivalent, or open burning one or more cubic yards of materials that are prohibited from being open-burned;
(aa) Open burning of ten or more cubic yards of commercial, construction, demolition, or industrial wastes in violation of OAR 340-264-0080 through -0180;
(bb) Failure to use or install certified vapor recovery equipment;
(cc) Failure to replace, repair, or modify any worn or ineffective component or design element to ensure the vapor-tight integrity and efficiency of a stage I or stage II vapor collection system;
(dd) Installation, service, repair, disposal of, or other treatment of automobile air conditioners without recovering and recycling chlorofluorocarbons using approved recovery and recycling equipment;
(ee) Selling or offering to sell, or giving as a sales inducement, any aerosol spray product that contains as a propellant any compound prohibited under ORS 468A.655;
(ff) Sale of any chlorofluorocarbon or halon-containing product prohibited under ORS 468A.635;
(gg) Transference of vehicle ownership for the purpose of avoiding department Inspection and Maintenance Testing;
(hh) Alteration or avoidance of the Vehicle Inspection Program's testing process to fraudulently produce a Certificate of Compliance with the department's Inspection and Maintenance Test;
(ii) Removing, or otherwise making inoperable, any factory-installed vehicle pollution control systems;
(jj) Operation of a vehicle in violation of visible emission standards; or
(kk) Any otherwise unclassified violation related to air quality that causes a major harm or poses a risk of major harm to human health or the environment.
(2) Class II:
(a) Operation of a non-major source required to have a permit without first obtaining the required permit;
(b) Failure to comply with any asbestos abatement licensing, certification, or accreditation requirements contained in OAR 340-248-0120, -0130, -0140 or -0150;
(c) Conduct of an asbestos abatement project by a person not licensed as an asbestos abatement contractor that does not result in actual or potential public exposure to asbestos or actual or potential release of asbestos into the environment;
(d) Requiring a person other than a licensed contractor to conduct an asbestos abatement project if the project does not result in actual or potential public exposure to asbestos or actual or potential release of asbestos into the environment;

(e) Storage or open accumulation of friable asbestos material or asbestos-containing waste material that does not result in actual or potential public exposure to asbestos or actual or potential release of asbestos into the environment;
(f) Failure to notify, properly notify, or revise notification of an asbestos abatement project when necessary, when the failure prevents the department from inspecting the project;
(g) Failure to perform an asbestos survey;
(h) Submission of an ACDP annual report 30 or more days after the due date contained in the permit; or
(i) Any otherwise unclassified violation related to air quality.
(3) Class III:
(a) Construction or operation of a source required to have a Basic Air Contaminant Discharge Permit (ACDP) without first obtaining a Basic ACDP;
(b) Modification of a source in such a way as to require construction approval but not a permit or permit modification without first notifying and receiving approval from the department;
(c) Exceedance of an opacity limit by a non-federal major source of 10% opacity or less;
(d) Submission of an ACDP annual report between one and 30 days after the due date contained in the permit;
(e) Otherwise unclassified violations relating to improper notification of an asbestos abatement project or failure to revise a notification when necessary;
(f) Failure to submit an air clearance report (ASN-5) for an asbestos abatement project that demonstrates compliance with standards;
(g) Open burning of less than 5 cubic yards of commercial, construction, demolition, or industrial wastes;
(h) Failure to display a temporary label on a certified woodstove; or
(i) Violation of OAR 340-242-0620 by a person who has performed motor vehicle refinishing on fewer than 10 on-road motor vehicles in the previous 12 months.
[Publications: The publication(s) referenced in this rule is available from the agency.]
~~Violations pertaining to air quality shall be classified as follows:~~
~~(1) Class One:~~
~~(a) Violation of a requirement or condition of a Commission or Department Order, or variance;~~
~~(b) Constructing or operating a source required to have a permit other than a Basic ACDP without first obtaining the appropriate permit;~~
~~(c) Modifying a source with an Air Permit without first notifying and receiving approval from the Department;~~
~~(d) Failure to install control equipment or meet performance standards as required by New Source Performance Standards under OAR 340 division 238 or National Emission Standards for Hazardous Air Pollutant Standards under OAR 340 division 244;~~
~~(e) Violation of a compliance schedule in a permit;~~
~~(f) Exceeding a hazardous air pollutant emission limitation;~~
~~(g) Exceeding an opacity or criteria pollutant emission limitation in a permit, rule or order by a factor of greater than or equal to two times the limitation;~~
~~(h) Exceeding the yearly emission limitations of a permit, rule or order;~~
~~(i) Failure to perform testing, or monitoring, required by a permit, rule or order that results in failure to show compliance with an emission limitation or a performance standard;~~
~~(j) Systematic failure to keep records required by a permit, rule or order;~~

~~(k) Failure to submit semi-annual Compliance Certification or Oregon Title V Annual Operating Report;~~
~~(l) Failure to file a timely application for an Oregon Title V Operating Permit pursuant to OAR 340 division 218;~~
~~(m) Submitting a report, semi-annual Compliance Certification or Oregon Title V Annual Operating Report, or any part thereof, that does not accurately reflect the monitoring, record keeping or other documentation held or performed by the permittee;~~
~~(n) Causing emissions that are a hazard to public safety;~~
~~(o) Failure to comply with Emergency Action Plans or allowing excessive emissions during emergency episodes;~~
~~(p) Violation of a work practice requirement for asbestos abatement projects which causes a potential for public exposure to asbestos or release of asbestos into the environment;~~
~~(q) Storage or accumulation of friable asbestos material or asbestos-containing waste material from an asbestos abatement project which causes a potential for public exposure to asbestos or release of asbestos into the environment;~~
~~(r) Visible emissions of asbestos during an asbestos abatement project or during collection, processing, packaging, transportation, or disposal of asbestos-containing waste material;~~
~~(s) Conduct of an asbestos abatement project by a person not licensed as an asbestos abatement contractor;~~
~~(t) Violation of a disposal requirement for asbestos-containing waste material which causes a potential for public exposure to asbestos or release of asbestos into the environment;~~
~~(u) Failing to hire a licensed contractor to conduct an asbestos abatement project which results in the potential for public exposure to asbestos or release of asbestos into the environment;~~
~~(v) Advertising to sell, offering to sell or selling a non-certified woodstove;~~
~~(w) Open burning of materials which are prohibited from being open burned anywhere in the State by OAR 340-264-0060(3);~~
~~(x) Failure to install vapor recovery piping in accordance with standards set forth in OAR chapter 340, division 150;~~
~~(y) Installing vapor recovery piping without first obtaining a service provider license in accordance with requirements set forth in OAR chapter 340, division 160;~~
~~(z) Submitting falsified actual or calculated emission fee data;~~
~~(aa) Failure to provide access to premises or records when required by law, rule, permit or order;~~
~~(bb) Any violation related to air quality which causes a major harm or poses a major risk of harm to public health or the environment.~~
~~(2) Class Two:~~
~~(a) Unless otherwise classified, exceeding an emission limitation, other than an annual emission limitation, or exceeding an opacity limitation by more than five percent opacity in permits, rules or order;~~
~~(b) Violating standards in permits or rules for fugitive emissions, particulate deposition, or odors;~~
~~(c) Failure to submit a complete Air Contaminant Discharge Permit application 60 days prior to permit expiration or prior to modifying a source;~~
~~(d) Failure to maintain on site records when required by a permit to be maintained on site;~~
~~(e) Exceedances of operating limitations that limit the potential to emit that do not result in emissions above the Oregon Title V Operating Permit permitting thresholds pursuant to OAR 340 division 218;~~

~~(f) Failure to perform testing or monitoring required by a permit, rule or order unless otherwise classified.~~
~~(g) Illegal open burning of agricultural, commercial, construction, demolition, and/or industrial waste except for open burning in violation of OAR 340-264-0060(3);~~
~~(h) Failing to comply with notification and reporting requirements in a permit;~~
~~(i) Failure to comply with asbestos abatement licensing, certification, or accreditation requirements;~~
~~(j) Failure to provide notification of an asbestos abatement project;~~
~~(k) Violation of a work practice requirement for asbestos abatement projects that does not cause a potential for public exposure to asbestos and does not release asbestos into the environment;~~
~~(l) Violation of a disposal requirement for asbestos-containing waste material that does not cause a potential for public exposure to asbestos and does not release asbestos into the environment;~~
~~(m) Failure to perform a final air clearance test or submit an asbestos abatement project air clearance report for an asbestos abatement project.~~
~~(n) Failure to display permanent labels on a certified woodstove;~~
~~(o) Alteration of a permanent label for a certified woodstove;~~
~~(p) Failure to use Department-approved vapor control equipment when transferring fuel;~~
~~(q) Operating a vapor recovery system without first obtaining a piping test performed by a licensed service provider as required by OAR chapter 340, division 160;~~
~~(r) Failure to obtain Department approval prior to installing a Stage II vapor recovery system not already registered with the Department as specified in Department rules;~~
~~(s) Installing, servicing, repairing, disposing of or otherwise treating automobile air conditioners without recovering and recycling chlorofluorocarbons using approved recovery and recycling equipment;~~
~~(t) Selling, or offering to sell, or giving as a sales inducement any aerosol spray product which contains as a propellant any compound prohibited under ORS 468A.655;~~
~~(u) Selling any chlorofluorocarbon or halon containing product prohibited under ORS 468A.635;~~
~~(v) Failure to pay an emission fee;~~
~~(w) Submitting inaccurate emission fee data;~~
~~(x) Violation of OAR 340-242-0620 by a person who has performed motor vehicle refinishing on 10 or more on-road motor vehicles in the previous 12 months;~~
~~(y) Constructing or operating a source required to have a Basic ACDP;~~
~~(z) Any violation of the Employee Commute Option rules contained in OAR 340-242-0010 to 0290;~~
~~(aa) Any violation related to air quality which is not otherwise classified in these rules.~~
~~(3) Class Three:~~
~~(a) Failure to perform testing, or monitoring required by a permit, rule or order where missing data can be reconstructed to show compliance with standards, emission limitations or underlying requirements;~~
~~(b) Illegal residential open burning;~~
~~(c) Improper notification of an asbestos abatement project;~~
~~(d) Failure to submit a completed renewal application for an asbestos abatement license in a timely manner;~~
~~(e) Failure to display a temporary label on a certified woodstove;~~
~~(f) Exceeding opacity limitation in permits or rules by five percent opacity or less.~~

~~(g) Violation of OAR 340-242-0620 by a person who has performed motor vehicle refinishing on fewer than 10 on-road motor vehicles in the previous 12 months.~~
~~[Publications: The publication(s) referenced in this rule is available from the agency.]~~
Stat. Auth.: ORS 468.020~~,~~ & ORS 468A.025 ~~& ORS 468A.045~~
Stats. Implemented: ORS 468.020, ORS 468.090 - ORS 468.140 & ORS 468A ~~& ORS 468A.025~~

~~340-012-0052~~ ***(Repealed)***
~~Noise Control Classification of Violations~~
~~Violations pertaining to noise control shall be classified as follows:~~
~~(1) Class One:~~
~~(a) Violation of a requirement or condition of a Commission or Department order or variance;~~
~~(b) Violations that exceed noise standards by ten decibels or more;~~
~~(c) Exceeding the ambient degradation rule by five decibels or more; or~~
~~(d) Failure to submit a compliance schedule required by OAR 340-035-0035(2);~~
~~(e) Operating a motor sports vehicle without a properly installed or well-maintained muffler or exceeding the noise standards set forth in OAR 340-035-0040(2);~~
~~(f) Operating a new permanent motor sports facility without submitting and receiving approval of projected noise impact boundaries;~~
~~(g) Failure to provide access to premises or records when required by law, rule, or order;~~
~~(h) Violation of motor racing curfews set forth in OAR 340-035-0040(6);~~
~~(i) Any violation related to noise control which causes a major harm or poses a major risk of harm to public health or the environment.~~
~~(2) Class Two:~~
~~(a) Violations that exceed noise standards by three decibels or more;~~
~~(b) Advertising or offering to sell or selling an uncertified racing vehicle without displaying the required notice or obtaining a notarized affidavit of sale;~~
~~(c) Any violation related to noise control which is not otherwise classified in these rules.~~
~~(3) Violations that exceed noise standards by one or two decibels are Class III violations.~~
~~Stat. Auth.: ORS 467.030 & ORS 468.020~~
~~Stats. Implemented: ORS 467.050 & ORS 467.990~~

340-012-0055 ***(Amended, same #)***
Water Quality Classification of Violations
(1) Class I:
(a) Violation of a requirement or condition of a commission or department order;
(b) Causing pollution of waters of the state;
(c) Reducing the quality of waters of the state below water quality standards;
(d) Any discharge of waste to waters of the state, either without a waste discharge permit or from a discharge point not authorized by a waste discharge permit;
(e) Operating a discharge source or conducting a disposal activity without registering for a National Pollutant Discharge Elimination System (NPDES) permit or a Water Pollution Control Facility (WPCF) general permit that covers that discharge or disposal activity;
(f) Failure to notify the department of an unpermitted discharge as required by a permit condition;

(g) Violation of a permit compliance schedule contained in Schedule C of a permit;
(h) Failure to submit or implement storm water management, pollution control or erosion control plans in accordance with an NPDES permit;
(i) Any violation of any pretreatment standard or requirement by a user of a municipal treatment works;
(j) Operation of a disposal system without first obtaining a WPCF or NPDES waste discharge permit;
(k) Failure to provide access to premises or records when required by statute, permit or order;
(l) Unauthorized change, modification, or alteration to a facility operating under a WPCF or NPDES permit;
(m) Submitting false, inaccurate or incomplete information to the department;
(n) Operation or supervision of a wastewater treatment system without proper certification;
(o) Failure to submit a discharge monitoring (DMR) or annual report;
(p) Land applying biosolids on a parcel that does not have department site authorization;
(q) Land applying biosolids that do not meet the pollutant, pathogen and vector attraction reduction requirements;
(r) Violation of an effluent limitation set forth in an NPDES or WPCF permit if:
(A) the discharge level (except for pH and bacteria) exceeds limitations by 100%;
(B) the discharge is more than 2 pH units outside the permitted pH range; or
(C) in the case of bacterial limits, the exceedance of the bacteria limit is the result of an inoperative disinfection system that results in no disinfection at all, or, for Level II, III, or IV reclaimed water, the concentration is more than five times the limit;
(s) Failing to report an effluent limitation exceedance; or
(t) Any otherwise unclassified violation related to water quality that causes a major harm or poses a risk of major harm to human health or the environment.

(2) Class II:

(a) Violation of an effluent limitation set forth in an NPDES or WPCF permit if:
(A) the discharge level (except for pH and bacteria) exceeds limitations by more than 25% but less than 100%;
(B) the discharge is more than 1 pH unit but 2 pH units or less outside the permitted pH range; or
(C) in the case of bacterial limits, the bacteria limit is exceeded by a factor of five, or for Level I, II, III, or IV reclaimed water, the concentration exceeds the permit limit;
(b) Failure to submit a report or plan as required by statute, rule, permit, order, or license except a DMR or a report required by Schedule C of a permit, or a storm water management, storm water control or erosion control plan;
(c) Causing any wastes to be placed in a location where such wastes are likely to escape or be carried to waters of the state by any means;
(d) Any violation of a management, monitoring, or operational plan established pursuant to a waste discharge permit that is not otherwise classified in these rules;
(e) Failure to timely submit a discharge monitoring report;
(f) Failure for Total Maximum Daily Load (TMDL)-identified Designated Management Agency (DMA) to submit a water quality management plan as required by an adopted TMDL; or
(h) Any otherwise unclassified violation related to water quality.

(3) Class III:

(a) Violation of an effluent limitation set forth in an NPDES or WPCF permit if:

(A) The discharge level (except for pH and bacteria) exceeds limitations by less than 10%;
(B) The actual discharge is 1 pH unit or less outside the permitted pH range; or
(C) In the case of bacterial limits, for other than reclaimed water, the bacteria limit is exceeded by less than a factor of five.
(b) Failure for TMDL-identified DMA to comply with provisions of a water quality management plan approved pursuant to an adopted TMDL.
~~Violations pertaining to water quality shall be classified as follows:~~
~~(1) Class One:~~
~~(a) Violation of a requirement or condition of a Commission or Department Order;~~
~~(b) Causing pollution of waters of the State;~~
~~(c) Reducing the water quality of waters of the State below water quality standards;~~
~~(d) Any discharge of waste that enters waters of the state, either without a waste discharge permit or from a discharge point not authorized by a waste discharge permit;~~
~~(e) Failure to comply with statute, rule, or permit requirements regarding notification of a spill or upset condition which results in a non-permitted discharge to public waters;~~
~~(f) Violation of a permit compliance schedule;~~
~~(g) Any violation of any pretreatment standard or requirement by a user of a municipal treatment works which either impairs or damages the treatment works, or causes a major harm or poses a major risk of harm to public health or the environment;~~
~~(h) Operation of a disposal system without first obtaining a Water Pollution Control Facility Permit;~~
~~(i) Failure to provide access to premises or records when required by law, rule, permit or order;~~
~~(j) Failure of any ship carrying oil to have financial assurance as required in ORS 468B.300 - 468B.335 or rules adopted thereunder;~~
~~(k) Any violation related to water quality which causes a major harm or poses a major risk of harm to public health or the environment.~~
~~(l) Unauthorized changes, modifications, or alterations to a facility operating under a WPCF or NPDES permit.~~
~~(m) Intentionally submitting false information;~~
~~(n) Operating or supervising a wastewater treatment system without proper certification.~~
~~(2) Class Two:~~
~~(a) Failure to submit a report or plan as required by rule, permit, or license, except for a report required by permit compliance schedule;~~
~~(b) Any violation of OAR Chapter 340, Division 49 regulations pertaining to certification of wastewater system operator personnel unless otherwise classified;~~
~~(c) Placing wastes such that the wastes are likely to enter public waters by any means;~~
~~(d) Failure by any ship carrying oil to keep documentation of financial assurance on board or on file with the Department as required by ORS 468B.300 - 468B.335 or rules adopted thereunder;~~
~~(e) Failing to connect all plumbing fixtures to, or failing to discharge wastewater or sewage into, a Department-approved system unless otherwise classified in OAR 340-012-0055 or 340-012-0060;~~
~~(f) Any violation of a management, monitoring, or operational plan established pursuant to a waste discharge permit, that is not otherwise classified in these rules.~~
~~(g) Any violation related to water quality which is not otherwise classified in these rules.~~
~~(3) Class Three:~~

~~(a) Failure to submit a discharge monitoring report on time;~~
~~(b) Failure to submit a complete discharge monitoring report;~~
~~(c) Exceeding a waste discharge permit biochemical oxygen demand (BOD), carbonaceous biochemical oxygen demand (CBOD), or total suspended solids (TSS) limitation by a concentration of 20 percent or less, or exceeding a mass loading limitation by ten percent or less;~~
~~(d) Violation of a removal efficiency requirement by a factor of less than or equal to 0.2 times the number value of the difference between 100 and the applicable removal efficiency requirement (e.g., if the requirement is 65 percent removal, 0.2 (100-65) = 0.2(35) = 7 percent; then 7 percent would be the maximum percentage that would qualify under this rule for a permit with a 65 percent removal efficiency requirement);~~
~~(e) Violation of a pH requirement by less than 0.5 pH.~~
Stat. Auth.: ORS 468.020 & ORS 468B.035~~15~~
Stats. Implemented: ORS 448.405 - ORS 448.460, ORS 448.992 - ORS 448.994, ORS 454.605 - ORS 454.655, ORS 454.782 - ORS 454.792, ORS 454.800, ORS 468.090 - ORS 468.140 & ORS 468B~~.025, ORS 468B.220 & ORS 468B.305~~

340-012-0058 ***(Adopted)***
Underground Injection Control Classification of Violations
(1) Class I:
(a) Violation of a requirement or condition of a commission or department order;
(b) Failure to provide access to premises or records as required by statute, permit, or order;
(c) Submitting false, inaccurate or incomplete information to the department;
(d) Constructing, operating, maintaining, modifying or converting an injection system or conducting an injection activity that causes a violation of any primary drinking water standard;
(e) Installing or operating a prohibited type of Class I, II, III, IV or V underground injection system, except for cesspools;
(f) Installing or operating an underground injection system without a permit; or
(g) Any otherwise unclassified violation related to underground injections that causes a major harm or poses a risk of major harm to human health or the environment.
(2) Class II:
(a) Failure to decommission an unused or abandoned underground injection system or failure to convert the unused or abandoned system to another type of system that will prevent the movement of contaminants into groundwater;
(b) Failure to register an underground injection system if the injected fluids are contaminated by hazardous materials or petroleum products or wastes;
(c) Failure to meet Class V stormwater requirements for an industrial or commercial facility where hazardous substances, toxic materials, or petroleum products are used, handled, or stored, or for a government entity with 50 or more dry wells;
(d) Failure to properly decommission an injection system, except for an on-site sewage disposal system and stormwater runoff from rooftops;
(e) Failure to properly decommission drilled wells, boreholes, sewage drill holes and sewage drain holes;
(f) Operating a prohibited cesspool; or
(g) Any otherwise unclassified violation related to underground injections.
(3) Class III:

(a) Operating a sewage drainhole without a permit;
(b) Failure to meet Class V stormwater requirements for an industrial or commercial facility, except as otherwise classified; or
(c) Failure to register an underground injection system, except as otherwise classified.
Stat. Auth.: ORS 468.020 & ORS 468B
Stats. Implemented: ORS 454.605 - ORS 454.655, ORS 468.090 - ORS 468.140 & ORS 468B

340-012-0060 ***(Amended, same #)***
On-Site Sewage Disposal Classification of Violations
(1) Class I:
(a) Violation of a requirement or condition of a commission or department order;
(b) Performing sewage disposal services without a current sewage disposal service provider license;
(c) Installing or causing to be installed an on-site sewage disposal system or any part thereof, or repairing any part thereof, without first obtaining a permit;
(d) Disposing of septic tank, holding tank, chemical toilet, privy or other treatment facility contents in a manner or location not authorized by the department;
(e) Failure to provide access to premises or records when required by statute, permit or order;
(f) Submitting false, inaccurate or incomplete information to the department;
(g) Allowing an uncertified installer to supervise or be responsible for the construction or installation of a system, or part thereof; or
(h) Any otherwise unclassified violation related to on-site sewage disposal that results in sewage on the ground or the discharge of sewage into waters of the state, or that causes a major harm or poses a risk of major harm to human health or the environment.
(2) Class II:
(a) Failure to meet the requirements for satisfactory completion within 30 days after written notification or posting of a Correction Notice at the site;
(b) Operating or using a nonwater-carried waste disposal facility without first obtaining a letter of authorization or permit;
(c) Placing into service, reconnecting to or changing the use of an on-site sewage disposal system, and increasing the projected daily sewage flow into the system without first obtaining an authorization notice, construction permit, alteration permit, or repair permit;
(d) Failing to connect all plumbing fixtures to, or failing to discharge wastewater or sewage into, a department-approved system, except if failure results in sewage on the ground or the discharge of sewage into waters of the state;
(e) Advertising or representing oneself as being in the business of performing sewage disposal services without a current sewage disposal service license from the department;
(f) Operating or using an on-site sewage disposal system, or part thereof, without first obtaining a Certificate of Satisfactory Completion;
(g) Failure to submit as-built plans that are signed by a certified installer who supervised or was responsible for the construction or installation of the on-site system;
(h) Any otherwise unclassified violation related to Recirculating Gravel Filter Systems, Sand Filter Systems, holding tanks or systems incorporating Alternative Treatment Technologies; or
(i) Any otherwise unclassified violation related to on-site sewage disposal.
~~Violations pertaining to On-Site Sewage Disposal shall be classified as follows:~~

~~(1) Class One:~~
~~(a) Violation of a requirement or condition of a Commission or Department order;~~
~~(b) Performing, advertising or representing one's self as being in the business of performing sewage disposal services without first obtaining and maintaining a current sewage disposal service license from the Department;~~
~~(c) Installing or causing to be installed an on-site sewage disposal system or any part thereof, or repairing any part thereof, without first obtaining a permit;~~
~~(d) Disposing of septic tank, holding tank, chemical toilet, privy or other treatment facility contents in a manner or location not authorized by the Department;~~
~~(e) Operating or using an on-site sewage disposal system that is failing by discharging sewage or effluent;~~
~~(f) Failure to provide access to premises or records when required by law, rule, permit or order;~~
~~(g) Any violations related to on-site sewage disposal which cause major harm or pose a major risk of harm to public health, welfare, safety or the environment.~~
~~(2) Class Two:~~
~~(a) Installing or causing to be installed an on-site sewage disposal system, or any part thereof, or the repairing of any part thereof, which fails to meet the requirements for satisfactory completion within 30 days after written notification or posting of a Correction Notice at the site;~~
~~(b) Operating or using a nonwater-carried waste disposal facility without first obtaining a letter of authorization from the Agent;~~
~~(c) Operating or using a newly constructed, altered or repaired on-site sewage disposal system, or part thereof, without first obtaining a Certificate of Satisfactory Completion;~~
~~(d) Providing any sewage disposal service in violation of any statute, rule, license, or permit, provided that the violation is not otherwise classified in these rules;~~
~~(e) Failing to obtain an authorization notice from the Agent prior to affecting change to a dwelling or commercial facility that results in the potential increase in the projected peak sewage flow from the dwelling or commercial facility in excess of the sewage disposal system's peak design flow;~~
~~(f) Installing or causing to be installed a nonwater-carried waste disposal facility without first obtaining written approval from the Agent;~~
~~(g) Failing to connect all plumbing fixtures to, or failing to discharge wastewater or sewage into, a Department approved on-site system;~~
~~(h) Any violation related to on-site sewage disposal which is not otherwise classified in these rules.~~
~~(3) Violations where the sewage disposal system design flow is not exceeded, placing an existing system into service, or changing the dwelling or type of commercial facility, without first obtaining an authorization notice are Class Three violations.~~
Stat. Auth.: ORS 454.050, ORS 454.625 & ORS 468.020
Stats. Implemented: ORS 454.605 - ORS 454.755, ORS 454.782 - ORS 454.800 & ~~ORS 454.635, ORS 454.645 &~~ ORS 468.090 - ORS 468.140

340-012-0065 ***(Amended, same #)***
Solid Waste Management and Disposal Classification of Violations
(1) Class I:
(a) Violation of a requirement or condition of a commission or department order;

(b) Establishing, expanding, maintaining or operating a disposal site without first obtaining a registration or permit;
(c) Accepting solid waste for disposal in a permitted solid waste unit or facility that has been expanded in area or capacity without first submitting plans to the department and obtaining department approval;
(d) Violation of a lagoon's freeboard limit that results in the overflow of a sewage sludge or leachate lagoon;
(e) Violation of the landfill methane gas concentration standards;
(f) Deviation from the department-approved facility plan that results in a safety hazard, public health hazard or damage to the environment;
(g) Violation of a facility permit, department-approved plans required by rule, or commission rule, unless otherwise classified under OAR 340-012-0065(2) or (3);
(h) Failure to provide access to premises or records when required by law, permit or order;
(i) Accepting for treatment or storage, disposing, or accepting for disposal, at a solid waste disposal site, materials prohibited from disposal by statute, rule, permit or order;
(j) Accepting for treatment, storage or disposal wastes defined as hazardous, or wastes from another state that are hazardous under the laws of that state, without approval from the department;
(k) Mixing for disposal or disposing of recyclable material that has been properly prepared and source separated for recycling;
(l) Failure to follow a department-approved Construction Quality Assurance (CQA) plan when constructing a waste cell;
(m) Failure to establish and maintain financial assurance as required by statute, rule, permit or order;
(n) Failure to comply with the terms of a permit automatically terminated due to a failure to submit a timely application for renewal;
(o) Submitting false, inaccurate or incomplete information to the department;
(p) Failure to comply with any solid waste permit or rule requirement pertaining to permanent household hazardous waste (HHW) collection facility operations;
(q) Open burning conducted in violation of a disposal site facility permit condition; or
(r) Any otherwise unclassified violation related to the management, recovery or disposal of solid waste that causes major harm or poses a risk of major harm to human health or the environment.
(2) Class II:
(a) Violation of a condition or term of a Letter of Authorization;
(b) Failure of a permitted landfill, solid waste incinerator or a municipal solid waste compost facility operator or a metropolitan service district to report amount of solid waste;
(c) Failure to accurately report weight and type of material recovered or processed from the solid waste stream;
(d) Failure of a disposal site to obtain certification for recycling programs before accepting solid waste for disposal;
(e) Acceptance of solid waste by a permitted disposal site from a person that does not have an approved solid waste reduction program;
(f) Unless otherwise classified, failure to comply with any plan approved by the department;
(g) Any violation of rigid plastic container disposal requirements;

(h) Failure to comply with any solid waste permit requirement pertaining to permanent HHW collection facility operations;
(i) Failure to comply with landfill cover requirements, including, but not limited to, daily, intermediate, and final covers, and limitation of working face size;
(j) Failure to submit a timely permit renewal application;
(k) Failure to establish and maintain a facility operating record for a municipal solid waste landfill;
(l) Operating a HHW collection event or site without first obtaining department approval, or not complying with approved plans for HHW collection events;
(m) Managing special waste in violation of or without a department-approved Special Waste Management Plan;
(n) Any violation of the labeling requirements under ORS 459A.675 - .685;
(o) Failure to collect, analyze or report groundwater, surface water or leachate quality data in accordance with the facility permit, the facility environmental monitoring plan, or department rules; or
(p) Any otherwise unclassified violation related to the management, recovery, or disposal of solid waste or solid waste reduction.

(3) Class III:
(a) Failure to post required signs;
(b) Failure to control litter; or
(c) Failure to notify the department of any name or address change.

~~Solid Waste Management Classification of Violations~~

~~Violations pertaining to the management, recovery and disposal of solid waste shall be classified as follows:~~

~~(1) Class One:~~
~~(a) Violation of a requirement or condition of a Commission or Department Order;~~
~~(b) Establishing, expanding, maintaining or operating a disposal site without first obtaining a registration or permit;~~
~~(c) Accepting solid waste for disposal in a permitted solid waste unit or facility that has been expanded in area or capacity without first submitting plans to the Department and obtaining Department approval;~~
~~(d) Disposing of or authorizing the disposal of a solid waste at a location not permitted by the Department to receive that solid waste;~~
~~(e) Violation of the freeboard limit which results in the actual overflow of a sewage sludge or leachate lagoon;~~
~~(f) Violation of the landfill methane gas concentration standards;~~
~~(g) Violation of any federal or state drinking water standard in an aquifer beyond the solid waste boundary of the landfill, or an alternative boundary specified by the Department;~~
~~(h) Violation of a permit-specific groundwater concentration limit, as defined in OAR 340-040-0030(3) at the permit-specific groundwater concentration compliance point, as defined in OAR 340-040-0030(2)(e);~~
~~(i) Failure to perform the groundwater monitoring action requirements specified in OAR 340-040-0030(5), when a significant increase (for pH, increase or decrease) in the value of a groundwater monitoring parameter is detected;~~

~~(j) Impairment of the beneficial use(s) of an aquifer beyond the solid waste boundary or an alternative boundary specified by the Department;~~
~~(k) Deviation from the Department approved facility plans which results in an safety hazard, public health hazard or damage to the environment;~~
~~(l) Failure to properly construct and maintain groundwater, surface water, gas or leachate collection, treatment, disposal and monitoring facilities in accordance with the facility permit, the facility environmental monitoring plan, or Department rules;~~
~~(m) Failure to collect, analyze and report ground-water, surface water or leachate quality data in accordance with the facility permit, the facility environmental monitoring plan, or Department rules;~~
~~(n) Violation of a compliance schedule contained in a solid waste disposal or closure permit;~~
~~(o) Failure to provide access to premises or records when required by law, rule, permit or order;~~
~~(p) Knowingly disposing, or accepting for disposal, materials prohibited from disposal at a solid waste disposal site by statute, rule, permit or order;~~
~~(q) Accepting, handling, treating or disposing of clean-up materials contaminated by hazardous substances by a landfill in violation of the facility permit and plans as approved by the Department or the provisions of OAR 340-093-0170(3);~~
~~(r) Accepting for disposal infectious waste not treated in accordance with laws and Department rules;~~
~~(s) Accepting for treatment, storage or disposal wastes defined as hazardous under ORS 466.005, et seq., or wastes from another state which are hazardous under the laws of that state without specific approval from the Department;~~
~~(t) Mixing for disposal or disposing of principal recyclable material that has been properly prepared and source separated for recycling;~~
~~(u) Receiving special waste in violation of or without a Department approved Special Waste Management Plan;~~
~~(v) Failure to follow a Department approved Construction Quality Assurance (CQA) plan when constructing a waste cell;~~
~~(w) Failure to comply with a Department approved Remedial Investigation Workplan developed in accordance with OAR 340-040-0040;~~
~~(x) Failure to establish and maintain financial assurance as required by statute, rule, permit or order;~~
~~(y) Open burning in violation of OAR 340-264-0060(3);~~
~~(z) Failure to abide by the terms of a permit automatically terminated due to a failure to submit a timely application for renewal as set forth in OAR 340-093-0115(1)(c);~~
~~(aa) Any violation related to the management, recovery and disposal of solid waste which causes major harm or poses a major risk of harm to public health or the environment.~~
~~(2) Class Two:~~
~~(a) Violation of a condition or term of a Letter of Authorization;~~
~~(b) Failure of a permitted landfill, solid waste incinerator or a municipal solid waste compost facility operator or a metropolitan service district to report amount of solid waste disposed in accordance with the laws and rules of the Department;~~
~~(c) Failure to accurately report weight and type of material recovered or processed from the solid waste stream in accordance with the laws and rules of the Department;~~

~~(d) Failure of a disposal site to obtain certification for recycling programs in accordance with the laws and rules of the Department prior to accepting solid waste for disposal;~~
~~(e) Acceptance of solid waste by a permitted disposal site from a person that does not have an approved solid waste reduction program in accordance with the laws and rules of the Department;~~
~~(f) Failure to comply with any solid waste permit requirement pertaining to permanent household hazardous waste collection facility operations;~~
~~(g) Failure to comply with landfill cover requirements, including but not limited to daily, intermediate, and final covers, and limitation of working face size;~~
~~(h) Unless otherwise classified failure to comply with any plan approved by the Department;~~
~~(i) Failure to submit a permit renewal application 180 days prior to the expiration date of the existing permit;~~
~~(j) Failure to establish and maintain a facility operating record for a municipal solid waste landfill;~~
~~(k) Any violation related to solid waste, solid waste reduction, or any violation of a solid waste permit not otherwise classified in these rules.~~
~~(3) Class Three:~~
~~(a) Failure to post required signs;~~
~~(b) Failure to control litter;~~
~~(c) Unless otherwise classified failure to notify the Department of any name or address change of the owner or operator of the facility within ten days of the change.~~
Stat. Auth.: ORS. 459.045, ~~&~~ ORS 459.398 & ORS 468.020
Stats. Implemented: ORS 459.055, ORS 459.205, ORS 459.305, ORS 459.376, ORS 459.395, ORS 459.415, ORS 459.420 - ORS 459.437, ORS 459.995 & ORS 468.090 - ORS 468.140

340-012-0066 ***(Amended, same #)***
Solid Waste Tire Management and Disposal Classification of Violations
(1) Class I:
(a) Violation of a requirement or condition of a commission or department order;
(b) Establishing, expanding, or operating a waste tire storage site without first obtaining a permit;
(c) Failure to maintain written records of waste tire generation, storage, collection, transportation, and disposal;
(d) Disposing of waste tires or tire-derived products at an unauthorized site;
(e) Violation of the compliance schedule or fire safety requirements of a waste tire storage site permit;
(f) Hauling waste tires, or advertising or representing oneself as being in the business of a waste tire carrier, without first obtaining a waste tire carrier permit;
(g) Failure to establish and maintain financial assurance;
(h) Failure to provide access to premises or records when required by statute, permit or order;
(i) Submitting false, inaccurate or incomplete information to the department; or
(j) Any otherwise unclassified violation related to the storage, transportation or management of waste tires or tire-derived products that causes major harm or poses a risk of major harm to human health or the environment.
(2) Class II:
(a) Failure to submit a timely permit renewal application;

(b) Hauling waste tires in a vehicle not identified in a waste tire carrier permit or failing to display required decals;
(c) Violation of a condition or term of a Letter Authorization;
(d) Hiring or otherwise using an unpermitted waste tire carrier to transport waste tires; or
(e) Any otherwise unclassified violation related to the storage, transportation or management of waste tires or tire-derived products.

(3) Class III:

(a) Failure to submit required annual reports in a timely manner;
(b) Failure to keep required records on use of vehicles;
(c) Failure to post required signs; or
(d) Failure to maintain written records of waste tire generation, storage, collection, transportation, and disposal.

~~Violations pertaining to the storage, transportation and management of waste tires or tire-derived products shall be classified as follows:~~

~~(1) Class One:~~

~~(a) Violation of a requirement or condition of a Commission or Department Order;~~
~~(b) Establishing, expanding, or operating a waste tire storage site without first obtaining a permit;~~
~~(c) Systematic failure to maintain written records of waste tire generation and disposal as required;~~
~~(d) Disposing of waste tires or tire-derived products at an unauthorized site;~~
~~(e) Violation of the compliance schedule or fire safety requirements of a waste tire storage site permit;~~
~~(f) Hauling waste tires or advertising or representing one's self as being in the business of a waste tire carrier without first obtaining a waste tire carrier permit as required by laws and rules of the Department;~~
~~(g) Hiring or otherwise using an unpermitted waste tire carrier to transport waste tires;~~
~~(h) Failure to establish and maintain financial assurance as required by statute, rule, permit or order;~~
~~(i) Failure to provide access to premises or records when required by law, rule, permit or order;~~
~~(j) Any violation related to the storage, transportation or management of waste tires or tire-derived products which causes major harm or poses a major risk of harm to public health or the environment.~~

~~(2) Class Two:~~

~~(a) Violation of a waste tire storage site or waste tire carrier permit other than a specified Class One or Class Three violation;~~
~~(b) Failure to submit a permit renewal application prior to the expiration date of the existing permit within the time required by statute, rule, or permit;~~
~~(c) Hauling waste tires in a vehicle not identified in a waste tire carrier permit or failing to display required decals as described in a permitee's waste tire carrier permit;~~
~~(d) Violation of a condition or term of a Letter Authorization;~~
~~(e) Any violation related to the storage, transportation or management of waste tires or tire-derived products which is not otherwise classified in these rules.~~

~~(3) Class Three:~~

~~(a) Failure to submit required annual reports in a timely manner;~~
~~(b) Failure to keep required records on use of vehicles;~~

~~(c) Failure to post required signs;~~
~~(d) Failure to submit a permit renewal application in a timely manner;~~
~~(e) Failure to submit permit fees in a timely manner;~~
~~(f) Failure to maintain written records of waste tire disposal and generation.~~
Stat. Auth.: ORS 459.785 & ORS 468.020
Stats. Implemented: ORS 459.705 - ORS 459.790, ORS 459.992 & ORS 468.090 - ORS 468.140

340-012-0067 ***(Amended, same #)***
Underground Storage Tank (UST) Classification of Violations
(1) Class I:
(a) Violation of a requirement or condition of a commission or department order;
(b) Failure to investigate or confirm a suspected release;
(c) Failure to establish or maintain the required financial responsibility mechanism;
(d) Failure to provide access to premises or records as required by statute, permit or order;
(e) Failure to obtain the appropriate general permit registration certificate before decommissioning, installing or operating an UST;
(f) Failure to install spill and overfill protection equipment that will prevent a release or failure to demonstrate to the department that the equipment is properly functioning;
(g) Failure to install, operate or maintain a method or combination of methods for release detection such that the method can detect a release from any portion of the UST system;
(h) Failure to protect from corrosion any part of an UST system that routinely contains a regulated substance;
(i) Failure to permanently decommission an UST system;
(j) Failure to obtain approval from the department before installing or operating vapor or groundwater monitoring wells as part of a release detection method;
(k) Installing, repairing, replacing or modifying an UST system in violation of any rule adopted by the department;
(l) Systematic failure to conduct testing or monitoring, or to keep records;
(m) Providing or offering tank services without the appropriate UST service provider license;
(n) Supervising tank services without the appropriate supervisor license;
(o) Using fraud or deceit to obtain a tank services provider or supervisor license;
(p) Demonstrating negligence or incompetence in performing tank services;
(q) Failure to assess the excavation zone of a decommissioned or abandoned UST when directed to do so by the department;
(r) Submitting false, inaccurate or incomplete information to the department; or
(s) Any otherwise unclassified violation related to underground storage tanks that causes a major harm or poses a risk of major harm to human health or the environment.
(2) Class II:
(a) Continuing to use a method or methods of release detection after period allowed by rule has expired;
(b) Failure to have a trained UST system operator for an UST facility after March 1, 2004;
(c) Failure to apply for a modified general permit registration certificate;
(d) Failure to have an operation certificate for each compartment of a multi-chambered or multi compartment UST when at least one compartment or chamber has an operation certificate.

(e) Installing, repairing, replacing or modifying an UST or UST equipment without providing the required notifications;
(f) Failure to decommission an UST in compliance with the statutes and rules adopted by the department, including, but not limited to, performance standards, procedures, notification, general permit registration and site assessment requirements;
(g) Providing tank services at an UST facility that does not have the appropriate general permit registration certificate;
(h) Failure by a distributor to obtain the identification number and operation certificate number before depositing a regulated substance into an UST;
(i) Failure by a distributor to maintain a record of all USTs into which it deposited a regulated substance;
(j) Allowing tank services to be performed by a person not licensed by the department;
(k) Failure to provide information as required by order, permit, rule or statute or as requested by the department;
(l) Failure to submit checklists or reports for UST installation, modification or suspected release confirmation activities;
(m) Failure to complete an integrity assessment before adding corrosion protection;
(n) Failure by an owner or permittee to pass the appropriate national examination before performing tank services;
(o) Failure to provide the identification number or operation certificate number to persons depositing a regulated substance into an UST;
(p) Any otherwise unclassified violation related to failure to inspect or test a corrosion protection system; or
(q) Any otherwise unclassified violation related to UST systems.
(3) Class III:
(a) Failure by a person who sells an UST to notify the new owner or permittee of the department's general permit registration requirements.
~~**Underground Storage Tank and Heating Oil Tank Classification of Violations**~~
~~Violations pertaining to underground storage tank (UST) systems and heating oil tanks are classified as follows:~~
~~(1) Class One:~~
~~(a) Violating a requirement or condition of a commission or department order;~~
~~(b) Failure to report a release or suspected release from an UST system or a heating oil tank;~~
~~(c) Failure to perform an investigation or confirmation of a suspected release;~~
~~(d) Failure to establish or maintain the required financial responsibility mechanism;~~
~~(e) Failure to initiate and complete the investigation or cleanup of a release from an UST system or a heating oil tank;~~
~~(f) Failure to submit reports from the investigation or cleanup of a release from an UST system or heating oil tank;~~
~~(g) Failure to provide or allow access to premises or records;~~
~~(h) Failure to apply for and be issued the appropriate general permit registration certificate before decommissioning, installing or operating an UST, not otherwise classified;~~
~~(i) Failure to install spill and overfill protection equipment that will prevent a release or to be able to demonstrate to the department that the equipment is properly functioning;~~

~~(j) Failure to install, operate or maintain a method or combination of methods for release detection for an UST system such that the method can detect a release from any portion of the UST system;~~
~~(k) Failure to install or use equipment that is properly designed and constructed to protect any portion of the UST or piping from corrosion;~~
~~(l) Failure to operate and maintain corrosion protection such that it continuously provides protection to the UST system;~~
~~(m) Failure to permanently decommission an UST system;~~
~~(n) Failure to obtain approval from the department before installing or operating vapor or groundwater monitoring wells as part of a release detection method;~~
~~(o) Installing, repairing, replacing or modifying an UST system in violation of any rule adopted by the department, not otherwise classified;~~
~~(p) Systematic failure to conduct testing, monitoring or to keep records;~~
~~(q) Failure to initiate and complete free product removal in accordance with OAR 340-122-0235;~~
~~(r) Providing installation, modification, repair, replacement, decommissioning or testing services on an UST system or providing soil matrix cleanup services at an UST facility without an UST service or soil matrix cleanup service provider license;~~
~~(s) Using fraud or deceit to obtain an UST service provider, soil matrix cleanup service provider, heating oil tank service provider or supervisor license or demonstrating negligence or incompetence in performing UST or other tank services;~~
~~(t) Failure to assess the excavation zone of a decommissioned or abandoned UST when directed to do so by the department; and~~
~~(u) Any other violations related to UST systems or heating oil tanks that cause or pose significant harm to public health or the environment.~~
~~(2) Class Two:~~
~~(a) Failure to conduct release detection monitoring and testing activities for USTs or piping, not otherwise classified;~~
~~(b) Failure to conduct corrosion protection monitoring and testing activities for USTs or piping, not otherwise classified;~~
~~(c) Failure to conform to performance standards and requirements and third party evaluation and approval for UST system release detection methods or equipment or corrosion protection equipment, not otherwise classified;~~
~~(d) Continuing to use a method or methods of release detection after period allowed by rule has expired;~~
~~(e) Failure to use or maintain spill or overfill prevention equipment, not otherwise classified;~~
~~(f) Failure to meet all requirements for a financial responsibility mechanism, not otherwise classified;~~
~~(g) Failure to have a trained UST system operator for an UST facility after March 1, 2004;~~
~~(h) Failure to apply for a modified general permit registration certificate;~~
~~(i) Failure to have an operation certificate for all compartments or chambers of a multichambered or multicompartment UST when at least one compartment or chamber has an operation certificate;~~
~~(j) Installing, repairing, replacing or modifying an UST or UST equipment or conducting a soil matrix cleanup without providing the required notifications;~~

~~(k) Failure to decommission an UST in compliance with the statutes and rules adopted by the department, including, but not limited to, performance standards, procedures, notification, general permit registration and site assessment requirements;~~
~~(l) Providing installation, modification, decommissioning or testing services on an UST system or providing soil matrix cleanup services at an UST facility that does not have the appropriate general permit registration certificate;~~
~~(m) Failure by a distributor to obtain the identification number for each UST and operation certificate number before depositing a regulated substance into an UST;~~
~~(n) Failure by a distributor to maintain a record of all USTs into which it deposited a regulated substance;~~
~~(o) Allowing the installation, modification, decommissioning or testing of an UST system or soil matrix cleanup at an UST facility by any person not licensed by the department;~~
~~(p) Failure to provide information as required by OAR 340-150-0135(6) or as requested by the department;~~
~~(q) Failure to submit checklists or reports for UST installation, modification or suspected release confirmation activities;~~
~~(r) Failure to comply with integrity assessment inspection schedules or requirements for internally lined USTs;~~
~~(s) Allowing the performance of heating oil tank services or supervision at a heating oil tank by any person not licensed by the department;~~
~~(t) Providing heating oil tank services at a heating oil tank without a heating oil tank service provider or supervisor license;~~
~~(u) Failure to submit a corrective action plan (CAP) in accordance with the schedule or format established by the department pursuant to OAR 340-122-0250;~~
~~(v) Failure by an owner or permittee to pass the appropriate national examination before performing installation, decommissioning or testing services on an UST system;~~
~~(w) Supervising the installation, modification, repair, replacement, decommissioning, testing or soil matrix cleanup of an UST system without a supervisor license;~~
~~(x) Failure by an owner or permittee to provide the identification number for each UST or operation certificate number to persons depositing a regulated substance into an UST; and~~
~~(y) Any other violation related to UST systems or heating oil tanks not otherwise classified.~~
~~(3) Class Three:~~
~~(a) Failure by a person who sells an UST to notify the new owner or permittee of the department's general permit registration requirements;~~
~~(b) Failure to maintain release detection records for USTs or piping if the failure does not constitute a significant operational compliance violation;~~
~~(c) Failure to maintain required manufacturer's information or third party evaluation documents for approved methods or equipment;~~
~~(d) Failure to maintain training records for an UST system operator; and~~
~~(e) Failure to keep records of UST system repair, modification or replacement work.~~
Stat. Auth.: ORS 466.720, ORS 466.746, ORS 466.882 ~~ORS 466.994~~ & ORS 468.020
Stats. Implemented: ORS 466.706 - ORS 466.835, ~~&~~ ORS 466.994 & ORS 468.090 - ORS 468.140

340-012-0068 ***(Amended, same #)***

Hazardous Waste Management and Disposal Classification of Violations

(1) Class I:

(a) Violation of a requirement or condition of a commission or department order;
(b) Failure to make a complete and accurate hazardous waste determination of a residue;
(c) Failure to meet general waste analysis requirements or to develop and follow a written waste analysis plan;
(d) Operation of a hazardous waste treatment, storage, or disposal (TSD) facility without first obtaining a permit or without first having interim status as an existing management facility;
(e) Accumulation of hazardous waste on-site for longer than the applicable on-site accumulation period;
(f) Accepting, transporting, or offering hazardous waste for transport without a complete and accurate uniform hazardous waste manifest;
(g) Failure to meet facility security requirements;
(h) Failure to meet ignitable, reactive, or incompatible hazardous waste management requirements;
(i) Illegal disposal, treatment, or storage of hazardous waste;
(j) Failure to meet land disposal restriction notification requirements;
(k) Failure to manage waste pesticide as required;
(l) Illegal disposal, treatment or dilution of a universal waste;
(m) Use or offer for use, any empty or decontaminated pesticide container for storage of food, fiber, or water intended for human or animal consumption;
(n) Mixing, solidifying, or otherwise diluting any hazardous waste to circumvent land disposal restrictions;
(o) Shipping of universal waste to a place other than an off-site collection site, destination facility, or foreign destination in violation of 40 CFR 273.18, 273.38, or 273.61;
(p) Failure to comply with hazardous waste tank integrity assessment or certification requirements;
(q) Failure of an owner or operator of a TSD facility to meet closure plan, post closure plan, or closure cost estimate requirements;
(r) Failure of an owner or operator of a TSD facility to retain an independent registered professional engineer to oversee closure activities and certify conformity with an approved closure plan;
(s) Failure of an owner or operator of a TSD facility or systematic failure of a generator of hazardous waste to conduct required inspections or to maintain required inspection records;
(t) Failure of an owner or operator of a TSD facility to establish and maintain financial assurance for closure or post closure care;
(u) Failure to prepare a facility contingency plan;
(v) Failure to follow an emergency procedure contained in a contingency plan or other emergency response plan;
(w) Storage of hazardous waste in a tank or container that is leaking or presenting a threat of release;
(x) Storage or accumulation of more than 100 containers of hazardous waste by a generator without placing the waste in a storage unit that meets the requirements of OAR 340-102-0034;
(y) Failure by a generator to mark a hazardous waste container with a required accumulation start date or failure to document the length of time hazardous waste has accumulated on-site;

(z) Failure to comply with the export requirements for hazardous wastes;
(aa) Violation of any TSD facility permit condition related to the handling, management, treatment, storage or disposal of hazardous waste;
(bb) Failure to comply with hazardous waste generator annual reporting requirements, Treatment, Storage, Disposal and Recycling facility annual requirements, or annual registration information;
(cc) Failure to properly install or maintain groundwater monitoring wells such that detection of hazardous waste or hazardous constituents that migrate from the waste management area cannot be immediately detected;
(dd) Failure to develop and follow an approved groundwater sampling and analysis plan;
(ee) Failure to obtain an EPA Identification Number;
(ff) Failure to provide access to premises or records as required by statute, permit or order;
(gg) Failure to decommission a groundwater monitoring well as required;
(hh) Failure to keep a container of hazardous waste closed except when necessary to add or remove waste;
(ii) Failure to place hazardous waste in a container, tank, or containment building or on a drip pad that complies with the requirements of 40 CFR Parts 264 and 265;
(jj) Recording or submitting false, inaccurate or incomplete information to the department;
(kk) Failure to immediately clean up a spill of hazardous waste;
(ll) Failure to manage universal waste in a manner that prevents releases into the environment;
(mm) Failure of a large-quantity hazardous waste generator or TSD facility to properly control volatile organic hazardous waste emissions; or
(nn) Any otherwise unclassified violation related to the generation, management, treatment, storage, or disposal of hazardous waste that causes major harm or poses a risk of major harm to human health or the environment.
(2) Class II:
(a) Failure to submit a manifest discrepancy report or exception report when required;
(b) Failure to update facility Contingency Plan;
(c) Failure to fully comply with Personnel Training requirements;
(d) Failure to maintain aisle space adequate to allow unobstructed movement of personnel, fire protection equipment, and spill control, and decontamination equipment;
(e) Failure to follow hazardous waste, universal waste, or pesticide waste container or tank labeling requirements; or
(f) Any otherwise unclassified violation related to the generation, management, or disposal of hazardous waste.
~~Violations pertaining to the management and disposal of hazardous waste, including universal wastes, shall be classified as follows:~~
~~(1) Class One:~~
~~(a) Violation of a requirement or condition of a Department or Commission order;~~
~~(b) Failure to make a complete and accurate hazardous waste determination of a residue as required by OAR 340-102-0011;~~
~~(c) Failure to have a waste analysis plan as required by 40 CFR 265.13;~~
~~(d) Operation of a hazardous waste treatment, storage or disposal facility (TSD) without first obtaining a permit or without having interim status pursuant to OAR 340-105-0010(2)(a);~~

~~(e) Accumulation of hazardous waste on site for longer than twice the applicable generator allowable on-site accumulation period;~~
~~(f) Transporting or offering for transport hazardous waste for off-site shipment without first preparing a manifest;~~
~~(g) Accepting for transport hazardous waste which is not accompanied by a manifest;~~
~~(h) Systematic failure of a hazardous waste generator to comply with the manifest system requirements;~~
~~(i) Failure to submit a manifest discrepancy report or exception report;~~
~~(j) Failure to prevent the unknown entry or prevent the possibility of the unauthorized entry of person or livestock into the waste management area of a TSD facility;~~
~~(k) Failure to manage ignitable, reactive, or incompatible hazardous wastes as required under 40 CFR Part 264 and 265.17(b)(1), (2), (3), (4) and (5);~~
~~(l) Illegal disposal of hazardous waste;~~
~~(m) Disposal of hazardous waste in violation of the land disposal restrictions;~~
~~(n) Failure to contain waste pesticide or date containers of waste pesticide as required by OAR 340-109-0010(2);~~
~~(o) Treating or diluting universal wastes in violation of 40 CFR 273.11, 273.31 or OAR 340-113-0030(5);~~
~~(p) Use of empty non-rigid or decontaminated rigid pesticide containers for storage of food, fiber or water intended for human or animal consumption;~~
~~(q) Mixing, solidifying, or otherwise diluting hazardous waste to circumvent land disposal restrictions;~~
~~(r) Incorrectly certifying a hazardous waste for disposal/treatment in violation of the land disposal restrictions;~~
~~(s) Failure to submit a Land Disposal notification, demonstration or certification with a shipment of hazardous waste;~~
~~(t) Shipping universal waste to a site other than an off-site collection site, destination facility or foreign destination in violation of 40 CFR 273.18 or 273.38;~~
~~(u) Failure to comply with the hazardous waste tank integrity assessments and certification requirements;~~
~~(v) Failure of an owner/operator of a TSD facility to have a closure and/or post closure plan and/or cost estimates;~~
~~(w) Failure of an owner/operator of a TSD facility to retain an independent registered professional engineer to oversee closure activities and certify conformity with an approved closure plan;~~
~~(x) Failure of an owner/operator of a TSD facility to establish or maintain financial assurance for closure and/or post closure care;~~
~~(y) Systematic failure of an owner/operator of a TSD facility or a generator of hazardous waste to conduct inspections;~~
~~(z) Failure of an owner/operator of a TSD facility or generator to promptly correct any hazardous condition discovered during an inspection;~~
~~(aa) Failing to prepare a Contingency Plan;~~
~~(bb) Failure to follow an emergency procedure contained in a Contingency Plan or other emergency response plan when failure could result in serious harm;~~
~~(cc) Storage of hazardous waste in a container which is leaking or presenting a threat of release;~~

~~(dd) Storing more than 100 containers of hazardous waste without complying with the secondary containment requirements at 40 CFR 264.175;~~
~~(ee) Systematic failure to follow hazardous waste container labeling requirements or lack of knowledge of container contents;~~
~~(ff) Failure to label a hazardous waste container where such failure could cause an inappropriate response to a spill or leak and substantial harm to public health or the environment;~~
~~(gg) Failure to date a hazardous waste container with a required accumulation date or failure to document length of time hazardous waste was accumulated;~~
~~(hh) Failure to comply with the export requirements for hazardous wastes;~~
~~(ii) Violation of any TSD facility permit, provided that the violation is equivalent to any Class I violation set forth in these rules;~~
~~(jj) Systematic failure to comply with hazardous waste generator annual reporting requirements, Treatment, Storage, Disposal and Recycling facility annual reporting requirements and annual registration information;~~
~~(kk) Failure to properly install groundwater monitoring wells such that detection of hazardous waste or hazardous constituents that migrate from the waste management area cannot be immediately be detected;~~
~~(ll) Failure to install any groundwater monitoring wells;~~
~~(mm) Failure to develop and follow a groundwater sampling and analysis plan using proper techniques and procedures;~~
~~(nn) Generating and treating, storing, disposing of, transporting, and/or offering for transportation, hazardous waste without first obtaining an EPA Identification Number;~~
~~(oo) Systematic failure of a large quantity hazardous waste generator or TSD facility to properly control volatile organic hazardous waste emissions;~~
~~(pp) Failure to provide access to premises or records when required by law, rule, permit or order;~~
~~(qq) Any violation related to the generation, management and disposal of hazardous waste which causes major harm or poses a major risk of harm to public health or the environment;~~
~~(rr) In addition to the above, the following Class One violations apply to entities regulated under OAR 340-124:~~
~~(A) Placing hazardous waste generated at a dry cleaning facility at any location other than an appropriately labeled hazardous waste storage container.~~
~~(B) Discharging dry cleaning wastewater to a sanitary sewer, storm sewer, septic system, boiler or into the waters of the state.~~
~~(C) Failure to have a secondary containment system under and around the dry cleaning machine as required by OAR 340-124-0040(3)(a) and under and around stored solvent as required by OAR 340-124-0040(3)(c).~~
~~(D) Failure by persons generating hazardous waste at a dry cleaning facility in amounts of 220 pounds a month or less or who never store onsite more than 2,200 pounds of hazardous waste to dispose of hazardous waste within one year of the date the waste was placed in the hazardous waste container.~~
~~(E) Failure by persons generating hazardous waste at a dry cleaning facility in amounts of 220 pounds a month or less or who never store onsite more than 2,200 pounds of hazardous waste to label a hazardous waste storage container with the date the waste was first placed in the container.~~
~~(F) Failure to store hazardous waste in closed containers.~~

~~(G) Failure to treat hazardous waste dry cleaning wastewater in equipment meeting the criteria in OAR 340-124-0040(2)(c) or (2)(d).~~
~~(H) Failure of a dry cleaning business owner or dry cleaning operator to submit an annual report to the Department.~~
~~(I) Failure of a dry store operator to submit an annual report to the Department.~~
~~(J) Failure to report a release of more than one pound of dry cleaning solvent in a 24 hour period released outside of a containment system.~~
~~(K) Failure to repair the cause of a release of dry cleaning solvent within a containment system.~~
~~(2) Class two:~~
~~(a) Failure to keep a copy of the documentation used to determine whether a residue is a hazardous waste;~~
~~(b) Failure to label a tank or container of hazardous wastes with the words "Hazardous Waste," "Pesticide Waste," "Universal Waste" or with other words as required that identify the contents;~~
~~(c) Failure to comply with hazardous waste generator annual reporting requirements, Treatment, Storage, Disposal and Recycling facility annual reporting requirements and annual registration information, unless otherwise classified;~~
~~(d) Failing to keep a container of hazardous waste closed except when necessary to add or remove waste;~~
~~(e) Failing to inspect areas where containers of hazardous waste are stored, at least weekly;~~
~~(f) Failure of a hazardous waste generator to maintain aisle space adequate to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination;~~
~~(g) Accumulating hazardous waste on-site, without fully complying with the Personnel Training requirements;~~
~~(h) Failure to manage universal waste in a manner that prevents releases into the environment;~~
~~(i) Failure to comply with the empty pesticide container management requirements unless otherwise classified;~~
~~(j) Any violation pertaining to the generation, management and disposal of hazardous waste which is not otherwise classified in these rules is a Class Two violation.~~
~~(k) In addition to the above, the following Class Two violations apply to entities as regulated under OAR 340-124.~~
~~(A) Failure to remove dry cleaning solvent remaining in the dry cleaning machine and solvent containing residue in accordance with OAR 340-124-0040(1)(h) and 340-124-0055.~~
~~(B) Failure to disconnect utilities from a dry cleaning machine at a dry store in accord with OAR 340-124-0055.~~
~~(C) Failure to comply with the containment requirements in OAR 340-124-0040(3)(b), (3)(d), (3)(e), (3)(f) and (3)(g).~~
~~(D) Failure to prominently post the Oregon Emergency Response System telephone number so the number is immediately available to all employees of the dry cleaning facility.~~
~~(E) Failure of a person delivering perchloroethylene solvent to a dry cleaning facility to use closed direct-coupled delivery according to OAR 340-124-0040(6) when delivering perchloroethylene dry cleaning solvent.~~
~~(F) Failure of a dry cleaning operator at a dry cleaning facility to have closed direct-coupled delivery for perchloroethylene according to OAR 340-124-0040(6).~~
~~(G) Failure to label hazardous waste storage container with the words "hazardous waste".~~

~~(H) Failure to immediately cleanup a release of dry cleaning solvent within a containment system.~~
~~(I) Any violation pertaining to the generation, management and disposal of hazardous waste from a dry cleaning facility which is not otherwise classified in these rules is a Class Two violation.~~
~~(3) Class three:~~
~~(a) Accumulation of hazardous waste on site by a large-quantity generator for less than ten days over the allowable on-site accumulation period;~~
~~(b) Accumulation of hazardous waste on site by a small-quantity generator for less than twenty days over the allowable on-site accumulation period;~~
~~(c) Failure of a large-quantity generator of hazardous waste to retain signed copies of manifests for at least three years when less than 5% of the reviewed manifests are missing and the facility is able to obtain copies during the inspection;~~
~~(d) Failure of a small-quantity generator of hazardous waste to retain signed copies of manifests for at least three years when only 3 of the reviewed manifests are missing and the facility is able to obtain copies and submit them to the Department within 10 days of the inspection;~~
~~(e) Failure to label only one container or tank which is less than 60 gallons in volume and in which hazardous waste was accumulated on site, with the required words "Hazardous Waste," "Pesticide Waste," "Universal Waste" or with other words as required that identify the contents;~~
~~(f) Failure of a large-quantity generator to retain copies of land disposal restriction notifications, demonstrations, or certifications when less than 5% of the reviewed land disposal restriction notices are missing and the facility is able to obtain copies during the inspection;~~
~~(g) Failure of a small-quantity generator to retain copies of land disposal restriction notifications, demonstrations, or certifications when 3 or fewer of the reviewed land disposal restriction notices missing and the facility is able to obtain copies and submit them to the Department within 10 days of the inspection;~~
~~(h) Failure to keep a container of hazardous waste located in a "satellite accumulation area" closed except when necessary to add or remove waste, when only one container is open;~~
~~(i) Failure to properly label a container of pesticide-containing material for use or reuse as required by OAR 340-109-0010(1)~~
~~(j) In addition to the above, the following Class Three violations apply to entities as regulated under OAR 340-124:~~
~~(A) Failure to notify the Department of change or closure at a dry cleaning business or dry store according to 340-124-0050.~~
[Publications: Publications referenced in this rule are available from the agency.]
Stat. Auth.: ORS ~~459.995~~466.020, ORS 466.070 - ORS 466.080, ORS 466.625 & ORS 468.020
Stats. Implemented: ORS 466.070 – ORS 466.225, ORS 466.635 – ORS 466.~~680~~645, ~~466.880-466.992~~ORS 466.990, ORS 466.994, & 468.090 - 468.140

~~340-012-0071~~ *(Renumbered to OAR 340-012-0100)*
~~PCB Classification of Violations~~
~~Violations pertaining to the management and disposal of polychlorinated biphenyls (PCB) shall be classified as follows:~~
~~(1) Class One:~~
~~(a) Violation of a requirement or condition of a Commission or Department Order;~~
~~(b) Treating or disposing of PCBs anywhere other than at a permitted PCB disposal facility;~~

~~(c) Establishing, constructing or operating a PCB disposal facility without first obtaining a permit;~~
~~(d) Failure to provide access to premises or records when required to by law, rule, permit or order;~~
~~(e) Any violation related to the management and disposal of PCBs which causes a major harm or poses a major risk of harm to public health or the environment.~~
~~(2) Class Two:~~
~~(a) Violating a condition of a PCB disposal facility permit;~~
~~(b) Any violation related to the management and disposal of PCBs which is not otherwise classified in these rules.~~
~~Stat. Auth.: ORS 459.995, ORS 466.625, ORS 467.030, ORS 468.020 & ORS 468.996~~
~~Stats. Implemented: ORS 466.255, ORS 466.265 - ORS 466.270, ORS 466.530 & ORS 466.880 - ORS 466.992~~

~~340-012-0072~~ *(Renumbered to 340-012-0105)*
~~Used Oil Management Classification of Violations~~
~~Violations pertaining to the management of used oil shall be classified as follows:~~
~~(1) Class One:~~
~~(a) Violation of a requirement or condition of a Department or Commission Order;~~
~~(b) Using used oil as a dust suppressant or pesticide, or otherwise spreading used oil directly in the environment;~~
~~(c) Collecting, processing, storing, disposing of, and/or transporting, used oil without first obtaining an EPA Identification number;~~
~~(d) Burning used oil with less than 5,000 Btu/pound for the purpose of "energy recovery" in violation of OAR 340-111-0110(3)(b);~~
~~(e) Offering for sale used oil as specification used oil fuel when the used oil does not meet used oil fuel specifications;~~
~~(f) Offering to sell off-specification used oil fuel to facility not meeting the definition of an industrial boiler or furnace, or failing to obtain proper certification under 40 CFR 179.75;~~
~~(g) Burning off-specification used oil in a device not specifically exempted under 40 CFR 279.60(a) that does not meet the definition of an industrial boiler or furnace~~
~~(h) Storing or managing used oil in a surface impoundment;~~
~~(i) Storing used oil in containers which are leaking or present a threat of release;~~
~~(j) Failure by a used oil transporter or processor to determine whether the halogen content of used oil exceeds that permissible for used oil;~~
~~(k) Failure to develop and follow a written waste analysis plan when required by law;~~
~~(l) Failure by a used oil processor or transporter to manage used oil residues as required under 40 CFR 279(10)(e);~~
~~(m) Any violation related to the management of used oil which causes major harm or poses a major risk of harm to public health or the environment;~~
~~(n) Failure to provide access to premises or records when required to do so by law, rule, permit or order.~~
~~(2) Class Two:~~
~~(a) Failure to close or cover used oil tanks or containers as required by OAR 340-111-0032(2);~~
~~(b) Failing to submit annual used oil handling reports;~~

~~(c) Failure by a used-oil transfer facility, processors, or off-specification used-oil burners to store used oil within secondary containment;~~
~~(d) Failure to label each container or tank in which used oil was accumulated on site with the words "used oil";~~
~~(e) Failure of a used-oil processor to keep a written operating record at the facility in violation of 40 CFR 279.57;~~
~~(f) Failure by a used-oil processor to prepare and maintain a preparedness and prevention plan;~~
~~(g) Failure by a used-oil processor to close out used-oil tanks or containers when required by 40 CFR 279.54(h);~~
~~(h) Any violation related to the management of used oil which is not otherwise classified in these rules is a Class two violation.~~
~~(3) Class three: Failure to label one container or tank in which used oil was accumulated on site, when there are five or more present, with the required words "used oil."~~
~~[Publications: The publication(s) referred to or incorporated by reference in this rule are available from the agency.]~~
~~Stat. Auth.: ORS 459.995, ORS 468.020, ORS 468.869, ORS 468.870 & ORS 468.996~~
~~Stats. Implemented: ORS 459A.580 - ORS 459A.585, ORS 459A.590 & ORS 468.090 - ORS 468.140~~

340-012-0073 ***(Amended, same #)***
Environmental Cleanup Classification of Violations
~~Violations of ORS 465.200 through 465.420 and related rules or orders pertaining to environmental cleanup shall be classified as follows:~~
(1) Class ~~I~~One:
(a) Violation of a requirement or condition of a ~~Commission~~ commission or ~~Department~~ department order; consent order, agreement or judicial consent decree;
(b) Failure to provide access to premises or records ~~when~~ as required by statute, order, consent order, agreement or judicial consent decree; ~~to do so by law, rule, permit or order;~~
(c)Failure to provide information under ORS 465.250;
(d) Submitting false, inaccurate or incomplete information to the department; or
(e~~e~~)-Any otherwise unclassified violation related to environmental investigation or cleanup ~~which~~ that causes a major harm or poses a ~~major~~ risk of major harm to public health or the environment.
(2) Class ~~Two~~II:
~~(a) Failure to provide information under ORS 465.250; or~~
(~~b~~a) Any otherwise unclassified violation related to cleanup of hazardous substances. ~~environmental investigation or cleanup which is not otherwise classified in these rules.~~
Stat. Auth.: ~~ORS 465.280~~, ORS 465.400 - ORS 465.410, ~~ORS 465.435~~ & ORS 468.020
Stats. Implemented~~: ORS 465.210~~ ORS 465.250, ORS 465.900, -& ORS 468.090 - ORS 468.140

340-012-0074 *(Adopted)*
Underground Storage Tank Cleanup Classification of Violations
(1) Class I:
(a) Violation of a requirement or condition of a commission or department order;
(b) Failure to report a confirmed release from an underground storage tank;

(c) Failure to initiate or complete the investigation or cleanup, or to perform required monitoring, of a release from an underground storage tank;
(d) Failure to conduct free product removal;
(e) Failure to properly manage petroleum contaminated soil;
(f) Failure to mitigate fire, explosion or vapor hazards;
(g) Failure to provide access to premises or records as required by statute, permit or order;
(h) Using fraud or deceit to obtain a soil matrix cleanup services provider or supervisor license;
(i) Demonstrating negligence or incompetence in performing soil matrix cleanup services;
(j) Providing soil matrix cleanup services without obtaining the appropriate service provider license;
(k) Supervising soil matrix cleanup services without first obtaining the appropriate supervisor license;
(l) Submitting false, inaccurate or incomplete information to the department; or
(m) Any otherwise unclassified violation related to a release from an underground storage tank that causes a major harm or poses a risk of major harm to human health or the environment.
(2) Class II:
(a) Failure to report a suspected release from an underground storage tank;
(b) Failure to submit reports or other documentation from the investigation or cleanup of a release from an underground storage tank;
(c) Failure to submit a corrective action plan or submitting an incomplete corrective action plan; or
(d) Any otherwise unclassified violation related to a release from an underground storage tank.
Stat. Auth.: ORS 466.746, ORS 466.994 & ORS 468.020
Stats. Implemented: ORS 466.706 - ORS 466.835 & ORS 466.994

340-012-0079 ***(Adopted)***
Heating Oil Tank Classification of Violations
(1) Class I:
(a) Violation of a requirement or condition of a commission or department order;
(b) Failure to report a release from a heating oil tank when the failure is discovered by the department;
(c) Failure to initiate and complete the investigation or cleanup of a release from a heating oil tank;
(d) Failure to submit reports from the investigation or cleanup of a release from a heating oil tank;
(e) Failure to provide access to premises or records as required by statute, permit or order;
(f) Failure to initiate and complete free product removal;
(g) Failure by a service provider to certify that heating oil tank services were conducted in compliance with all applicable regulations;
(h) Failure of a responsible party or service provider to conduct corrective action after the department rejects a certified report;
(i) Using fraud or deceit to obtain a heating oil tank services provider or supervisor license or demonstrating negligence or incompetence in performing heating oil tank services;
(j) Providing or offering to provide heating oil tank services without first obtaining the appropriate service provider license;

(k) Supervising heating oil tank services without first obtaining the appropriate supervisor's license;
(l) Submitting false, inaccurate or incomplete information to the department; or
(m) Any otherwise unclassified violation related to a heating oil tank or performing heating oil tank services that causes a major harm or poses a risk of major harm to human health or the environment.

(2) Class II:

(a) Failure to submit a corrective action plan (CAP);
(b) Failing to properly decommission a heating oil tank;
(c) Failure of a heating oil tank service provider to hold and continuously maintain errors and omissions or professional liability insurance;
(d) Performing heating oil tank services in a manner that does not comply with all applicable statutes, rules, or permits;
(e) Failure of a heating oil tank service provider to have a licensed supervisor on site when required by law;
(f) Failure to report a release from a heating oil tank when the failure is discovered by the responsible person and reported to the department; or
(g) Any otherwise unclassified violation related to heating oil tank services.
Stat. Auth.: ORS 466.746, ORS 466.858 - ORS 466.882 & ORS 468.020
Stats. Implemented: ORS 466.706, ORS 466.858 - ORS 466.882, ORS 466.994 & ORS 468.090 - ORS 468.140

340-012-0081 ***(Amended, same #)***
Oil and Hazardous Material Spill and Release Classification of Violations

(1) Class I:

(a) Violation of a requirement or condition of a commission or department order;
(b) Failure to provide access to premises or records as required by statute, permit, or order;
(c) Failure by any person having ownership or control over oil or hazardous materials to immediately clean up spills or releases or threatened spills or releases;
(d) Failure to immediately notify the Oregon Emergency Response System (OERS) of the type, quantity and location of a spill of oil or hazardous material, and corrective and cleanup actions taken and proposed to be taken if the amount of oil or hazardous material released exceeds the reportable quantity, or will exceed the reportable quantity within 24 hours;
(e) Failure to use every reasonable method to stop any spill or release of oil or hazardous materials;
(f) Failure to activate alarms, warn people in the immediate area, contain the oil or hazardous material, or notify appropriate local emergency personnel;
(g) Failure to immediately implement a required spill plan;
(h) Use of chemicals to disperse, coagulate or otherwise treat a spill or release of oil or hazardous material without department approval;
(i) Intentional dilution of wastes during a spill response;
(j) Submitting false, inaccurate or incomplete information to the department;
(k) Failure to take immediate preventive, repair, corrective or containment action in response to a threatened spill or release;

(l) Disposal of spilled oils and oil contaminated materials resulting from control, treatment and cleanup in a manner not approved by the department;
(m) Failure of a person owning or having control of oil or hazardous material spilled to call 911 or local fire or police in the event of a medical emergency or public safety hazard; or
(n) Any otherwise unclassified violation related to the spill or release of oil or hazardous materials that causes a major harm or a risk of major harm to human health or the environment.

(2) Class II:

(a) Failure to submit a complete written report to the department of a spill of oil or hazardous material;
(b) Failure to use the required sampling procedures and analytical testing protocols for oil and hazardous materials spills or releases;
(c) Failure to coordinate with the department during the emergency response to a spill after being notified of the department's jurisdiction;
(d) Failure to immediately report spills or releases within containment areas when reportable quantities are exceeded and exemptions are not met under OAR 340-142-0040;
(e) Failure to immediately manage any spill or release of oil or hazardous materials consistent with the National Interagency Incident Management System (NIIMS);
(f) Failure to make an initial assessment of the spill; or
(g) Any otherwise unclassified violation related to the spill or release of oil or hazardous materials.

(3) Class III:

(a) Failure to provide the maintenance and inspection records of a storage and transfer facility to the department upon request; or
(b) Failure of a vessel owner or operator to make maintenance and inspection records, and oil transfer procedures available to the department upon request.

~~Violations pertaining to spills or releases of oil or hazardous materials will be classified as follows:~~

~~(1) Class One:~~

~~(a) Violation of a requirement or condition of a Commission or Department Order;~~
~~(b) Failure to provide access to premises or records when required by law, rule, permit or order;~~
~~(c) Failure by any person having ownership or control over oil or hazardous materials to immediately clean up spills or releases or threatened spills or releases;~~
~~(d) Failure to immediately notify the Oregon Emergency Response System (OERS) of the type, quantity and location of a spill of oil or hazardous material, and corrective and cleanup actions taken and proposed to be taken if the amount of oil or hazardous material released exceeds the reportable quantity, or will exceed the reportable quantity within 24 hours;~~
~~(e) Failure to immediately stop any spill that has entered or may enter waters of the state;~~
~~(f) Any spill or release of oil or hazardous materials which enters waters of the state;~~
~~(g) Failure to identify the existence, source, nature and extent of a hazardous materials spill or release, or threatened spill or release;~~
~~(h) Failure to activate alarms, warn people in the immediate area, contain the oil or hazardous material or notify appropriate local emergency personnel;~~
~~(i) Failure to immediately implement a required plan;~~
~~(j) Failure to immediately correct the cause of the spill or release;~~

~~(k) Use of chemicals to disperse, coagulate or otherwise treat a spill or release of oil or hazardous material spills without prior Department approval;~~
~~(l) Failure to obtain Department approval before conducting any major aspect of the spill response contrary to a Department approved plan for the site or spiller;~~
~~(m) Intentional dilution of wastes during a spill response;~~
~~(n) Knowingly submitting false information to the Department;~~
~~(o) Failure to take immediate preventative, repair, corrective or containment action in the event of a threatened spill or release;~~
~~(p) Improper characterization of drug lab waste during disposal or recycling; or~~
~~(q) Disposal of spilled oils and oil contaminated materials resulting from control, treatment and cleanup in a manner not approved by the Department.~~
~~(2) Class Two:~~
~~(a) Failure to submit a complete and detailed written report to the Department of a spill of oil or hazardous material for which the person is responsible describing all aspects of the spill and steps taken to prevent a recurrence if required by the Department to make a report;~~
~~(b) Failure to use the required sampling procedures and analytical testing protocols for oil and hazardous materials spills or releases;~~
~~(c) Failure of a responsible party to coordinate with the Department during the emergency response to a spill after being notified of the Department's jurisdiction;~~
~~(d) Failure to immediately report spills or releases within containment areas when reportable quantities are exceeded and exemptions are not met under OAR 340-142-0040; or~~
~~(e) Any violation related to the spill or release of oil or hazardous materials which is not otherwise classified in these rules is a Class Two violation.~~
~~(3) Class Three:~~
~~(a) Failure to provide maintenance and inspections records of the storage and transfer facilities to the Department upon request; or~~
~~(b) Failure of vessel owners or operators to make maintenance and inspection records, and oil transfer procedures available to the Department upon request.~~
Stat. Auth.: ORS 466.625, ~~&~~ORS 468.020 <u>& ORS 468B.350</u>
Stats. Implemented: ORS 466.635 - ORS 466.680, ORS 466.~~992~~<u>990</u>, ~~&~~ORS 468.090 - ORS 468.140 <u>& ORS 468b.300 – ORS 468B.350</u>

340-012-0082 ***(Amended, same #)***
Contingency Planning Classification of Violations
<u>**(1) Class I:**</u>
<u>(a) Violation of a requirement or condition of a commission or department order;</u>
<u>(b) Failure to immediately implement, after discovery of a spill, the required oil spill prevention and emergency response contingency plan;</u>
<u>(c) Failure to immediately implement, after discovery of a spill, the site's spill prevention containment and countermeasures (SPCC) plan, modified SPCC plan, or other applicable contingency plan;</u>
<u>(d) Operation of an onshore or offshore facility without an approved or conditionally approved oil spill prevention and emergency response contingency plan;</u>
<u>(e) Entry into the waters of the state by a covered vessel without an approved or conditionally approved oil spill prevention and emergency response contingency plan or without having</u>

purchased coverage under an approved umbrella oil spill prevention and emergency response contingency plan;
(f) Submitting false, inaccurate or incomplete information to the department;
(g) Failure to establish and maintain financial assurance;
(h) Failure to develop spill prevention strategies as required;
(i) Failure to maintain equipment, personnel and training at levels described in an approved or conditionally approved oil spill prevention and emergency response contingency plan;
(j) Failure to provide access to premises or records when required by statute, permit or order;
(k) Failure to obtain department approval of the management or disposal of spilled oil or hazardous materials, or materials contaminated with oil or hazardous material, that are generated during spill response; or
(l) Any otherwise unclassified violation related to contingency planning that causes a major harm or poses a risk of major harm to human health or the environment.
(2) Class II:
(a) Failure to pay the annual fee for an offshore and onshore facility;
(b) Failure by a regulated vessel or barge to pay the per trip fee within 30 days of conclusion of a trip;
(c) Failure of an onshore or offshore facility or covered vessel to submit an oil spill prevention and emergency response contingency plan to the department at least 90 calendar days before beginning operations in Oregon;
(d) Failure to have a simplified field document summarizing key notification and action elements of a required vessel or facility contingency plan available on-site;
(e) Failure of a plan holder to submit and implement required changes to a required vessel or facility contingency plan following conditional approval;
(f) Failure of a covered vessel or facility contingency plan holder to submit the required vessel or facility contingency plan for re-approval at least 90 days before the expiration date of the required vessel or facility contingency plan; or
(g) Any otherwise unclassified violation related to required contingency plans.
(3) Class III:
(a) Failure to provide maintenance and inspections records of a storage and transfer facility to the department upon request;
(b) Failure of a vessel owner or operator to make maintenance and inspection records and oil transfer procedures available to the department upon request;
(c) Failure to have at least one copy of the required vessel or facility contingency plan in a central location accessible at any time by the incident commander or spill response manager;
(d) Failure to have the covered vessel field document available to all appropriate personnel in a conspicuous and accessible location;
(e) Failure to notify the department within 24 hours of any significant changes that could affect implementation of a required vessel or facility contingency plan; or
(f) Failure to distribute amended page(s) of the plan changes to the department within 30 calendar days of the amendment.
~~Violations pertaining to contingency planning shall be classified as follows:~~
~~(1) Class One:~~
~~(a) Violation of a requirement or condition of a Commission or Department Order;~~

~~(b) Failure to immediately implement the required oil spill prevention and emergency response contingency plan;~~
~~(c) Failure to immediately implement the site's applicable contingency plan;~~
~~(d) Operation of an onshore or offshore facility without an approved or conditionally approved oil spill prevention and emergency response contingency plan;~~
~~(e) Entry into the waters of the state by a covered vessel without an approved or conditionally approved oil spill prevention and emergency response contingency plan or purchased coverage under an umbrella oil spill prevention and emergency response contingency plan;~~
~~(f) Entry into the waters of the state by any covered vessel after the Department has denied such entry;~~
~~(g) Failure to maintain equipment, personnel and training at levels described in an approved or conditionally approved oil spill prevention and emergency response contingency plan;~~
~~(h) Knowingly submitting false information to the Department;~~
~~(i) Failure to establish and maintain financial assurance as required by statute, rule or order; or~~
~~(j) Failure by the owner or operator of an oil terminal facility, or covered vessel, to take all appropriate measures to prevent spills or overfilling during transfer of petroleum or hazardous material products.~~
~~(2) Class Two:~~
~~(a) Failure to pay the annual fee for all offshore and onshore facilities required to develop oil spill prevention and emergency response plans;~~
~~(b) Failure to pay the per trip fee for all regulated vessels or barges within thirty (30) days of conclusion of each trip;~~
~~(c) Failure by any onshore or offshore facility or covered vessel to submit an oil spill prevention and emergency response contingency plan to the Department at least 90 calendar days before beginning operations in Oregon;~~
~~(d) Failure, in the event of a spill, to have prepared and have available on-site a simplified field document summarizing key notification and action elements of a required vessel or facility contingency plan;~~
~~(e) Failure by a plan holder to submit and implement required changes to a required vessel or facility contingency plan that has received conditional approval status from the Department within thirty (30) calendar days of conditional approval;~~
~~(f) Failure of a covered vessel or facility contingency plan holder to submit the required vessel or facility contingency plan for re-approval at least ninety (90) days before the expiration date of the required vessel or facility contingency plan;~~
~~(g) Failure to obtain Department approval of the management or disposal of spilled oil or hazardous materials, or materials contaminated with oil or hazardous material, that are generated during spill response; or~~
~~(h) Any violation related to required contingency plans that is not otherwise classified in these rules is a Class Two violation.~~
~~(3) Class Three:~~
~~(a) Failure to provide maintenance and inspections records of the storage and transfer facilities to the Department upon request;~~
~~(b) Failure of a vessel owner or operator to make maintenance and inspection records and oil transfer procedures available to the Department upon request;~~

~~(c) Failure to have at least one copy of the required vessel or facility contingency plan in a central location accessible at any time by the incident commander or spill response manager;~~
~~(d) Failure to have the covered vessel field document available to all appropriate personnel in a conspicuous and accessible location;~~
~~(e) Failure to notify the Department within 24 hours of any significant changes that could affect implementation of a required vessel or facility contingency plan; or~~
~~(f) Failure to distribute amended page(s) of the plan changes to the Department within thirty (30) calendar days of the amendment.~~
Stat. Auth.: ORS 468.020 & ORS 468B.350
Stats. Implemented: ~~ORS 468B.345~~ ORS 468B.340 – ORS 468B.425 & ORS 468.090 – ORS 468.140

340-012-0083 ***(Amended, same #)***
Ballast Water Management Classification of Violations
(1) Class I:
(a) Violation of a requirement or condition of a commission or department order;
(b) Failure to provide access to premises or records as required by statute, permit or order;
(c) Unauthorized discharge of ballast water;
(d) Submitting false, inaccurate or incomplete information to the department;
(e) Submitting false, inaccurate or incomplete information related to a ballast water management report to the department; or
(f) Any otherwise unclassified violation related to ballast water management that causes major harm or causes a risk of major harm to human health or the environment.
(2) Class II:
(a) Failure to report ballast water management information to the department at least 24 hours before entering the waters of the state;
(b) Failure to file an amended ballast water management report after a change in a ballast water management plan; or
(c) Any otherwise unclassified violation related to ballast water management, reports or reporting.
~~340-012-0083~~
~~Ballast Water Management Classification of Violations~~
~~Violations pertaining to ballast water management shall be classified as follows.~~
~~(1) Class One:~~
~~(a) Violation of a Commission or Department Order;~~
~~(b) Failure to provide access to premises or records when required by law, rule, permit or order;~~
~~(c) Unauthorized discharging of ballast water; or~~
~~(d) Knowingly submitting false information.~~
~~(2) Class Two:~~
~~(a) Failure to report ballast water management information to the Department at least 24 hours before entering the waters of this State;~~
~~(b) Failure to file an amended ballast water management report after a change in the vessel's ballast water management plan; or~~
~~(c) Any violation of these rules related to ballast water management, or ballast water reports and reporting, that is not otherwise classified in these rules is a Class Two violation.~~

Stat. Auth.: ~~ORS 783.600 to ORS 783.992~~ ORS 468.020, ORS 468.090 – ORS 468.140
Stats. Implemented: ORS 783.620 – ORS 783.640, ORS 783.992, ORS 468.090 – ORS 468.140

~~340-012-0090~~ *(Renumbered to -0135)*
~~**Selected Magnitude Categories**~~
~~(1) Magnitudes for select violations pertaining to Air Quality may be determined as follows:~~
~~(a) Opacity limitation violations:~~
~~(A) Major – Opacity measurements or readings of more than 40 percent opacity over the applicable limitation;~~
~~(B) Moderate – Opacity measurements or readings between greater than 10 percent and 40 percent or less opacity over the applicable limitation;~~
~~(C) Minor – Opacity measurements or readings of ten percent or less opacity over the applicable limitation.~~
~~(b) Steaming rates, performance standards, and fuel usage limitations:~~
~~(A) Major – Greater than 1.3 times any applicable limitation;~~
~~(B) Moderate – From 1.1 up to and including 1.3 times any applicable limitation;~~
~~(C) Minor – Less than 1.1 times any applicable limitation.~~
~~(c) Air contaminant emission limitation violations for selected air pollutants:~~
~~(A) Magnitude determination shall be made based upon the following table: [Table not included. See ED. NOTE.]~~
~~(B) Major:~~
~~(i) Exceeding the annual amount as established by permit, rule or order by more than the above amount;~~
~~(ii) Exceeding the monthly amount as established by permit, rule or order by more than ten percent of the above amount;~~
~~(iii) Exceeding the daily amount as established by permit, rule or order by more than 0.5 percent of the above amount;~~
~~(iv) Exceeding the hourly amount as established by permit, rule or order by more than 0.1 percent of the above amount.~~
~~(C) Moderate:~~
~~(i) Exceeding the annual amount as established by permit, rule or order by an amount from 50 up to and including 100 percent of the above amount;~~
~~(ii) Exceeding the monthly amount as established by permit, rule or order by an amount from five up to and including ten percent of the above amount;~~
~~(iii) Exceeding the daily amount as established by permit, rule or order by an amount from 0.25 up to and including 0.50 percent of the above amount;~~
~~(iv) Exceeding the hourly amount as established by permit, rule or order by an amount from 0.05 up to and including 0.10 percent of the above amount.~~
~~(D) Minor:~~
~~(i) Exceeding the annual amount as established by permit, rule or order by an amount less than 50 percent of the above amount;~~
~~(ii) Exceeding the monthly amount as established by permit, rule or order by an amount less than five percent of the above amount;~~
~~(iii) Exceeding the daily amount as established by permit, rule or order by an amount less than 0.25 percent of the above amount;~~

~~(iv) Exceeding the hourly amount as established by permit, rule or order by an amount less than 0.05 percent of the above amount.~~
~~(d) Asbestos violations:~~
~~(A) Major - More than 260 lineal feet or more than 160 square feet or more than 35 cubic feet of asbestos-containing material;~~
~~(B) Moderate - From 40 lineal feet up to and including 260 lineal feet or from 80 square feet up to and including 160 square feet or from 17 cubic feet up to and including 35 cubic feet of asbestos-containing material;~~
~~(C) Minor - Less than 40 lineal feet or 80 square feet or less than 17 cubic feet of asbestos-containing material;~~
~~(D) The magnitude of the asbestos violation may be increased by one level if the material was comprised of more than five percent asbestos.~~
~~(e) Open burning violations:~~
~~(A) Major - Initiating or allowing the initiation of open burning of material constituting more than five cubic yards in volume;~~
~~(B) Moderate - Initiating or allowing the initiation of open burning of material constituting from one up to and including five cubic yards in volume, or if the Department lacks sufficient information on which to base a determination;~~
~~(C) Minor - Initiating or allowing the initiation of open burning of material constituting less than one cubic yard in volume;~~
~~(D) For the purposes of determining the magnitude of a violation only, five tires shall be deemed the equivalent in volume to one cubic yard.~~
~~(2) Magnitudes for select violations pertaining to Water Quality may be determined as follows:~~
~~(a) Violating wastewater discharge limitations:~~
~~(A) Major:~~
~~(i) Discharging more than 30% outside any applicable range for flow rate, concentration limitation, or mass limitation, except for toxics, pH, and bacteria; or~~
~~(ii) Discharging more than 10% over any applicable concentration limitation or mass load limitations for toxics; or~~
~~(iii) Discharging wastewater having a pH of more than 1.5 above or below any applicable pH range; or~~
~~(iv) Discharging more than 1,000 bacteria per 100 milliliters (bact./100 mls) over the effluent limitation; or~~
~~(v) Discharging wastes having more than 10% below any applicable removal rate.~~
~~(B) Moderate:~~
~~(i) Discharging from 10% to 30% outside any applicable range for flow rate, concentration limitation, or mass limitation, except for toxics, pH, and bacteria; or~~
~~(ii) Discharging from 5% to 10% over any applicable concentration limitation or mass load limitations for toxics; or~~
~~(iii) Discharging wastewater having a pH from 0.5 to 1.5 above or below any applicable pH range; or~~
~~(iv) Discharging from 500 to 1,000 bact./100 mls over the effluent limitation; or~~
~~(v) Discharging wastewater having from 5% to 10% below any applicable removal rate.~~
~~(C) Minor:~~

~~(i) Discharging less than 10% outside any applicable range for flow rate, concentration limitation or mass limitation, except for toxics, pH, and bacteria; or~~
~~(ii) Discharging less than 5% over any applicable concentration limitation or mass load limitations for toxics; or~~
~~(iii) Discharging wastewater having a pH of less than 0.5 above or below any applicable pH range; or~~
~~(iv) Discharging less than 500 bact./100 mls over the effluent limitation; or~~
~~(v) Discharging wastewater having less than 5% below any applicable removal rate.~~
~~(b) Causing violation of numeric water-quality standards:~~
~~(A) Major:~~
~~(i) Reducing or increasing any criteria by 25% or more of the standard except for toxics, pH, and turbidity;~~
~~(ii) Increasing toxics by any amount over the acute standard or by 100% or more of the chronic standard;~~
~~(iii) Reducing or increasing pH by 1.0 pH unit or more from the standard;~~
~~(iv) Increasing turbidity by 50 nephelometric turbidity units (NTU) or more of the standard.~~
~~(B) Moderate:~~
~~(i) Reducing or increasing any criteria by more than 10% but less than 25% of the standard, except for toxics, pH, and turbidity;~~
~~(ii) Increasing toxics by more than 10% but less than 100% of the chronic standard;~~
~~(iii) Reducing or increasing pH by more than 0.5 pH unit but less than 1.0 pH unit from the standard;~~
~~(iv) Increasing turbidity by more than 20 but less than 50 NTU over the standard.~~
~~(C) Minor:~~
~~(i) Reducing or increasing any criteria by 10% or less of the standard, except for toxics, pH, and turbidity;~~
~~(ii) Increasing toxics by 10% or less of the chronic standard;~~
~~(iii) Reducing or increasing pH by 0.5 pH unit or less from the standard;~~
~~(iv) Increasing a turbidity standard by 20 NTU or less over the standard.~~
~~(D) The magnitude of the violation may be increased one level if the reduction or increase:~~
~~(i) Occurred in a stream which is water-quality limited for that criterium; or~~
~~(ii) For oxygen or turbidity in a stream where salmonids are rearing or spawning; or~~
~~(iii) For bacteria in shell-fish growing waters or during period June 1 through September 30.~~
~~(3) Magnitudes for select violations pertaining to Hazardous Waste may be determined as follows:~~
~~(a) Failure to make a hazardous waste determination:~~
~~(A) Major – Failure to make the determination on five or more waste streams;~~
~~(B) Moderate – Failure to make the determination on three or four waste streams;~~
~~(C) Minor – Failure to make the determination on one or two waste streams;~~
~~(D) The magnitude of the violation may be increased by one level, if more than 1,000 gallons of hazardous waste is involved in the violation;~~
~~(E) The magnitude of the violation may be decreased by one level, if less than 250 gallons of hazardous waste is involved in the violation.~~
~~(b) Hazardous Waste disposal violations:~~

~~(A) Major - Disposal of more than 150 gallons of hazardous waste, or the disposal of more than three gallons of acutely hazardous waste, or the disposal of any amount of hazardous waste or acutely hazardous waste that has a substantial impact on the local environment into which it was placed;~~
~~(B) Moderate - Disposal of 50 to 150 gallons of hazardous waste, or the disposal of one to three gallons of acutely hazardous waste;~~
~~(C) Minor - Disposal of less than 50 gallons of hazardous waste, or the disposal of less than one gallon of acutely hazardous waste when the violation had no potential for or had no more than de minimis actual adverse impact on the environment, nor posed any threat to public health, or other environmental receptors.~~
~~(c) Hazardous waste management violations:~~
~~(A) Major - Failure to comply with hazardous waste management requirements when more than 1,000 gallons of hazardous waste, or more than 20 gallons of acutely hazardous waste, are involved in the violation;~~
~~(B) Moderate - Failure to comply with hazardous waste management requirements when 250 to 1,000 gallons of hazardous waste, or when 5 to 20 gallons of acutely hazardous waste, are involved in the violation;~~
~~(C) Minor - Failure to comply with hazardous waste management requirements when less than 250 gallons of hazardous waste, or 10 gallons of acutely hazardous waste are involved in the violation.~~
~~(4) Magnitudes for select violations pertaining to Solid Waste may be determined as follows:~~
~~(a) Operating a solid waste disposal facility without a permit:~~
~~(A) Major - If the volume of material disposed of exceeds 400 cubic yards;~~
~~(B) Moderate - If the volume of material disposed of is between 40 and 400 cubic yards;~~ .
~~(C) Minor - If the volume of materials disposed of is less than 40 cubic yards;~~
~~(D) The magnitude of the violation may be raised by one magnitude if the material disposed of was either in the floodplain of waters of the state or within 100 feet of waters of the state.~~
~~(b) Failing to accurately report the amount of solid waste received.~~
~~(A) Major - If the amount of solid waste is underreported by more than 15% of the amount received;~~
~~(B) Moderate - If the amount of solid waste is underreported by from 5% to 15% of the amount received;~~
~~(C) Minor - If the amount of solid waste is underreported by less than 5% of the amount received.~~
~~(5) Magnitudes for select violations pertaining to spills of oil or hazardous materials may be adjusted when a violation listed in subsection (a) or (b) has been determined. Further, any overdue notification violation under subsection (b) is raised in significance as indicated in subsection (c) if the amount of the material involved equals or exceeds the reportable quantity (RQ) set by OAR 340-142:~~
~~(a) Failure to clean up spills involving the following quantities spilled to land and not threatening waters of the State:~~
~~(A) Major - Greater than 10 times the RQ.~~
~~(B) Moderate - From the RQ to 10 times the RQ.~~
~~(C) Minor - Less than the RQ.~~
~~(b) Overdue notification violations.~~

~~(A) Major - Notifying more than one week after the spill or release.~~
~~(B) Moderate - Notifying from 48 hours to one week after the spill or release.~~
~~(C) Minor - Notifying between 24 and 48 hours after the spill or release.~~
~~(c) Overdue notification violations are raised in relation to RQ:~~
~~(A) A spill or release of greater than 10 times the RQ increases minor or moderate magnitude violations in section (5)(b) to major magnitude violations.~~
~~(B) A spill or release equal to twice the RQ, or to 10 times the RQ, increases a minor magnitude violation in section (5)(b) to a moderate magnitude violation.~~
~~[ED. NOTE: Tables & Publications referenced are available from the agency.]~~
~~Stat. Auth.: ORS 468.065 & ORS 468A.045~~
~~Stats. Implemented: ORS 468.090 - ORS 468.140 & ORS 468A.060~~

340-012-0097 ***(Adopted)***
Dry Cleaning Classification of Violations
(1) Class I:
(a) Violation of a requirement or condition of a commission or department order;
(b) Failure to provide access to premises or records as required by statute, permit or order;
(c) Submitting false, inaccurate or incomplete information to the department;
(d) Placing hazardous waste generated at a dry cleaning facility at any location other than in an appropriately labeled hazardous waste storage container;
(e) Discharging dry cleaning wastewater to a sanitary sewer, storm sewer, septic system, boiler or into waters of the state;
(f) Failure to have a secondary containment system under and around a dry cleaning machine or stored solvent;
(g) Failure of a person generating hazardous waste at a dry cleaning facility to dispose of hazardous waste within the required time frame from when the waste was placed in a hazardous waste container;
(h) Failure of a person generating hazardous waste at a dry cleaning facility to label a hazardous waste storage container with the date the waste was first placed in the container;
(i) Failure of a dry cleaning owner or operator to store hazardous waste in closed containers;
(j) Failure of a dry cleaning owner or operator to treat hazardous waste dry cleaning wastewater in the required equipment;
(k) Failure of a dry cleaning operator to submit an annual report to the department;
(l) Failure to report a release outside of a containment system of more than one pound of dry cleaning solvent released in a 24-hour period;
(m) Failure to repair the cause of a release of dry cleaning solvent within a containment system; or
(n) Any otherwise unclassified violation related to a drycleaning facility or dry store that causes major harm or causes a risk of major harm to human health or the environment.
(2) Class II:
(a) Failure of a dry cleaning owner or dry cleaning operator to remove dry cleaning solvent or solvent containing residue from a dry cleaning machine, dry cleaning store or dry store as required;
(b) Failure to disconnect utilities from a dry cleaning machine at a dry cleaning store as required;
(c) Failure of a dry cleaning operator to comply with containment requirements;

(d) Failure of a dry cleaning operator to prominently post the Oregon Emergency Response System telephone number so the number is immediately available to all employees of the dry cleaning facility;
(e) Failure of a person delivering perchloroethylene to a dry cleaning facility to use closed direct-coupled delivery;
(f) Failure of a dry cleaning operator to have closed direct-coupled delivery for perchloroethylene;
(g) Failure of a dry cleaner owner or operator to label a hazardous waste storage container with the words "hazardous waste;"
(h) Failure to immediately clean up a release of dry cleaning solvent within a containment system; or
(i) Any otherwise unclassified violation related to dry cleaning facilities or dry stores.
(3) Class III:
(a) Failure to notify the department of change or closure at a dry cleaning business or dry store.
Stat. Auth.: ORS 466.070 - ORS 466.080, ORS 466.625 & ORS 468.020
Stats. Implemented: ORS 466.635 – ORS 466.680, ORS 466.990, ORS 466.994 & ORS 468.090 - 468.140

340-012-0100 ***(Amended and renumbered from -0071)***
Polychlorinated Biphenyl (PCB) Classification of Violations
(1) Class I:
(a) Violation of a requirement or condition of a commission or department order;
(b) Treating or disposing of PCBs anywhere other than at a permitted PCB disposal facility;
(c) Establishing, constructing or operating a PCB disposal facility without a permit;
(d) Failure to provide access to premises or records as required by statute, permit, or order;
(e) Submitting false, inaccurate or incomplete information to the department; or
(f) Any otherwise unclassified violation related to the management and disposal of PCBs that causes a release to the environment, or that causes major harm or poses a risk of major harm to human health or the environment.
(2) Class II:
(a) Violation of a condition of a PCB disposal facility permit; or
(b) Any otherwise unclassified violation related to the management or disposal of PCBs.
Stat. Auth.: ORS 466.265 - ORS 466.270, ORS 466.525, ORS 466.625 & ORS 468.020
Stats. Implemented: ORS 466.250 - ORS 466.530, ORS 466.255, ORS 466.265 – ORS 466.270, ORS 466.530, ORS 466. 990 & ORS 468.090 - 468.140

340-012-0105 ***(Amended and renumbered from -0072)***
Used Oil Classification of Violations
(1) Class I:
(a) Violation of a requirement or condition of a department or commission order;
(b) Using used oil as a dust suppressant or pesticide;
(c) Collecting, processing, storing, disposing of, or transporting used oil without first obtaining an EPA identification number;
(d) Burning used oil with less than 5,000 Btu per pound for the purpose of "energy recovery;"

(e) Offering used oil for sale as specification used oil-fuel when the used oil does not meet used oil-fuel specifications;
(f) Offering to sell off-specification used oil fuel to a facility not meeting the definition of an industrial boiler or furnace;
(g) Failure of a used oil generator, transporter, or processor/re-refiner to obtain one-time written notification from burner before shipping off-speculation used oil fuel;
(h) Failure to perform a hazardous waste determination on used oil or material containing used oil that is destined for disposal;
(i) Burning off-specification used oil in a device that does not meet the definition of an industrial boiler or furnace and is not otherwise exempt;
(j) Storing or managing used oil in a surface impoundment;
(k) Storing used oil in a container that is leaking or presents a threat of release;
(l) Failure of a used oil transporter or processor to determine whether used oil exceeds the permissible halogen content;
(m) Failure of a used oil processor to develop or follow a written waste analysis plan;
(n) Mixing used oil with a solid waste or other material when prohibited;
(o) Failure to provide access to premises or records as required by statute, permit or order;
(p) Failure by to immediately clean up a spill or a release, or a threatened spill or release of used oil;
(q) Failure of a used oil transporter or processor to contain or stop a release of used oil;
(r) Failure of a used oil transporter or processor to repair a used oil container or tank before returning it to service or to replace it when needed;
(s) Failure to make an on-specification used oil fuel determination when required;
(t) Failure to maintain records and results of used oil analysis;
(u) Submitting false, inaccurate or incomplete information to the department;
(v) Failure to close or cover a used oil tank or container;
(w) Failure of a used oil processor to perform closure on a used oil tank or container when required; or
(x) Any otherwise unclassified violation related to the management of used oil that causes major harm or poses a risk of major harm to human health or the environment.
(2) Class II:
(a) Failure of a used oil processor to submit annual used oil handling reports;
(b) Failure of a used oil transfer facility, processor, or off-specification used-oil burner to provide secondary containment;
(c) Failure to label each container or tank in which used oil was accumulated on site with the words "used oil;"
(d) Failure of a used oil processor to keep a written operating record at the facility;
(e) Failure of a used oil processor to prepare and maintain an up-to-date preparedness and prevention plan;
(f) Failure to maintain records of all incidents that require implementation of a contingency plan;
(g) Any otherwise unclassified violation related to the management of used oil.
[Publications: The publication(s) referred to or incorporated by reference in this rule are available from the agency.]
Stat. Auth.: ORS 459A.590, ORS 459A.595, ORS 466.020, ORS 466.625 & ORS 468.020,

Stats. Implemented: ORS 459A.555, ORS 459A.580 - ORS 459A.585, ORS 459A.995, ORS 466.070 – ORS 466.105, ORS 466.150, ORS 466.180, ORS 466.635 – ORS 466.645 & ORS 468.090 - ORS 468.140

340-012-0130 ***(Adopted—some content from -0045)***
Determination of Violation Magnitude
{Changes: Describes the interrelationship between pre-determined, selected and general magnitudes. Provides that if a selected magnitude exists but there is not sufficient information reasonably available to the Department to determine the application of that selected magnitude, the general magnitude findings will apply. Provides that magnitude will be minor if violation had no more than de minimis potential for or actual adverse impact on the environment. Clarifies that the Department must consider information that is reasonably available, not all applicable information. Provides the administrative law judge standard of review for general magnitudes.
Purpose: To more clearly identify the magnitude determination process. To resolve current interpretation issue in cases where evidence does not support finding of an otherwise applicable selected magnitude. Also provides more flexibility to make a finding of minor magnitude.}

(1) For each civil penalty assessed, the magnitude will be moderate, unless:
(a) A selected magnitude is specified in 340-012-0135 and information is reasonably available to the department to determine the application of that selected magnitude; or
(b) The department determines, using information reasonably available to it, that the magnitude should be major under section (2) or minor under section (3).
(2) The magnitude of the violation will be major if the department finds that the violation had a significant adverse impact on the environment, or posed a significant threat to human health. In making its finding, the department will consider all reasonably available information, including, but not limited to: the degree of deviation from applicable statutes or commission and department rules, standards, permits or orders; the extent of actual or threatened effects of the violation; the concentration, volume, or toxicity of the materials involved; and the duration of the violation. In making this finding, the department may consider any single factor to be conclusive. Upon review, an administrative law judge (ALJ) may reject or revise the department's finding if the ALJ determines, based on substantial evidence in the record, that the department's finding was implausible, otherwise inconsistent with the wording or purpose of this rule, or an abuse of discretion.
(3) The magnitude of the violation will be minor if the department finds that the violation had no more than a de minimis adverse impact on the environment and posed no more than a de minimis threat to human health or other environmental receptors. In making its finding, the department will consider all reasonably available information including, but not limited to: the degree of deviation from applicable statutes, or commission or department rules, standards, permits or orders; the extent of actual or threatened effects of the violation; the concentration, volume, or toxicity of the materials involved; and the duration of the violation. In making this finding, the department may consider any single factor to be conclusive. Upon review, an ALJ may reject or revise the department's finding if the ALJ determines, based on substantial evidence in the record, that the department's finding was implausible, otherwise inconsistent with the wording or purpose of this rule, or an abuse of discretion.

Stat. Auth.: ORS 468.020, ORS 468.090 – ORS 468.140
Stats. Implemented: ORS 459.376, ORS 459.995, ORS 465.900, ORS 465.992, ORS 466.210, ORS 466.990, ORS 466.994, ORS 467.050, ORS 467.990, ORS 468.090 – ORS 468.140 & ORS 468.996

340-012-0135 *(Amended and renumbered from-0090)*
Selected Magnitude Categories
{Changes to section: Provides additional selected magnitudes for some programs and changes some selected magnitudes by making them more specific.
Purpose: To provide more predictability for regulated community and consistency in civil penalties.}
(1) Magnitudes for selected Air Quality violations (340-012-0050) are as follows:
(a) Operating a major source without first obtaining the required permit:
(A) Major:
(i) If the source is located in a nonattainment or maintenance area and is a major source for the pollutant(s) of concern.
(B) Moderate:
(i) If the source is located in a nonattainment or maintenance area but is a major source for a pollutant other than the pollutant(s) of concern, or if the source is located in any other area of the state.
(C) Minor:
(i) There is no selected minor magnitude for this subsection.
(b) Operating a non-major source without first obtaining the required permit:
(A) Major:
(i) There is no selected magnitude for this subsection.
(B) Moderate:
(i) If operating under the required permit would have resulted in lower emissions than operating without the permit.
(C) Minor:
(i) If operating under the required permit would have resulted in the same emissions as operating without the permit.
(c) Exceedance of an opacity limit by a federal major source or exceedance of an opacity limit by a non-federal major source by greater that 20 percent opacity (OAR 340-012-050(1)(i):
(A) Major:
(i) If the source is located in a PM, PM10, or PM2.5 nonattainment or maintenance area.
(B) Moderate:
(i) If the source is located in any other area of the state.
(C) Minor:
(i) There is no selected minor magnitude for this subsection.
(d) Exceedance of a plant site emission limitation (PSEL) (OAR 340-012-0050(1)(j):
(A) Major:
(i) If the source is located in a nonattainment or maintenance area for the pollutant(s) of concern.
(B) Moderate:

(i) If the source is located in a nonattainment or maintenance area but the PSEL exceeded was for a pollutant other than the pollutant(s) of concern or if the source is located in any other area of the state.
(C) Minor:
(i) There is no selected minor magnitude for this subsection.
(e) Asbestos violations, except the violations set forth in OAR 340-012-0050(1)(u), OAR 340-012-0050(2)(a), OAR 340-012-0050(2)(e), OAR 340-012-0050(3)(e), and OAR 340-012-0050(3)(f):
(A) Major:
(i) If more than 260 linear feet or more than 160 square feet of asbestos-containing material (ACM) or asbestos-containing waste material (ACWM) were involved.
(B) Moderate:
(i) If from 40 linear feet up to and including 260 linear feet or from 80 square feet up to and including 160 square feet of ACM or ACWM were involved.
(C) Minor:
(i) If less than 40 linear feet or 80 square feet of ACM or ACWM were involved.
(D) The magnitude of the asbestos violation may be increased by one level if the material involved was comprised of more than five percent asbestos.
(f) The magnitudes for the following violations are as follows:
(A) Major
(i) Exceedance of an opacity or emission limit (including a grain loading standard) or violation of an operational or process standard when the limit or standard was established, pursuant to NSR, PSD, or the Western Backstop SO2 Trading Program, to limit emissions or to avoid classification as a major source as defined in OAR 340-200-0020;
(ii) Failure to comply with Emergency Action Plans;
(iii) Transference of vehicle ownership for the purpose of avoiding department inspection and maintenance testing;
(iv) Alteration or avoidance of the Vehicle Inspection Program's testing process to fraudulently produce a Certificate of Compliance with the department's inspection and maintenance test;
(v) Removing, or otherwise making inoperable, any factory-installed vehicle pollution control systems;
(vi) Operation of a vehicle in violation of visible emission standards;
(vii) Any otherwise unclassified violation related to air quality that causes a major harm or poses a risk of major harm to human health or the environment.
(B) Moderate
(i) There are no pre-determined moderate magnitude violations.
(C) Minor
(i) Construction of a new source or modification of an existing source, that requires a New Source Review/Prevention of Significant Deterioration (NSR/PSD) permit before obtaining the required permit;
(ii) Construction of a new Major Hazardous Air Pollutant source without complying with Section 112(g) of the federal Clean Air Act or without first obtaining the required permit;
(iii) Failure to comply with asbestos abatement licensing, certification, or accreditation requirements in OAR 340-248-0120, -0130, -0140 or -0150.
(2) Magnitudes for selected Water Quality violations (340-012-0055) are as follows:

(a) Violating wastewater discharge permit effluent limitations, causing pollution of waters of the state, violating a narrative water quality standard, or discharging wastes to waters of the state without a permit authorizing such discharge:

(A) Major: The magnitude is major if:

(i) The dilution of the spill or discharge was less than two, when calculated as follows: $D = ((Q_R /4)+ Q_I)/ Q_I$, where Q_R is the estimated receiving stream flow and Q_I is the estimated quantity or discharge rate of the incident;

(ii) Except for permit violations of monthly or weekly average limits, the spill or discharge continued for five or more consecutive days;

(iii) The resulting water quality from the spill or discharge was as follows:

(I) For spills or discharges of toxic pollutants: C_S/D was more than C_{Acute}, where C_S is the concentration of the discharge or spill, D is the dilution of the spill or discharge as determined under subparagraph (2)(a)(A)(i) above, and C_{Acute} is the concentration for acute toxicity (as defined by the applicable water quality standard);

(II) For spills or discharges affecting temperature in salmonid bearing waters, $(T_E - T_R)/D$ is more than 10° F, where T_E is the temperature of the discharge or spill, T_R is the temperature of the receiving stream, and D is the dilution of the spill or discharge as determined under subparagraph (2)(a)(A)(i) above; or

(III) For BOD5 discharges or spills: (BOD-5)/D is more than 10 where BOD-5 is the concentration of the five day Biochemcial Oxygen Demand of the discharge or spill and D is the dilution of the spill or discharge as determined under subparagraph (2)(a)(A)(i) above.

(iv) Any violation of reuse or biosolids requirements or permit conditions resulted in a human health hazard; or

(v) The violation resulted in a documented fish or wildlife kill.

(B) Moderate: The magnitude is moderate if:

(i) The dilution of the spill or discharge (D) was two or more but less than 10 when calculated as follows: $D = ((Q_R /4)+ Q_I)/ Q_I$, where Q_R is the estimated receiving stream flow and Q_I is the estimated quantity or discharge rate of the spill or discharge;

(ii) Except for permit violations of monthly and weekly averages limits, the spill or discharge continued for fewer than five days; or

(iii) For spills or discharges affecting temperature in salmonid bearing waters, $(T_E - T_R)/D$ was 10° F or less, but more than 1° F, where T_E is the temperature of the discharge or spill, T_R is the temperature of the receiving stream, and D is the dilution of the spill or discharge as determined under subparagraph (2)(a)(B)(i) above.

(C) Minor: The magnitude is minor if:

(i) The dilution of the spill or discharge (D) was 10 or more when calculated as follows: $D = ((Q_R/4)+ Q_I)/ Q_I$, where Q_R is the receiving stream flow and Q_I is the quantity or discharge rate of the incident; or

(ii) For spills or discharges affecting temperature in salmonid bearing waters, $(T_E - T_R)/D$ is 1° F or less, where T_E is the temperature of the discharge or spill, T_R is the temperature of the receiving stream, and D is the dilution of the spill or discharge as determined under subparagraph (2)(a)(C)(i) above.

(D) The magnitude of the violations in subsection (2)(a) may be increased one level if the discharge or spill:

(i) Occurred in a water body that is water-quality limited (listed on the most current 303(d) list) and the pollutants in the discharge or spill likely aggravated the water quality problem for which the water body is listed;
(ii) Likely depressed oxygen levels or increase turbidity and/or sedimentation in a stream in which salmonids rear or spawn; or
(iii) Violated a bacteria standard either in shellfish growing waters or during the period from June 1 through September 30.
(b) Numeric water quality standards violations:
(A) Major. The magnitude is major if the violation:
(i) Increased the concentration of any pollutant except for toxics, dissolved oxygen, pH, and turbidity, by 25 percent or more of the standard;
(ii) Decreased the dissolved oxygen concentration by two or more milligrams per liter below the standard;
(iii) Increased the toxic pollutant concentration by any amount over the acute standard or by more than 100 percent of the chronic standard;
(iv) Increased or decreased pH by one or more pH units or more from the standard; or
(v) Increased turbidity by 50 or more nephelometric turbidity units (NTU) over background.
(B) Moderate. The magnitude is moderate if the violation:
(i) Increased the concentration of any pollutant except for toxics, dissolved oxygen, pH, and turbidity by more than 10 percent but less than 25 percent of the standard;
(ii) Decreased the dissolved oxygen concentration by one or more, but less than two, milligrams per liter below the standard;
(iii) Increased the concentration of toxic pollutants by more than 10 percent but less than 100 percent of the chronic standard;
(iv) Increased or decreased pH by more than 0.5 pH unit but less than 1.0 pH unit from the standard; or
(v) Increased turbidity by more than 20 NTU but less than 50 NTU over background.
(C) Minor. The magnitude is minor if the violation:
(i) Increased the concentration of any pollutant except for toxics, dissolved oxygen, pH, and turbidity by 10 percent or less of the standard;
(ii) Decreased the dissolved oxygen concentration by less than one milligram per liter below the standard;
(iii) Increased the concentration of toxic pollutants by 10 percent or less of the chronic standard;
(iv) Increased or decreased pH by 0.5 pH unit or less of the standard; or
(v) Increased turbidity by 20 NTU or less over background.
(D) The magnitude of the violations in subsection (2)(b) may be increased one level if the violation:
(i) Occurred in a water body that is water-quality limited (listed on the most current 303(d) list) and the pollutants in the discharge or spill likely aggravated the water quality problem for which the water body is listed;
(ii) Likely depressed oxygen levels or increased turbidity and/or sedimentation in a stream in which salmonids rear or spawn; or
(iii) Violated a bacteria standard either in shell-fish growing waters or during the period from June 1 through September 30.
(c) The magnitudes for the following violations are as follows:

(A) Major:
(i) Any otherwise unclassified violation related to water quality that causes a major harm or poses a risk of major harm to human health or the environment.
(B) Moderate:
(i) There are no pre-determined moderate magnitude violations.
(C) Minor:
(i) There are no pre-determined minor magnitude violations.
(3) Magnitudes for selected Underground Injection Control violations (340-012-0058) are as follows:
(a) The magnitudes for the following violations are as follows:
(A) Major:
(i) Any otherwise unclassified violation related to underground injection that causes a major harm or poses a risk of major harm to human health or the environment.
(B) Moderate:
(i) There are no pre-determined moderate magnitude violations.
(C) Minor:
(i) There are no pre-determined minor magnitude violations.
(4) Magnitudes for selected On-Site Sewage Disposal violations (340-012-0060) are determined as follows:
(a) The magnitudes for the following violations are as follows:
(A) Major:
(i) Any otherwise unclassified violation related to on-site sewage disposal that results in sewerage on the ground or the discharge of sewage into waters of the State, or that causes a major harm or poses a risk of major harm to human health or the environment.
(B) Moderate:
(i) There are no pre-determined moderate magnitude violations.
(C) Minor:
(i) There are no pre-determined minor magnitude violations.
(5) Magnitudes for selected Solid Waste violations (340-012-0065) are as follows:
(a) Operating a solid waste disposal facility without a permit:
(A) Major. The magnitude is major if:
(i) The volume of material disposed of exceeded 400 cubic yards.
(B) Moderate. The magnitude is moderate if:
(i) The volume of material disposed of was between 40 and 400 cubic yards.
(C) Minor. The magnitude is minor if:
(i) The volume of materials disposed of was less than 40 cubic yards.
(D) The magnitude of the violation may be raised one level if the material was disposed of either in the floodplain of waters of the state or within 100 feet of waters of the state.
(b) Failing to accurately report the amount of solid waste received:
(A) Major. The magnitude is major if:
(i) The amount of solid waste was underreported by more than 15 percent of the amount received.
(B) Moderate. The magnitude is moderate if:
(i) The amount of solid waste was underreported by 5 to 15 percent of the amount received.
(C) Minor. The magnitude is minor if:

(i) The amount of solid waste is underreported by less than 5 percent of the amount received.
(c) The magnitudes for the following violations are as follows:
(A) Major:
(i) Any otherwise unclassified violation related to the management, recovery or disposal of solid waste that causes major harm or poses a risk of major harm to human health or the environment.
(B) Moderate:
(i) There are no pre-determined moderate magnitude violations.
(C) Minor:
(i) There are no pre-determined minor magnitude violations.
(6) Magnitudes for selected Solid Waste Tire Management violations (340-012-0066) are as follows:
(a) The magnitudes for the following violations are as follows:
(A) Major:
(i) Any otherwise unclassified violation related to the storage, transportation or management of waste tires or tire-derived products that causes major harm or poses a risk of major harm to human health or the environment.
(B) Moderate:
(i) There are no pre-determined moderate magnitude violations.
(C) Minor:
(i) There are no pre-determined minor magnitude violations.
(7) Magnitudes for selected Underground Storage Tanks violations (340-012-0067) are as follows:
(a) The magnitudes for the following violations are as follows:
(A) Major:
(i) Any otherwise unclassified violation related to underground storage tanks that causes major harm or poses a risk of major harm to human health or the environment.
(B) Moderate:
(i) There are no pre-determined moderate magnitude violations.
(C) Minor:
(i) There are no pre-determined minor magnitude violations.
(8) Magnitudes for selected Hazardous Waste Management and Disposal violations (340-012-0068) are as follows:
(a) Failure to make a hazardous waste determination:
(A) Major:
(i) Failure to make the determination on five or more waste streams.
(B) Moderate:
(i) Failure to make the determination on three or four waste streams.
(C) Minor:
(i) Failure to make the determination on one or two waste streams.
(D) The magnitude of the violation may be increased or decreased based on the findings described at
(b) Hazardous Waste disposal violations:
(A) Major. The magnitude is major if the violation involved:
(i) Disposal of more than 50 gallons of hazardous waste;
(ii) Disposal of more than three gallons of acutely hazardous waste; or

(iii) Disposal of any amount of hazardous waste or acutely hazardous waste that caused major harm or posed a risk of major harm to human health or the environment.
(B) Moderate. The magnitude is moderate if the violation involved:
(i) Disposal of up to 50 gallons of hazardous waste.
(ii) Disposal of up to three gallons of acutely hazardous waste.
(C) Minor:
(i) There is no selected minor magnitude for this subsection.
(c) Hazardous waste management violations (340-012-0068(1)(e), (f), (h), (k), (n), (w)-(y), (hh), (ii) and (2)(d):
(A) Major.
(i) Failure to comply with hazardous waste management requirements when more than 1,000 gallons of hazardous waste, or more than 20 gallons of acutely hazardous waste, were involved in the violation.
(B) Moderate.
(i) Failure to comply with hazardous waste management requirements when from 250 to 1,000 gallons of hazardous waste, or 5 to 20 gallons of acutely hazardous waste, were involved in the violation.
(C) Minor.
(i) Failure to comply with hazardous waste management requirements when less than 250 gallons of hazardous waste, or less than 5 gallons of acutely hazardous waste, were involved in the violation.
(d) The magnitudes for the following violations are:
(A) Major:
(i) Any otherwise unclassified violation related to the generation, management, treatment, storage, or disposal of hazardous waste that causes major harm or poses a risk of major harm to human health or the environment.
(B) Moderate:
(i) There are no pre-determined moderate magnitude violations.
(C) Minor:
(i) There are no pre-determined minor magnitude violations.
(9) Magnitudes for selected Underground Storage Tank Cleanup violations (340-012-0074) are as follows:
(a) The magnitudes for the following violations are as follows:
(A) Major:
(i) Any otherwise unclassified violation related to a release from an underground storage tank that causes major harm or poses a risk of major harm to human health or the environment.
(B) Moderate:
(i) There are no pre-determined moderate magnitude violations.
(C) Minor:
(i) There are no pre-determined minor magnitude violations.
(10) Magnitudes for selected Environmental Cleanup violations (340-012-0073) are as follows:
(a) The magnitudes for the following violations are as follows:
(A) Major:
(i) Any otherwise unclassified violation related to environmental investigation or cleanup that causes major harm or poses a risk of major harm to human health or the environment.

(B) Moderate:
(i) There are no pre-determined moderate magnitude violations.
(C) Minor:
(i) There are no pre-determined minor magnitude violations.
(11) Magnitudes for selected Heating Oil Tanks violations (340-012-0079) are as follows:
(a) The magnitudes for the following violations are as follows:
(A) Major:
(i) Any otherwise unclassified violation related to a heating oil tank or performing heating oil tank services that causes major harm or poses a risk of major harm to human health or the environment.
(B) Moderate:
(i) There are no pre-determined moderate magnitude violations.
(C) Minor:
(i) There are no pre-determined minor magnitude violations.
(12) Magnitudes for selected Oil and Hazardous Material Spill and Release violations (340-012-0081) are as follows:
(a) Failure to clean up spills:
(A) Major:
(i) If the quantity spilled was more than 10 times the reportable quantity (RQ).
(B) Moderate:
(i) If the quantity spilled was from the RQ up to 10 times the RQ.
(C) Minor:
(i) If the quantity spilled was less than the RQ.
(b) Overdue notification violations:
(A) Major:
(i) Notification more than one week after the spill or release, or failure to notify.
(B) Moderate:
(i) Notification from 24 hours to one week after the spill or release, unless otherwise provided in subsection (c).
(C) Minor:
(i) There is no selected minor magnitude for this subsection.
(D) The magnitude of overdue notification violations may be increased based on the quantity spilled.
(i) The magnitude of an overdue notification violation is major if the quantity spilled or released was more than 10 times the RQ.
(ii) The magnitude of an overdue notification violation will be increased one level if the quantity spilled or released was from two to 10 times the RQ.
(c) The magnitudes for the following violations are as follows:
(A) Major:
(i) Any otherwise unclassified violation related to spills or releases of oil or hazardous materials that causes major harm or poses a risk of major harm to human health or the environment.
(B) Moderate:
(i) There are no pre-determined moderate magnitude violations.
(C) Minor:
(i) There are no pre-determined minor magnitude violations.

(13) Magnitudes for selected Contingency Planning violations (340-012-0082) are as follows:
(a) The magnitudes for the following violations are as follows:
(A) Major:
(i) Any otherwise unclassified violation related to contingency planning that causes major harm or poses a risk of major harm to human health or the environment.
(B) Moderate:
(i) There are no pre-determined moderate magnitude violations.
(C) Minor:
(i) There are no pre-determined minor magnitude violations.
(14) Magnitudes for selected Ballast Water violations (340-012-0083) are determined as follows:
(a) The magnitudes for the following violations are as follows:
(A) Major:
(i) Any otherwise unclassified violation related to ballast water management that causes major harm or poses a risk of major harm to human health or the environment.
(B) Moderate:
(i) There are no pre-determined moderate magnitude violations.
(C) Minor:
(i) There are no pre-determined minor magnitude violations.
(15) Magnitudes for selected Dry Cleaning violations (340-012-0097) are as follows:
(a) The magnitudes for the following violations are as follows:
(A) Major:
(i) Any otherwise unclassified violation related to a dry cleaning facility or dry store that causes major harm or poses a risk of major harm to human health or the environment.
(B) Moderate:
(i) There are no pre-determined moderate magnitude violations.
(C) Minor:
(i) There are no pre-determined minor magnitude violations.
(16) Magnitudes for selected Polychlorinated Biphenyl (PCB) violations (340-012-0100) are as follows:
(a) The magnitudes for the following violations are as follows:
(A) Major:
(i) Any otherwise unclassified violation related to the management and disposal of PCBs that causes a release to the environment, or that causes major harm or poses a risk of major harm to human health or the environment.
(B) Moderate:
(i) There are no pre-determined moderate magnitude violations.
(C) Minor:
(i) There are no pre-determined minor magnitude violations.
(17) Magnitudes for selected Used Oil violations (340-012-0105) are as follows:
(a) Used Oil management violations:
(A) Major:
(i) Failure to comply with used oil management requirements when more than 1,000 gallons of used oil were involved in the violation.
(B) Moderate:

(i) Failure to comply with used oil management requirements when 250 to 1,000 gallons of used oil were involved in the violation.
(C) Minor:
(i) Failure to comply with used oil management requirements when less than 250 gallons of used oil were involved in the violation.
(b) Used Oil spill violations:
(A) Major:
(i) If the spill involved more than 420 gallons of used oil.
(B) Moderate:
(i) If the spill involved from 42 to 420 gallons of used oil.
(C) Minor:
(i) If the spills of used oil involved less than 42 gallons of used oil.
(D) The magnitude of the violation may be increased by one level if more than 1,000 gallons of used oil were involved in the violation.
(c) The magnitudes for the following violations are as follows:
(A) Major:
(i) Any otherwise unclassified violation related to the management of used oil that causes major harm or poses a risk of major harm to human health or the environment.
(B) Moderate:
(i) There are no pre-determined moderate magnitude violations.
(C) Minor:
(i) There are no pre-determined minor magnitude violations.
[Publications: The publication(s) referred to or incorporated by reference in this rule are available from the agency.]
Stat. Auth.: ORS 468.020 & ORS 468.130
Stats. Implemented: ORS 454, ORS 459, ORS 459A, ORS 465, ORS 466, ORS 468.090 - ORS 468.140, ORS 468A & ORS 468B

340-012-0140 ***(Amended and renumbered from -0042)***
Determination of Base Penalty
{Changes to section: Adds a new mid-range ($6,000) penalty matrix; provides additional differentiation of violations to be assigned to different matrices. Increases values in the $10,000 matrix. Provides a set penalty for Class III violations in each matrix. This matrix approach addresses equity in specific deterrence based on "who" the violator is. There is a new section on Department discretion to raise violators up to a higher matrix (see 340-012-0160); and the consideration of ability to pay is still available.
Purpose of section: To tailor civil penalty amounts to achieve deterrence, consistency and equity.}
(1) Except for Class III violations and for violations noted under 340-012-0155(2), the Base Penalty (BP) is determined by applying the type, class and magnitude of the violation to the matrices set forth in this section. For Class III violations, no magnitude determination is required.
(2) $8,000 Penalty Matrix.
(a) The $8,000 penalty matrix applies to the following:

(A) Any violation of an air quality statute, rule, permit or related order committed by a person that has or should have a Title V permit or an Air Contaminant Discharge Permit (ACDP) issued pursuant to New Source Review (NSR) regulations or Prevention of Significant Deterioration (PSD) regulations, and section 112(g) of the federal Clean Air Act;
(B) Open burning violations as follows:
(i) Any violation of an open burning statute, rule, permit or related order committed by a permitted industrial facility.
(ii) Any violation of OAR 340-264-0060(3) in which 25 or more cubic yards of prohibited materials are burned, except when committed by a residential owner-occupant;
(iii) Open burning of ten or more cubic yards of commercial, construction, demolition, or industrial wastes in violation of OAR 340-264-0080 through -0180; or
(iv) Open burning of more than 15 tires except when committed by a residential owner-occupant;
(C) Any violation of ORS 468B.050(1)(a), or of 468B.025(1)(a) or (1)(b) by a person without an NPDES or WPCF permit;
(D) Any violation of a water quality rule, permit or related order committed by:
(i) A person that has a National Pollutant Discharge Elimination System (NPDES) permit, or that has or should have a Water Pollution Control Facility (WPCF) permit for a municipal or private utility sewage treatment facility with a permitted flow of five million or more gallons per day;
(ii) A person that has a major industrial source NPDES permit;
(iii) A person that has a population of 100,000 or more, as determined by the most recent national census, and either has or should have a WPCF Municipal Stormwater Underground Injection Control (UIC) System Permit, or has an NPDES Municipal Separated Storm Sewer Systems (MS4) Stormwater Discharge Permit;
(iv) A person that has or should have a WPCF permit for a major vegetable or fruit processing industry, for a major mining operation involving over 500,000 cubic yards per year, or for any mining operation using chemical leaching or froth flotation; or
(v) A person that installs or operates a prohibited Class I, II, III, IV or V underground injection system, except for a cesspool;
(E) Any violation of an underground storage tank (UST) statute, rule, permit, license or related order if the person is the owner, operator or permittee of 10 or more UST facilities or the person is licensed or should have been licensed by the department to perform tank services;
(F) Any violation of a heating oil tank statute, rule, permit, license or related order if the person is licensed or should have been licensed by the department to perform heating oil tank services.
(G) Any violation of ORS 468B.485, or related rules or orders regarding financial assurance for ships transporting hazardous materials or oil;
(H) Any violation of an used oil statute, rule, permit or related order committed by a person that is a used oil transporter, transfer facility, processor or re-refiner, off-specification used oil burner or used oil marketer;
(I) Any violation of a statute, rule, permit or order related to a spill or release of used oil to the land or waters of the state;
(J) Any violation of a hazardous waste statute, rule, permit or related order committed by:
(i) A person that is a large quantity generator or hazardous waste transporter; or
(ii) A person that has or should have a treatment, storage or disposal facility permit;
(K) Any violation of an oil and hazardous material spill and release statute, rule, or related order.

(L) Any violation of a polychlorinated biphenyls (PCBs) management and disposal statute, rule, permit or related order;
(M) Any violation of ORS Chapter 465, underground storage tank or environmental cleanup statute, rule, related order or related agreement; and
(N) Unless specifically listed under another penalty matrix, any violation of ORS Chapter 459 or any violation of a solid waste statute, rule, permit, or related order committed by:
(i) A person that has or should have a solid waste disposal permit; or
(ii) A local government unit with a population of 25,000 or more, as determined by the most recent national census.
(b) The base penalty values for the $8,000 penalty matrix are as follows:
(A) Class I:
(i) Major - $8000.
(ii) Moderate - $4000.
(iii) Minor - $2000.
(B) Class II:
(i) Major - $4000.
(ii) Moderate - $2000.
(iii) Minor - $1000.
(C) Class III: $750.
(3) $6,000 Penalty Matrix
(a) The $6,000 penalty matrix applies to the following:
(A) Any violation of an air quality statute, rule, permit or related order committed by a person that has or should have an ACDP permit, except for NSR, PSD and Basic ACDP permits;
(B) Any violation of an asbestos statute, rule, permit or related order except those listed in section (5) of this rule;
(C) Any violation of a vehicle inspection program statute, rule, permit or related order committed by an auto repair facility;
(D) Any violation of a water quality statute, rule, permit or related order committed by:
(i) A person that has an NPDES Permit or that has or should have a WPCF Permit for a municipal or private utility sewage treatment facility with a permitted flow of two million or more, but less than five million, gallons per day;
(ii) A person that has a minor industrial source NPDES Permit or has or should have a WPCF Permit for an industrial source;
(iii) A person that has or should have applied for coverage under an NPDES or a WPCF General Permit, except an NPDES Stormwater Discharge 1200-C General Permit for a construction site of one acre or more, but less than five acres in size;
(iv) A person that has a population of less than 100,000 but more than 10,000, as determined by the most recent national census, and either has or should have a WPCF Municipal Stormwater UIC System Permit or has an NPDES MS4 Stormwater Discharge Permit;
(v) A person that has or should have a WPCF permit for a mining operation involving from 100,000 up to 500,000 cubic yards other than those operations using chemical leachate or froth flotation; or
(vi) A person that owns and either has or should have registered an underground injection system that disposes of wastewater other than storm water or sewage;

(E) Any violation of an underground storage tank statute, rule, permit or related order if the person is the owner, operator or permittee of five to nine UST facilities;
(F) Unless specifically listed under another penalty matrix, any violation of ORS Chapter 459 or any violation of a solid waste statute, rule, permit, or related order committed by:
(i) A person that has or should have a waste tire permit; or
(ii) A local government unit with a population of more than 5,000 but less than or equal to 25,000, as determined by the most recent national census; and
(G) Any violation of a hazardous waste management statute, rule, permit or related order committed by a person that is a small quantity generator.
(b) The base penalty values for the $6,000 penalty matrix are as follows:
(A) Class I:
(i) Major - $6,000.
(ii) Moderate - $3,000.
(iii) Minor - $1,500.
(B) Class II:
(i) Major - $3,000.
(ii) Moderate - $1,500.
(iii) Minor - $750.
(C) Class III: $500.
(4) $2,500 Penalty Matrix.
(a) The $2,500 penalty matrix applies to the following:
(A) Any violation of any statute, rule, permit, license, or order committed by a person not specifically listed under another penalty matrix;
(B) Any violation of an air quality statute, rule, permit or related order committed by a person not specifically listed under another penalty matrix;
(C) Unless specifically listed under another penalty matrix, any violation of an open burning statute, rule, permit or related order committed by the residential owner-occupant, involving more than 25 cubic yards of any material listed in OAR 340-264-0060(3) or more than 15 tires;
(D) Any violation of a vehicle inspection program statute, rule, permit or related order committed by a natural person, except for those specified in section (5) of this rule;
(E) Unless specifically listed under another penalty matrix, any violation of a water quality statute, rule, permit, license or related order committed by:
(i) A person that has an NPDES permit or has or should have a WPCF permit for a municipal or private utility wastewater treatment facility with a permitted flow of less than two million gallons per day;
(ii) A person that has or should have applied for coverage under a NPDES Stormwater Discharge 1200-C General Permit for a construction site that is more than one, but less than five acres in size;
(iii) A person that has a population of 10,000 or less, as determined by the most recent national census, and either has an NPDES MS4 Stormwater Discharge Permit or has or should have a WPCF Municipal Stormwater UIC System Permit;
(iv) A person who is licensed as an on-site sewage disposal service provider or who has provided sewage disposal services;

(v) A person that owns and either has or should have registered an underground injection control system that disposes of stormwater or sewage, except for a system serving an owner-occupied family residence; and
(vi) A person that has or should have a WPCF Individual Stormwater UIC System Permit;
(F) Any violation of an on-site sewage disposal statute, rule, permit or related order, except for a violation committed by the residential owner-occupant;
(G) Any violation of an underground storage tank statute, rule, permit or related order if the person is the owner, operator or permittee of two to four UST facilities;
(H) Any violation, except a violation related to a spill or release, of a used oil statute, rule, permit or related order committed by a person that is a used oil generator;
(I) Unless specifically listed under another penalty matrix, any violation of a hazardous waste management statute, rule, permit or related order committed by a person that is a conditionally exempt generator if the violation does not impact the person's generator status;
(J) Any violation of ORS Chapter 459 or any violation of a solid waste statute, rule, permit, or related order committed by a local government unit with a population less than 5,000, as determined by the most recent national census;
(K) Any violation of the labeling requirements of ORS 459A.675 through 459A.685; and
(L) Any violation of rigid pesticide container disposal requirements of OAR 340-109-0200 by a conditionally exempt generator of hazardous waste.
(b) The base penalty values for the $2,500 penalty matrix are as follows:
(A) Class I:
(i) Major - $2,500.
(ii) Moderate - $1,250.
(iii) Minor - $625.
(B) Class II:
(i) Major - $1250.
(ii) Moderate - $625.
(iii) Minor - $300.
(C) Class III: $200.
(5) $1,000 Penalty Matrix.
(a) The $1,000 penalty matrix applies to the following:
(A) Unless specifically listed under another penalty matrix, any violation of an open burning statute, rule, permit or related order committed by a residential owner-occupant at the residence;
(B) Any violation of OAR 340-256-0100(1), the failure of vehicle to pass the department vehicle inspection program smoke test within sixty days after receipt of letter from the department indicating that the vehicle was observed with excessive smoke emissions;
(C) Any violation of an asbestos statute, rule, permit or related order committed by the residential owner-occupant;
(D) Any violation of an on-site sewage disposal statute, rule, permit or related order of OAR chapter 340, division 44 by a residential owner-occupant;
(E) Any violation of an underground storage tank statute, rule, permit or related order if the person is the owner, operator or permittee of one UST facility;
(F) Unless specifically listed under another penalty matrix, any violation of a heating oil tank statute, rule, permit or related order;
(G) Any violation of a dry cleaning facility statute, rule, permit or related order;

(H) Any violation of a statute, rule, permit or order relating to disposal of rigid plastic containers, except for violation of the labeling requirements under ORS 459A.675 through 459A.685;
(I) Failure of a person to provide the opportunity to recycle;
(J) Any violation of a statute, rule, permit or order relating to woodstoves, except a violation related to the sale of new or used woodstoves; and
(K) Any violation of an underground injection control (UIC) system statute, rule, permit or related order by a residential owner-occupant, when the UIC disposes of stormwater or sewage.
(b) The base penalty values for the $1,000 penalty matrix are as follows:
(A) Class I:
(i) Major - $1,000.
(ii) Moderate - $500.
(iii) Minor - $250.
(B) Class II:
(i) Major - $500.
(ii) Moderate - $250.
(iii) Minor - $125.
(C) Class III: $100.
Stat. Auth.: ORS 468.020 & ORS 468.090 - ORS 468.140
Stats. Implemented: ORS 459.376, ORS 459.995, ORS 465.900, ORS 465.992, ORS 466.210, ORS 466.990, ORS 466.994, ORS 467.990, ORS 467.050, ORS 468.090 – ORS 468.140 & ORS 468.996

340-012-0145 ***(Adopted-some content from -0045)***
Determination of Aggravating or Mitigating Factors
{Changes to section: Provides that if respondent's prior enforcement history results in aggravation of civil penalty, respondent's history of correcting prior violations cannot completely negate that aggravation unless the Respondent took extraordinary efforts to correct or minimize the impacts of the prior violations. Increases penalty in relation to number of days of violation. Proposes clarifying language to the mental state factor. Provides that respondent can receive a broader range of credit for their efforts to correct the current violation. Provides for a greater range of options under the occurrence factor.
Purpose of section: To more precisely tailor civil penalty amount to achieve deterrence, consistency and equity.}
(1) Each of the aggravating or mitigating factors is determined as described below and then applied to the total civil penalty formula in OAR 340-012-0045(2).
(2) "P" is whether the respondent has any prior significant actions (PSAs). A violation becomes a PSA on the date the Formal Enforcement Action in which it is cited is issued.
(a) Except as otherwise provided in this section, the values for "P" and the finding that supports each are as follows:
(A) 0 if no prior significant actions or if there is insufficient information on which to base a finding;
(B) 1 if the PSA included one Class II violation or two Class III violations; or
(C) 2 if the PSA(s) included one Class I or equivalent violation.
(b) For each additional Class I or equivalent violation in a PSA, the value of "P" is increased by 1.

(c) The value of "P" shall not exceed 10.
(d) If any of the PSAs were issued under ORS 468.996, the value of "P" shall be 10.
(e) In determining the value for the PSAs as described above, the department may reduce the value by:
(A) 2 if the formal enforcement action(s) in which the PSA(s) was cited was issued more than three years before the date the current violation occurred; or
(B) 4 if the formal enforcement action(s) in which the PSA(s) was cited was issued more than five years before the date the current violation occurred.
(f) In applying paragraphs (2)(e)(A) or (B), the value of "P" may not be reduced below zero.
(g) PSAs that are more than ten years old are not included in determining the value for "P".
(3) "H" is respondent's history of correcting prior significant actions.
(a) The values for "H" and the finding that supports each are as follows:
(A) -2 if respondent corrected all PSAs;
(B) -1 if the violations were uncorrectable and respondent took reasonable efforts to minimize the effects of the violations cited as PSAs; or
(C) 0 if there is no prior history or if there is insufficient information on which to base a finding under subsections (3)(A) or (B).
(b) The sum of values for "P" and "H" may not be less than 1 unless respondent took extraordinary efforts to correct or minimize the effects of the PSAs. In no case shall the sum of the "P" factor and the "H" factor be less than zero.
(4) "O" is whether the violation was repeated or ongoing.
(a) The values for "O" and the finding that supports each are as follows:
(A) 0 if the violation existed for one day or less and did not recur on the same day, or if there is insufficient information on which to base a finding;
(B) 2 if the violation recurred on the same day, or existed for or occurred on from more than one day up to and including six days, which need not be consecutive days;
(C) 3 if the violation existed for or occurred from seven to 28 days, which need not be consecutive days; or
(D) 4 if the violation existed for or occurred on more than 28 days, which need not be consecutive days.
(b) The department may, at its discretion, assess separate penalties for each day that a violation occurs. If the department does so, the O factor for each affected violation may be set at 0.
(5) "M" is the mental state of the respondent. In any case where the findings support more than one mental state, the mental state with the highest value will apply.
(a) The values for "M" and the finding that supports each are as follows:
(A) 0 if there is insufficient information to make a finding regarding the values set forth in subsections (5)(a)(B) through (5)(a)(E);
(B) 2 if respondent acted negligently or had constructive knowledge (should have known) that its conduct would be a violation. Holding a permit that prohibits or requires the conduct is presumed to constitute at least constructive knowledge and may be actual knowledge depending on the specific facts;
(C) 6 if respondent acted recklessly or had actual knowledge that its conduct would be a violation. A respondent that received a previous notice of noncompliance, warning letter, pre-enforcement notice or any formal enforcement action for the same violation is presumed to have actual knowledge; or

(D) 10 if respondent acted flagrantly.
(6) "C" is the respondent's efforts to correct the current violation.
(a) The values for "C" and the finding that supports each are as follows:
(A) -3 if respondent took extraordinary efforts to correct the violation, or took extraordinary efforts to minimize the effects of the violation;
(B) -2 if respondent took reasonable efforts to correct the violation, reasonable affirmative efforts to minimize the effects of the violation, or took extraordinary efforts to ensure the violation would not be repeated;
(C) -1 if respondent eventually took efforts to correct the violation, or took affirmative efforts to minimize the effects of the violation;
(D) 0 if there is insufficient information to make a finding or if the violation or the effects of the violation could not be corrected or minimized; or
(E) 2 if respondent did not address the violation as described in paragraphs (6)(a)(A) – (D) above.
Stat. Auth.: ORS 468.020 & ORS 468.090 - ORS 468.140
Stats. Implemented: ORS 459.376, ORS 459.995, ORS 465.900, ORS 465.992, ORS 466.210, ORS 466.990, ORS 466.994, ORS 467.050, ORS 467.990, ORS 468.090 – ORS 468.140, & ORS 468.996

340-012-0150 (Adopt used to be in -0045)
Determination of Economic Benefit
{Changes to section: Provides that economic benefit will be calculated using the EPA's BEN model (use of the model is no longer discretionary). Cleans up the language.
Purpose: To more precisely tailor civil penalty amount to achieve deterrence, consistency and equity.}
(1) The Economic Benefit (EB) is the approximate dollar value of the benefit gained and the costs avoided or delayed as a result of respondent's violations and noncompliance. The economic benefit may be determined using the U.S. Environmental Protection Agency's BEN computer model, as adjusted annually to reflect changes in marginal tax rates, inflation rate and discount rate. Upon request of the respondent, the department will provide the name of the version of the model used and respond to any reasonable request for information about the content or operation of the model. The model's standard values for income tax rates, inflation rate and discount rate are presumed to apply to all respondents unless a specific respondent can demonstrate that the standard value does not reflect that respondent's actual circumstance.
(2) In lieu of information specific to the respondent, the department may make, for use in the applicable model, a reasonable estimate of the benefits gained and the costs avoided or delayed by the respondent as a result of respondent's violations and noncompliance.
(3) The department need not calculate economic benefit if the department makes a reasonable determination that the economic benefit is de minimis or if there is insufficient information reasonably available to the department on which to make an estimate under section (2) of this rule.
(4) The department may assess the economic benefit of the violation whether or not it assesses any other portion of the civil penalty formula in OAR 340-012-0045.
(5) The department's calculation of economic benefit may not cause the civil penalty for a violation to exceed the maximum civil penalty allowed by rule or statute. However, when a

violation has extended over more than one day, the department may treat the violation as extending over at least as many days of violation as necessary to recover the economic benefit calculation. When the purpose of treating a violation as extending over more than one day is to recover the economic benefit calculation, the department has the discretion not to impose the base penalty portion of the civil penalty. Nothing in this section precludes the department from assessing a penalty of up to $10,000 per violation per day.

Stat. Auth.: ORS 468.020 & ORS 468.090 - ORS 468.140

Stats. Implemented: ORS 459.376, ORS 459.995, ORS 465.900, ORS 465.992, ORS 466.210, ORS 466.990, ORS 466.994, ORS 467.050, ORS 467.990, ORS 468.090 – ORS 468.140, ORS & 468.996

340-012-0155 (Amended and renumbered from -0049)
Additional or Alternate Civil Penalties

{Changes to section: Adds civil penalty amount to be assessed for failure to pay UST fee. Removes obsolete sections. Section 1 covers penalties imposed and enforced in accordance with 468.135; Section 2 addresses alternate penalties to those assessed under 468.135. Purpose of section: To accurately reflect alternate statutory requirements. }

(1) The following violations and violators may be subject to additional civil penalties as specified below:

(a) In addition to any other penalty prescribed by these rules, any person who intentionally or recklessly violates any provision of ORS 164.785, ORS 459.205 – 459.426, ORS 459.705 – 459.790, ORS chapters 465, 466, 467, 468, 468A or 468B or any rule or standard or order of the commission adopted or issued pursuant to ORS 459.205 – 459.426, ORS 459.705 – 459.790, ORS chapters 465, 466, 467, 468, 468A, or 468B, that results in or creates the imminent likelihood for an extreme hazard to the public health or that causes extensive damage to the environment, shall incur a civil penalty of up to $100,000. When determining the civil penalty sum to be assessed under this subsection, the director shall apply the following procedures:

(A) Select one of the following base penalties after evaluating the cause of the violation:

(i) $50,000 if the violation was caused intentionally.

(ii) $75,000 if the violation was caused recklessly.

(iii) $100,000 if the violation was caused flagrantly.

(B) Then determine the civil penalty through application of the following formula: BP + [(0.1 x BP)(P + H + O + C)] + EB.

(b) In addition to any other penalty prescribed by these rules, any person who intentionally or negligently causes or permits the discharge of oil to waters of the state will incur a civil penalty not to exceed $20,000 dollars for each violation. The amount of the penalty is determined by doubling the penalty derived from application of the $8,000 penalty matrix in 340-012-0140(2) and the penalty calculation formula contained in OAR 340-012-0045.

(c) In addition to any other penalty prescribed by these rules, any person who willfully or negligently causes or permits the discharge of oil to state waters will incur, in addition to any other penalty derived from application of the $10,000 penalty matrix in 340-012-0140(2) and the penalty calculation formula contained in OAR 340-012-0045, a civil penalty commensurate with the amount of damage incurred. The amount of the penalty will be determined by the director with the advice of the director of the Oregon Department of Fish and Wildlife. In determining the amount of the penalty, the director may consider the gravity of the violation, the previous record of the violator in complying with the provisions of ORS 468B.450 to 468B.460, and such other considerations the director deems appropriate.

(d) In addition to any other penalty prescribed by these rules, any person who has care, custody or control of a hazardous waste or a substance that would be a hazardous waste except for the fact that it is not discarded, useless or unwanted will incur a civil penalty according to the schedule set forth in this subsection for the destruction, due to contamination of food or water supply by such waste or substance, of any of the following wildlife that are property of the state:

(A) Each game mammal other than mountain sheep, mountain goat, elk or silver gray squirrel, $400.

(B) Each mountain sheep or mountain goat, $3,500.

(C) Each elk, $750.

(D) Each silver gray squirrel, $10.

(E) Each game bird other than wild turkey, $10.

(F) Each wild turkey, $50.

(G) Each game fish other than salmon or steelhead trout, $5.

(H) Each salmon or steelhead trout, $125.

(I) Each fur-bearing mammal other than bobcat or fisher, $50.

(J) Each bobcat or fisher, $350.

(K) Each specimen of any wildlife species whose survival is specified by the wildlife laws or the laws of the United States as threatened or endangered, $500.

(L) Each specimen of any wildlife species otherwise protected by the wildlife laws or the laws of the United States, but not otherwise referred to in this subsection, $25.

(e) Any owner or operator of a confined animal feeding operation who has not applied for or does not have a permit required by ORS 468B.050 shall be assessed a civil penalty of $500.

(2) The following violations are subject to the civil penalties specified below, in lieu of civil penalties calculated pursuant to OAR 340-012-0045:

(a) Until December 31, 2005, whenever an underground storage tank fee is due and owing under ORS 466.785 or 466.795, the director may issue a civil penalty of up to $100 for each day the fee is due and owing.

(b) Until December 31, 2005, the department will assess a field penalty as specified under OAR 340-150-0250 for all Class II violations under OAR 340-012-0067 unless the department determines that an owner, operator or permittee is not eligible for the field penalty. In such cases of ineligibility, the penalty will be calculated according to the procedures in OAR chapter 340, division 12.

(c) Any owner or operator of a vessel discharging ballast water in violation of ORS 783.635 may incur a civil penalty not to exceed $5,000 for each violation. In determining the amount of the penalty, the director will consider whether the violation was intentional, negligent or without any fault and will consider the quality and nature of risks created by the violation, the previous record of the violator in complying with the provisions of ORS 468B.450 to 468B.460, and such other considerations the director deems appropriate.

(d) Any owner or operator of a vessel violating the ballast water reporting requirements in ORS 783.640 will incur a civil penalty not to exceed $500 per violation.

Stat. Auth.: ORS 468.020, ORS 468.140, ORS 468.996 & 2001 c.754 sec. 13

Stats. Implemented: ORS 466.992, ORS 466.994, ORS 468.140, ORS 468.996, ORS 468B.220, ORS 468B.450, ORS 783.992 & 2001 c.754 sec. 13

340-012-0160 *(Adopted-mostly new, some from -0045)*

Department Discretion Regarding Penalty Assessment

{Changes: Allows Department to increase the penalty matrix by a level if doing so will achieve specific deterrence.

Purpose: To increase equity.}

(1) The department has the discretion to increase a base penalty determined under OAR 340-012-0140 to that derived using the next highest penalty matrix. Factors that may be taken into consideration include the respondent's compliance history, the likelihood of future violations, the degree of environmental or human health impact, the deterrence impact and other similar factors.

(2) In determining a civil penalty, the director may reduce any penalty by any amount the director deems appropriate if the violator has voluntarily disclosed the violation to the department. In deciding whether a violation has been voluntarily disclosed, the director may take into account any conditions the director deems appropriate, including whether the violation was:

(a) Discovered through an environmental auditing program or a systematic compliance program;

(b) Voluntarily discovered;

(c) Promptly disclosed;

(d) Discovered and disclosed independent of any government or a third party activity or investigation;

(e) Corrected and remedied;

(f) Prevented from recurring;

(g) Repeated;

(h) The cause of significant harm to human health or the environment; and

(i) Disclosed and corrected in a cooperative manner.

(3) Regardless of any other penalty amount listed in this division, the director has the discretion to increase the penalty to $10,000 per violation per day of violation based upon the facts and circumstances of the individual case.

(4) For violations of a department-issued permit with more than one permittee, the department will issue separate civil penalties to each permittee, unless inappropriate, given compliance objectives, including the level of deterrence needed.

Stat. Auth.: ORS 468.020 & ORS 468.090 - ORS 468.140

Stats. Implemented: ORS 183.090, ORS 183.415, ORS 459.376, ORS 459.995, ORS 465.900, ORS 465.992, ORS 466.210, ORS 466.994, ORS 466.996, ORS 467.050, ORS 467.990, ORS 468.090 – ORS 468.140 & ORS 468.996

340-012-0162 *(Adopted- some content from -0045)*

Inability to Pay the Penalty

{Changes: New Section, but moved from old areas. No substantive changes.}

(1) After a penalty is assessed, the department may reduce any penalty based on the respondent's inability to pay the full penalty amount. If the respondent seeks to reduce the penalty, the respondent must provide to the department evidence supporting respondent's inability to pay the full penalty amount in a form required by the department.

(2) If the respondent is currently unable to pay the full penalty amount, the first option is to place the respondent on a payment schedule with interest. The department may reduce the penalty only

after determining that the respondent is unable to meet a payment schedule of a length the department determines is reasonable.
(3) In determining the respondent's ability to pay a civil penalty, the department may use the U.S. Environmental Protection Agency's ABEL computer model to determine a respondent's ability to pay the full civil penalty amount. Upon respondent's request, the department will provide respondent the name of the version of the model used and respond to any reasonable request for information about the content or operation of the model.
(4) The department, at its discretion, may refuse to reduce a civil penalty after performing the ability to pay analysis. In exercising this discretion, the department may take into consideration any factor related to the violations or the respondent, including but not limited to the respondent's mental state, whether the respondent has corrected the violation or taken efforts to ensure the violation will not be repeated, whether the respondent's financial condition poses a serious concern regarding respondent's the ability to remain in compliance, respondent's future ability to pay, and respondent's real property or other assets.
Stat. Auth.: ORS 468.020 & ORS 468.090 - ORS 468.140
Stats. Implemented: ORS 183.090, ORS 183.415, ORS 459.376, ORS 459.995, ORS 465.900, ORS 465.992, ORS 466.210, ORS 466.994, ORS 466.996, ORS 467.050, ORS 467.990, ORS 468.090 – ORS 468.140 & ORS 468.996

340-012-0165 ***(Amended and renumbered from-0048)***
Stipulated Penalties
{Changes: No substantive changes.}
Nothing in OAR chapter 340, division 12 affects the ability of the commission or director to include stipulated penalties in a Mutual Agreement and Order, Consent Order, Consent Decree or any other order or agreement issued under ORS Chapters 183, 454, 459, 465, 466, 467, 468, 468A, or 468B.
Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 183.090, ORS 183.415, ORS 459.376, ORS 459.995, ORS 465.900, ORS 465.992, ORS 466.210, ORS 466.990, ORS 466.994, ORS 467.050, ORS 467.990, ORS 468.090 –ORS 468.140 & ORS 468.996

340-012-0170 ***(Amended and renumbered from -0047)***
Compromise or Settlement of Civil Penalty by Department
{Changes: No substantive changes.}
(1) Any time after service of the formal enforcement action, the department may compromise or settle any civil penalty at any amount that the department deems appropriate.
(2) In determining whether a penalty should be compromised or settled, the department may take into account the following:
(a) New information obtained through further investigation or provided by respondent that relates to the penalty determination factors in OAR 340-012-0045;
(b) The effect of compromise or settlement on deterrence;
(c) Whether respondent has or is willing to employ extraordinary means to correct the violation or maintain compliance;
(d) Whether respondent has had any previous penalties that have been compromised or settled;

(e) Whether respondent has the ability to pay the civil penalty as determined by OAR 340-012-0160;
(f) Whether the compromise or settlement would be consistent with the department's goal of protecting the human health and environment; and
(g) The relative strength or weakness of the department's evidence.
Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 183.090, ORS 183.415, ORS 459.376, ORS 459.995, ORS 465.900, ORS 465.992, ORS 466.210, ORS 466.990, ORS 466.994, ORS 467.050, ORS 467.990, ORS 468.090 –ORS 468.140 & ORS 468.996

List of EQC Decisions, January, 1996 -December, 2003

1. 01/18/1996, **McInnis**, David, Case No. WQIW-NWR-94-311

Facts: McInnis's employees washed out chemical toilets and discharged automotive fluids on the property. The wash water ran off into a Portland storm sewer. After subsequent violations of automotive fluids into catch basins which drained into the Deering Canal, McInnis was fined by DEQ for discharging waste into the waters of the state.

Legal Issues: 1) Is discharging waste into a catch basin which drains into Deering Canal discharging into "waters of the state?"

Hearing Officer: Yes.

2) Were automotive fluids pollution under ORSB.005(3)?

Hearing Officer: Yes, because the definition is very broad and includes discharges that change the taste or odor of water. Automotive fluids change the taste and odor of water. The discharge would also tend to render such waters harmful to public health or to fish. Discharge of such fluids was pollution.

EQC Held: EQC upheld the hearing officer's Hearing Order.

Argument: Appellant McInnis argued on the facts not the law.

2. 01/28/1997, **Henry**, Russell R., Case No. AQOB-WR-94-289

Facts: Henry was fined for open burning of demolition waste within six miles of the corporate city limit of Salem.

Legal Issue: Are the DEQ and EQC bound by procedural court rules and custom?

Henry's Argument: DEQ's Notice of Appeal and Answering Brief and Motion to Deny should be dismissed for procedural shortcomings.

EQC Held: The EQC found that the EQC is not bound by court rules or customs regarding either form or style of pleadings. DEQ's Notice was legally adequate. The Commission can increase a civil penalty assessed without remand to the hearings officer if a) there is sufficient notice to the parties and b) the evidence to support the increase is in the record from the hearing below or the Commission can re-open the record for additional evidence if a party so moves. EQC upheld the decision of the hearings officer.

Appeal: Henry appealed the case to the court of appeals, but later settled with the DEQ, agreeing to pay a fine.

3. 05/02/1997, **Compton, John M.**, Permit No. 95-014

(Not a Division 12 case.)

Facts: Case involves the revocation and request to decommission a sewage disposal system.

Legal Issue: Can an on-site construction permit be revoked once construction is complete?

DEQ's Argument: DEQ can revoke an on-site construction permit once construction is complete.

Compton's Argument: DEQ has no legal authority to order the decommissioning of the system since there was no factual basis for the finding of the public health or water pollution hazard.

Hearing Officer Held: Once construction of the system is complete, the Department does not have authority to revoke the on-site construction permit and must seek decommissioning of the system through enforcement proceedings.
EQC Held: EQC confirmed the decision of the hearings officer. EQC agreed that under 340-71-160, DEQ is required to institute a separate enforcement proceeding to order decommissioning of an on-site system once construction has been completed and a Certificate of Satisfactory Completion has been issued.
Furthermore: EQC directs DEQ to proceed with rulemaking, as appropriate, to clarify whether an on-site construction permit continues as an operating permit after construction is completed.

4. 08/11/1998, **City of Coos Bay**, Case No. WQMW-WR-96-277
Facts: The city obtained an NPDES permit. After a pipe ruptured between the treatment plant and sludge lagoon, DEQ fined the city for discharging wastes that reduced the quality of state waters below the EQC's water quality standard. Additionally, the city was found in violation of a condition of its NPDES permit.
Legal Issue (1): Does the City incur liability under the statute and rules because of violations due to its failure to effect permanent repairs to the pressure pipeline prior to its rupture and spill?
City's Argument: Argues that not conducting a permanent repair was not a violation under the statutes and rules for which penalties or orders could be imposed.
EQC Held: The disposal of sewage can be hazardous to the health and welfare of the public. Even though the City did not intentionally direct the partially-treated sewage into the bay, its acts or omissions were the cause of the sewage entering the bay and were sufficient to meet any "placement," "cause pollution" or "discharge" requirements of the statutes or rules. Likewise, the City's choice not to repair the pipeline led to its permit violation, so it is responsible.
Legal Issue (2): Can a party be liable under ORS 468B.050(1) for a discharge when the party has an NPDES permit?
City's Argument: As long as it had a permit, it could not be held to violate ORS 468B.050(1).
EQC Held: The city is liable under ORS 468B.050. The city's interpretation is inconsistent with the express language in the statute and the statutory scheme as a whole.
Legal Issue (3): Can a party be liable under ORS 468B.050(1)(b) for discharging wastes into the waters of the state without a permit authorizing such discharge if it has not been proven the party had the intent to violate the statute?
City's Argument: Based on the word "discharge" in the statute, a party must intentionally mean to violate the statute for it to be a violation, and this *mens rea* must be proven.
EQC Held: No, strict liability applies for violations of ORS 468B.050. Strict liability is the longstanding custom of EQC and DEQ. Nothing in the statute leads the EQC to believe "discharge" was meant to be read to require intent. Strict liability for administrative violations follows from ORS 468.130(2)(f). When the legislature has intended to require a culpable mental state, it has generally done so expressly. Strict liability is more consistent with the general legislative policies governing water quality protection.

Legal Issue(4): Can a party be liable under ORS 468B.050(1)(b) for discharging wastes that reduce the quality of state waters below the water quality standard established by the EQC when it has not been proven the party had the intent to violate the statute?
City's Argument: a) There is a legislative scheme evident in ORS 468B.025(1)(a) which requires proof of negligence and in ORS 468B.025(1)(b) which requires proof of intent. b) The City argues the verbs "cause," "discharge" and "violate" in the statute show an intent requirement. c) The City argues that since the violations are also public nuisances, it should be inferred a culpable mental state is required.
EQC Held: Yes, a party is liable under this statute without proof of intent to violate the statute. a) The statutes referred to do not establish a widespread legislative intent to require proof of intent. When placed in their historical context, these statutes can not be viewed as proving any general rule regarding an intent requirement. b) The plain ordinary meaning of these verbs do not require or suggest intent be an element of the violation. c) The EQC finds no relevance in the fact that ORS 468B.025(3) finds these violations are also public nuisances. The legal authority relied upon by the City applies only to tort suits brought by a private party to recover money damages.
Appeal: The Oregon Court of Appeals reversed the EQC on the fine given under ORS 468B.050(1)(a) (*Legal Issue 2 above*). The Court of Appeals held that ORS 468B.050(1)(a) establishes when a permit is required but says nothing about violations of that permit. The EQC's contention that any discharge in violation of the conditions of a permit amounts to discharging without a permit in violation of 468B.050(1)(a) is wrong. The Court held that violations of a permit are covered under ORS 468B.025(2), and that the two statutes are designed to work together.

<u>5. 10/30/1998, **Ferguson, William H.**, Case No. AQFB-WR-96-351</u>
Facts: Ferguson (respondent) removed a sample of duct wrap for testing from a renovation project after he had been informed by a Department Asbestos Control Analyst that the wrap might contain asbestos. Respondent was fined for not following ORS and OAR asbestos rules.
Legal Issue (1): Was Respondent (Ferguson) engaged in an "asbestos abatement project" before his notification from the Asbestos analyst that his site might contain asbestos?
Hearing Officer: No. Despite the definition in OAR-340-032-5590(3) and the strict liability in ORS 468.140(1)(f), Respondent was not engaged in an asbestos abatement project before the asbestos notification. He had taken all reasonable steps, so liability did not attach prior to notification. (* For some reason, this led the hearings officer not to apply liability directly after notification as well, unlike the ECQ.)
DEQ: Strict liability applies to the respondent's violation.
ECQ Held: Strict liability does apply in this situation. When the Respondent handled the material after learning it might contain asbestos, liability attached. The hearings officer erred in his determinations on this matter.
Legal Issue (2): When the Respondent bagged and removed the material, did he violate OAR 340-32-5620(1) by failing to notify the DEQ of an asbestos abatement project?
ECQ held: Since the Respondent did not know the material in the building contained asbestos (because it had not yet been tested), and since the Respondent was only involved in the asbestos abatement to the extent that he bagged an initial sample, it is not appropriate to assess violation under this provision of the rule.

<u>6. 03/17/2000, **Cascade General**, Case No. HW-NWR-97-176</u>
Facts: Cascade flushed Tectyl products through the engines of a Navy ship. After the job, Cascade hired a company to take the used Tectyls, along with used oil, away for recycling.
Legal Issue 1: Were the Tectyls hazardous waste?
Cascade General's Argument: No, the Tectyls were used oil and, thus, exempt from the definition of hazardous waste and the manifest requirement.
DEQ's Argument: The Tectyls were hazardous waste because the flashpoints of Tectyls were less than 140 degrees Fahrenheit, a characteristic of hazardous waste. DEQ interpreted the definition of used oil in EQC's rules to exclude corrosion inhibitors such as Tectyls.
EQC held: The Tectyls were hazardous waste. Since the Tectyls have a low flashpoint characteristic of hazardous waste, Cascade General had the burden of proving they were not. Cascade General's affirmative defenses fail because a) the Tectyls were not a virgin commercial product; b) the Tectyls were not mixed with enough oil to raise their flashpoint above the hazardous waste characteristic, and the mixing took place after property transfer; and c) the Tectyls do not fall under the "used oil" exception because some of the Tectyls which were disposed of had not been run through the ship, so they were not "used." (The EQC did not reach the question of whether the Tectyls which had been run through the ship qualified as "used oil.")
Legal Issue 2: Did Cascade perform an adequate hazardous waste determination?
DEQ's Argument: Cascade General did not perform a correct determination as it did not arrive at an accurate conclusion.
Hearing Officer: Found Cascade did perform an adequate hazardous waste determination. Cascade's determination revealed the Tectyls had a characteristic of hazardous waste. It simply discounted the results.
EQC Held: A majority of the Commission failed to either affirm or reverse the Hearing Officer's decision, so the Hearing Officer's decision on this point stands.

<u>7. 12/19/2001, **Reggie H. Huff**, Case No. WQ/I-NWR-00-125</u>
Facts: Huff discharged a solution containing ethylene glycol and metal leaching into a storm drain, believing it was connected to the city's sanitary system.
Legal Issue 1: Was the waste "likely to escape or be carried into waters of the state" as prohibited in ORS 468B.025(1)?
Huff's Argument: The ethylene glycol solution was dumped down a storm drain which connected to a dry sump system. Since the solution would have been absorbed by the ground, the solution would never reach any waters of the state, including groundwater.
DEQ's Argument: The dry sump system is designed so fluid held within can seep into the surrounding ground, which can contain groundwater. Rainwater can flush the dry sump system, driving fluid into the ground and groundwater. Therefore, any fluid placed in a dry sump system can reach waters of the state.
Hearing Officer: Held that the fluid put into dry sump system fell under 468B.025 prohibition against placing waste in a location where such wastes are "likely to escape or be carried into the waters of the state by any means…"

EQC Held: The EQC affirmed the order of the Hearing Officer with the following clarification: "The Commission concludes the term "likely" as used in ORS468B.025 should be given its ordinary and common meaning and applied on a case-by-case basis. The Hearing Officer correctly found that the waste water was placed in a storm drain. The storm drain was designed to convey storm water into the surrounding ground and groundwater. Under these circumstances, the waste water was placed in a location where it was likely to reach waters of the state."
Appeal: Reggie Huff has appealed the EQC decision to the Court of Appeals. The appeal is ongoing.

8. 02/11/2002, **Ronald C. LaFranchi**, Case No. WP/M-SPWR-00-009
Facts: A LaFranchi truck carrying gasoline collided with a pickup truck. The tanks of gasoline rolled down an embankment near Knowles Creek. After all the clean up, some gasoline still made it into Knowles Creek. The LaFranchi truck driver was found negligent for his role in the accident.
Legal Issue: When a Respondent's employee acts negligently, is it correct to assign a negligent "R" factor to the Respondent when calculating the penalty formula?
LaFranchi's Argument: Ron LaFranchi was not negligent, so he should not be penalized for negligence.
DEQ's Argument: An employer is responsible for his employees.
Hearing Officer: The DEQ cannot penalize the Respondent for the negligence of his employee. The DEQ would have to establish that the Respondent himself acted negligently. In this case, the DEQ would have to prove the Respondent had knowledge that his employee was in some way deficient and failed to act on that knowledge.
EQC Held: Under OAR 349-012-0045(1)(C)(D), "the act of the respondent" includes both direct acts and also the acts of employees for which the Respondent is legally responsible. As long as an employee is acting within the scope of his employment, his employer is responsible for his actions. Therefore, the DEQ was correct in assessing the Respondent with a negligent "2" penalty in its penalty formula on the basis that the Respondent's employee was proven negligent in this action.

9. 08/20/2002, **City of Scappoose**, Case No. WQ/M-NWR-00-010
Facts: The City of Scappoose's representative incorrectly conducted NPDES monitoring tests and intentionally reported inaccurate data. A DEQ inspection led to the bad reporting becoming known.
Legal Issue 1: Did the respondent violate a condition of its NPDES permit by intentionally reporting false test results on its discharge monitoring report?
DEQ Argument: The City of Scappoose, acting through its plant superintendent, Wabschall, intentionally reported false test results on the monthly DMR for December 1998 the City filed with DEQ, and thus violated its NPDES permit.
The City's Argument: Wabschall's actions do not meet the definition of "intentional" in the DEQ administrative rules. Since Wabschall knew the data from the tests were inaccurate, his estimates based on that data were not intentionally false. He believed his estimates had a sound basis.
Hearing Officer: Under the permit conditions, the city was required to report accurate test results reached by following specified test methodology. Wabschall's estimating

obviously did not satisfy the permit requirements, so he was intentionally reporting inaccurate data. Thus, the City of Scappoose violated its NPDES permit monitoring condition.

Legal Issue 2: If respondent intentionally reported false test results, was its conduct flagrant?

DEQ Argument: When he reported inaccurate monitoring data, Wabschall committed a flagrant violation.

Hearing Officer: The DEQ did not prove by a preponderance of the evidence that Wabschall consciously set out to commit the violation. Acting fragrantly implies planning or deliberately setting out in advance to violate the law. Although Wabschall had a knowledge of the law and the NPDES permit provisions, the DEQ did not prove that he set out to violate the law. If Wabschall had planned to violate the law, he could have recorded false test data which would have made it nearly impossible to discover the violation. In this case, he recorded his flawed test results and admitted he had used estimates when asked. He did intentionally report false test values, but DEQ did not prove he flagrantly did so.

EQC Held: Affirmed the Hearing Order of the Hearing Officer.

Appeal: The City of Scappoose has appealed the EQC decision to the Court of Appeals on the grounds that the order erroneously interprets provisions of law and that a correct interpretation of the law would result in no civil penalty. The case has been settled and the City withdrew its appeal.

10. 01/09/2003, **Caleb Siaw,** Case No. WQ/D-NWR-99-186

Facts: Respondent signed an MAO with the DEQ regarding a sewage system the respondent operates at his mobile home park. Despite agreeing to in the MAO, the respondent failed to submit information to complete his application for a WPCF permit. Despite agreeing to in the MAO, the respondent failed to submit holding tank receipts for the previous month.

Issues: The main issues in the case do not involve any interpretation of DEQ Division 12 statutes or regulations and, therefore, are not reported here.

Legal Issue: Under ORS 468.140, does the DEQ have the discretion to issue a fine based upon one daily civil penalty for each month a violation occurred, or must the DEQ either issue a fine for only one day of violation or every day of violation?

Hearing Officer: The DEQ can assess a penalty based upon one daily civil penalty for each month a violation occurred. Although the DEQ did not specify the day of each month on which it sought penalty (which the DEQ should have done), it did state that it elected a penalty for each month in which a daily violation occurred. Thus, the DEQ was essentially acting within its statutory power.

EQC Held: Affirmed the Hearing Order of the Hearing Officer.

Appeal: Caleb Siaw has appealed the EQC decision to the Court of Appeals. The appeal is ongoing.

11. 01/30/2003(EQC Appeal date), **Jackson & Sons**, Case No. 02-GAP-00020
Facts: Jackson & Sons mounded pea gravel around a 2500 gallon aboveground tank full of gasoline and applied for and obtained an underground storage tank permit from the DEQ. After receiving a letter from DEQ to stop using the tank, Jackson & Sons removed the pea gravel.
Legal Issue: Does Jackson's tank meet the legal definition of an underground storage tank subject to EQC regulation?
Jackson Argument: Commonsense shows the tank was not beneath the surface of the ground. Since the regulations define underground storage tanks as those tanks "beneath the surface of the ground," this tank was not an underground storage tank.
DEQ Argument: A tank, including pipes, is an underground storage tank when ten percent or more is "beneath the surface of the ground." OAR 340-150-0010 (adopting by reference 40 CFR 280.12) defines "beneath the surface of the ground" as "beneath the surface of the ground or otherwise covered with earthen materials." Jackson's tank was not under the ground; however, the tank was more than ten percent covered with earthen materials, thus meeting the definition of "beneath the surface of the ground." Therefore, the tank was an underground storage tank under the EQC's rules.
Hearing Officer: Jackson's tank did not meet the definition of an underground storage tank because it was not beneath the surface of the ground. DEQ did not meet its burden of proof, showing this tank meet the definition. By administrative rule, DEQ adopted the definition of underground storage tank prescribed by the US EPA in 40 CFR 280. OAR 340-150-0002. These statutes and rules characterize an underground storage tank as "beneath the surface of the ground." The descriptive phrase "beneath the surface of the ground" is not given a specific or peculiar meaning by statute or rule.
EQC Held: At the hearing, the EQC affirmed the Hearing Officer's Hearing Order.

12. 05/08/2003, **Pegasus Corporation**, Case No. AQ/AB-WR-02-059
Facts: Pegasus Corporation (Pegasus) allowed a contractor to perform an asbestos abatement project without a license on a facility it operated.
Legal Issue: Was Pegasus an "owner or operator" such that it would be required to ensure that only licensed asbestos abatement contractors remove asbestos-containing siding from a FedEx Terminal in North Bend, Oregon?
Pegasus Argument: Pegasus argued that it was not the operator of the FedEx Terminal, and was not responsible for ensuring that only a licensed asbestos abatement contractor remove the asbestos-containing siding.
DEQ Argument: Pegasus was an operator of the FedEx Terminal, and was responsible for ensuring that only a licensed asbestos abatement contractor remove the asbestos-containing siding.
Hearing Officer: Although the term "owner or operator" was not defined at the time of the alleged violation, the term was defined under ORS 465.200(19) of the Hazardous Waste and Hazardous Materials I chapter, and because asbestos is defined as a hazardous substance under ORS 465.200(15), Pegasus had notice as a lessor and lessee of the FedEx Terminal that any act committed in violation of ORS 468.715(1) and OAR 340-248-0110(2) was done at its peril. DEQ's policy of treating lessors as "owners or operators" was consistent with the definition provided under ORS 465.200(15).
EQC Held: The EQC affirmed the Hearing Officer's Order.

13. 12/4/03, **Luhr Jensen & Sons, Inc.**, Case No. LH/HW-ER-01-275
Facts: Luhr Jensen & Sons, Inc. (Luhr Jensen) is a privately held Oregon corporation that manufactures fishing lures and other products in Hood River, Oregon. Luhr Jensen operates three facilities in Hood River. The fishing lure manufacturing process generates regulated hazardous wastes from electroplating and painting of lures and other products. As a result of DEQ inspections in August 2001, DEQ issued a Notice of Assessment of Civil Penalty in April 2002. The Notice alleged that Luhr Jensen committed 11 hazardous waste violations and three water quality violations and assessed penalties totaling $66,534 for the 14 alleged violations. Prior to the contested case hearing in this case, the Department amended its Notice and reduced the penalties for the hazardous waste violations from $66,354 to $34,801. The hearing officer upheld the amended proposed penalty in its entirety, and Luhr Jensen appealed to the Commission.
Legal Issues: Did Respondent commit several of the hazardous waste violations? Did Respondent violate its general NPDES permit by failing to monitor stormwater and submit discharge monitoring reports? Is the proposed civil penalty warranted?
Hearing Officer: Upheld all of the civil penalties in total.
EQC Held: Respondent committed all of the alleged violations. During the argument, the Department agreed with the petitioner to reduce the "R" factor for one of the hazardous waste violations from 6 ("intentional") to 2 ("negligent"), thereby reducing the penalty from $34,801 to $34,401.

14. 12/4/03, **American Exchange Services, Inc.**, Case No. AQ/A-WR-98-186
Facts: Respondent is an Oregon corporation that acts as a facilitator for tax-deferred exchange transactions under the Internal Revenue Code. As part of these tax-deferred exchanges, Respondent temporarily holds legal title to real property on behalf of its customers so they can take advantage of tax deferrals. Respondent held legal title to real property and its improvements in Medford. Respondent entered into a real property exchange agreement with its agent William Ferguson giving Ferguson authority to manage, operate, maintain and repair the property. During the course of the agreement, Ferguson had the building on the property demolished. The building contained asbestos.
Legal Issues: Who is responsible for the asbestos-related violations? As a section 1031 exchange company, is Respondent exempt from liability? Can Respondent assert affirmative defenses not raised in its answer? Can the negligence of Respondent's agent be imputed to Respondent when the negligence is at least in part based on the agent's prior knowledge?
Hearing Officer: Upheld the violation citations and the penalty, except gave Respondent credit for cooperativeness for having the openly accumulated asbestos-containing material cleaned up, which the Department had not.
EQC Held: The Commission upheld the hearing officer's decision in its entirety. Respondent cannot assert affirmative defenses or legal arguments that were not raised in its answer. Ferguson's negligence can be imputed to Respondent even though the negligence is at least in part based on Ferguson's prior knowledge.

DEPARTMENT OF ENVIRONMENTAL QUALITY
NOTICE OF PROPOSED RULEMAKING HEARING
A Statement of Need and Fiscal Impact accompanies this form.

Department of Environmental Quality — Agency and Division
OAR Chapter 340 — Administrative Rules Chapter Number

Rachel Sakata — Rules Coordinator
503-229-5659 — Telephone

811 SW Sixth Ave., Portland, OR 97204 — Sakata.Rachel@deq.state.or.us
Address/e-mail

HEARINGS

Hearing Date, Time	Location	Hearings Officer
1/26/04, 6:30 p.m.	State Office Building, 700 S.E. Emigrant, First Floor Conf. Room, Room 130, Pendleton, OR 97801	Anne Price or Jane Hickman
1/27/ 04, 6:30 p.m.	DEQ, 2146 NE 4th, Bend, OR 97701	Anne Price or Jane Hickman (DEQ Employees)
1/28/04, 2:00 p.m.	DEQ, 811 SW 6th Avenue, Rm. 3 A/B, Portland, OR 97204	Anne Price or Jane Hickman (DEQ Employees)
1/28/04, 6:30 p.m.	DEQ, 750 Front St. NE, Ste 120, Salem, OR 97301	Anne Price or Jane Hickman (DEQ Employees)
1/29/04, 6:30 p.m.	Community Justice Center, 1101 W. Main St., Medford, OR 97501	Anne Price or Jane Hickman (DEQ Employees)

Are auxiliary aids for persons with disabilities available upon advance request? XYes No

LAST DAY FOR PUBLIC COMMENT: JANUARY 30, 2004, 5:00 p.m.

RULEMAKING ACTION

ADOPT: 340-012-0058; 340-012-0072; 340-012-0079; 340-012-0097; 340-012-0130; 340-012-0145; 340-012-0150; 340-012-0160; 340-012-0162

AMEND: 340-012-0026; 340-012-0030; 340-012-0041; 340-012-0045; 340-012-0050; 340-012-0055; 340-012-0060; 340-012-0065; 340-012-0066; 340-012-0067; 340-012-0068; 340-012-0073; 340-012-0081; 340-012-0082; 340-012-0083; 340-150-0250

REPEAL: 340-012-0028; 340-012-0035; 340-012-0046, 340-012-0052

AMEND AND RENUMBER: 340-012-0040 to 340-012-0038; 340-012-0071 to 340-012-100; 340-012-0072 to 340-012-0105; 340-012-0090 to 340-012-0135; 340-012-0042 to 340-012-0140; 340-012-0049 to 340-012-0155; 340-012-0048 to 340-0012-0165; 340-012-0047 to 340-012-0170

Stat. Auth.: ORS 459.376(1); ORS 459.995; ORS 468.020(1); ORS 468.035(1)(j); ORS 468.045(1)(c); 465.900; ORS 466.210; ORS 466.990; ORS 466.992; ORS 466.994; ORS 783.992

Other Authority:

Stats. Implemented: ORS 454.635 - ORS 454.645, ORS 459.376, ORS 459.995, ORS 465.900, ORS 466.210, ORS 466.990 – ORS 466.994, ORS 468.090 - ORS 468.140, ORS 468.996, ORS 468B.025, ORS 468B.220 & ORS 468B.450; ORS 783.992

RULE SUMMARY

The proposed rules apply to individuals, businesses, and federal, state and local government agencies against whom the Department enforces its rules and enabling statutes. These proposed rules do not create any new duties for the regulated community but, due to proposed changes in base penalties, matrix assignments, classifications and selected magnitudes, penalty amounts for a given violation may increase or decrease if a given violation is referred for formal enforcement. Some of the main changes to the Division 12 rules include:

- Clarifying the differences between informal, pre-enforcement and formal enforcement processes.
- Including more individual violation classifications which historically have been classified under the general, "default" classificati
- Adjusting violation classifications in all programs which may increase or decrease the civil penalty calculated for those violations.
- Modifying the penalty matrices, including increasing the values of the $10,000 penalty matrix, adding a new intermediate penalty matrix to start at $6,000, increasing the values for the $2,500 matrix, decreasing the values for the $1,000 matrix and eliminating the $500 penalty matrix. The matrices have also been modified so that small business and other smaller permitted sources, in most cases, fall into a lower penalty matrix.
- Modifying the magnitude determination process (e.g., pre-determined, selected and general).
- Modifying the notice of noncompliance process to allow for a two-tiered notification (e.g., Warning Letters and Pre-Enforcement Notices).
- Amending a rule from the tanks program (OAR 340-150-0250) regarding the expedited enforcement process to provide that all Class II violations related to underground storage tanks are assigned a field penalty amount of $50 rather than assigning some violations a penalty of $75.

To submit comments, request a copy of the proposed rules or request additional information, please contact Jane K. Hickman at the Department of Environmental Quality, Office of Compliance and Enforcement, 811 S.W. 6th Avenue, Portland, OR 97204, phone toll free in Oregon at 1 (800) 452-4011, ext. 5555 or local (503) 229-5555, email hickman.jane@deq.state.or.us; or fax (503) 229-6762. The proposed rules may also be viewed online at http://www.deq.state.or.us/programs/enforcement/index.htm

ORS 183.335(2)(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.

Rachel Sakata 12/15/03
Signature and Date

RACHEL SAKATA
Printed name

*The *Oregon Bulletin* is published on the 1st of each month and updates the rule text found in the Oregon Administrative Rules Compilation. Notice forms must be submitted to the Administrative Rules Unit, Oregon State Archives, 800 Summer Street NE, Salem, Oregon 97310 by 5:00 pm on the 15th day of the preceding month unless this deadline falls on a Saturday, Sunday or legal holiday when Notice forms are accepted until 5:00pm on the preceding workday. ARC 920-1997

State of Oregon
Department of Environmental Quality **Memorandum**

Date: December 29, 2003

To: Interested and Affected Public

Subject: Rulemaking Proposal – Rule Revisions Regarding Formal Enforcement Actions, including Assessment of Civil Penalties and Orders

This memorandum contains information on a proposal by the Department of Environmental Quality (Department or DEQ) to amend the Department's rules [Oregon Administrative Rules (OAR) Chapter 340, Division 12] governing the procedures for enforcing Oregon's environmental regulations and statutes, including civil penalty assessments and orders. The proposal also includes an amendment to OAR Chapter 340, Division 150, the rules pertaining to expedited enforcement of underground storage tank (UST) rules. That amendment will set the field penalty amount for all Class II UST violations eligible for the expedited enforcement process at $50 (some are currently set at $75). Pursuant to Oregon Revised Statute (ORS) 183.335, this memorandum also provides information about the Environmental Quality Commission's intended action to adopt a rule.

The Department has the statutory authority to adopt regulations regarding compliance and enforcement procedures under ORS 468.020. These rules implement ORS 183.464.

Whom does this rule affect including the public, regulated community or other agencies, and how does it affect these groups?

The proposed rules apply to individuals, businesses, and federal, state and local government agencies against whom the Department enforces its rules and enabling statutes. These proposed rules do not create any new duties for the regulated community. However, due to proposed changes in base penalties, matrix assignments, classifications and selected magnitudes, penalty amounts for a given violation may increase or decrease if a given violation is referred for formal enforcement. The Compliance and Enforcement Guidance Manual (Guidance Manual) provides the DEQ regional offices guidance regarding which violations, and thus violators, should be referred for formal enforcement. Not everyone who has committed a documented violation will be referred for formal enforcement.

Background on the Development of the Rulemaking Proposal

Why is there a need for this rule?

During the 2000-2001 legislative session, members of the legislature raised the issue of whether DEQ is fair and consistent in its formal enforcement actions. They compared the civil penalty for illegal discharges to state waters from a large municipality to those assessed to small towns with seemingly similar violations. Legislators observed that the small towns appear to suffer a disparate impact from their civil penalties. Stephanie Hallock, DEQ Director, also observed during her review of formal enforcement actions that individuals and small businesses may receive the same civil penalties as large, sophisticated businesses for the same type of violation. She questioned whether this was always appropriate.

Director Hallock has made it a high priority in the Department's strategic plan to ensure that the Department implements an effective compliance and enforcement program that is understandable, encourages compliance, is equitable, and appropriately reflects the severity of the violation. The Department's Office of Compliance and Enforcement (OCE) was commissioned with reviewing OAR 340, Division 12, the enforcement regulations, with these objective in mind. An internal rulemaking team and an external Advisory Group were formed to assist with this regulatory review. Work began on this rulemaking in January 2002.

How was the rule developed?

This has been a complex rulemaking because these rules affect every agency program. This rulemaking has involved the participation of more staff members than possibly any other rulemaking undertaken by the agency. Along with reviewing the rules, the Department is amending the Guidance Manual to promote certainty and consistency in implementation of the rules.

The Department's senior managers appointed an internal rulemaking team of eight members in January 2002. The rulemaking team members are managers or lead staff representing each of the agency's program areas of water quality, air quality, land quality (which includes hazardous waste, solid waste and tanks). Some rulemaking team members work in regional offices (which implement the rules) and some work in headquarters (where policies and programs are developed). The internal rulemaking team met approximately eighteen times, from February 2002 through December 2003.

The Department established an external Advisory Group in January 2003, after the rulemaking team narrowed the scope of issues and developed an initial draft of proposed amendments. The advisory group was comprised of thirteen regular members and two auxiliary members. See Attachment E: Advisory Group Membership List. The regular members represented big and small businesses, small cities, public water management agencies, the Association of Oregon Industries and environmental groups. The auxiliary members represented Lane Regional Air

Pollution Agency and the U.S. Environmental Protection Agency. The Advisory Group met seven times, from February 2003 to January 2004.

Internal rulemaking team members drafted amendments to the rules and provided the amendments to the Advisory Group. The Advisory Group reviewed proposed amendments to the rules and commented. The Department responded to those comments, by either incorporating suggested changes or explaining why they were not incorporated. The more generally applicable issues related to the rulemaking are presented in Attachment D – Summary of Key Rulemaking Issues.

Anne Price, OCE Administrator, provided several informational updates to the Environmental Quality Commission on the rulemaking. OCE distributed a draft version of the proposed rules to all DEQ staff statewide for review and comment in April 2003. Rulemaking team members responded directly to staff, either incorporating their suggestions or explaining why they were not incorporated. In October 2003 OCE issued another redlined version of the proposed rules to the Advisory Group and the rulemaking team. The Advisory Group commented on that version, which is substantially similar to these proposed rules, at its meeting on October 14, 2003. (See Attachment D – Summary of Key Rulemaking Issues.)

The Department relied upon the following documents in developing this rule proposal:

- DEQ Instructions for Rulemaking
- DEQ, Office of Compliance and Enforcement, Enforcement Guidance for Field Staff, Draft – May 2002
- EPA's RCRA Penalty Policy (1990)

Copies of these documents can be reviewed at the Department of Environmental Quality's office at 811 S.W. 6th Avenue, Portland, Oregon. Please contact Jane Hickman at (503) 229-5555 to schedule a reasonable time for review.

What was the scope of this rulemaking?

While the Division 12 rules specifically relate to the penalty assessment process once a violator has been referred for formal enforcement, many issues regarding equity and clarity of the enforcement process stem from steps in the compliance process much earlier than the penalty calculation. For example, internal rulemaking team members and Advisory Group members wished to discuss issues involving the interaction between an inspector and a facility that is being inspected. They wanted to discuss the necessary documentation, the process, and how the agency and the parties interact. Many of these issues were discussed and the outcomes will be integrated into internal agency guidance (e.g., the Compliance and Enforcement Guidance Manual), document templates and policy directives that will guide the complete inspection, compliance and enforcement process from start to finish. The scope of this rulemaking is the point when a violation has already been documented and is being referred for formal enforcement.

The specific scope of the Division 12 rulemaking review centered on the five issue areas listed below.

a) **Review of Existing Division 12 Violations** – Compare the existing Division 12 violations to the programmatic rules (e.g., water quality permitting, hazardous waste generation) they are implementing to:
   i) Make sure language is clear and enforceable;
   ii) Make sure language is consistent with the underlying rules; and
   iii) Make sure more recent program rules have appropriate violations listed in Division 12.

b) **Review the Classification of Violations** -- Compare the violations in the same classification (e.g., Class I) across programs to assess whether they are being classified consistently, to the extent possible and practical.

c) **Review the Violation Magnitude Determination Process** -- Assess the content and process associated with determining major, moderate and minor magnitudes to evaluate whether:
   i) The selected magnitudes are consistent with the severity of the impact;
   ii) It is clear when selected magnitude versus general magnitudes (previously defined in OAR 340-012-0045(1)(a)(B)) are to be used; and
   iii) Any other changes are needed to the magnitude determination process.

d) **Review the Penalty Matrices** -- Review the current penalty matrices ($10,000, $2,500, $1,000, $500 and $100,000) to determine if they provide a deterrence from future violations and/or if an adequate penalty is assigned in light of the severity of a violation; and consider whether the matrices should be more clearly delineated by the type of violators, (e.g., small municipalities or individuals).

e) **Review the Penalty Equation, including Aggravating/Mitigating Factors and Economic Benefit** -- Determine whether the current factors and their assigned values are appropriate to aggravate or mitigate a penalty.

This regulatory review has resulted in a number of adjustments to the existing civil penalty calculation process, as opposed to a full scale revamping of the process.

Some of the main changes to the Division 12 rules include:

- Clarifying the differences between informal, pre-enforcement and formal enforcement processes.
- Specifically including more individual violation classifications which historically have been classified under the general, "default" classification.
- Adjusting violation classifications in all programs which may increase or decrease the civil penalty calculated for those violations.
- Modifying the penalty matrices, including increasing the values of the $10,000 penalty matrix, adding a new intermediate penalty matrix to start at $6,000, increasing the values for the $2,500 matrix, decreasing the values for the $1,000 matrix and eliminating the $500 penalty matrix. The matrices have also been modified so that small business and other smaller permitted sources, in most cases, fall into a lower penalty matrix.
- Modifying the magnitude determination process (e.g., pre-determined, selected and general).
- Modifying the notice of noncompliance process to allow for a two-tiered notification (e.g., Warning Letters and Pre-Enforcement Notices).

The proposed changes are interconnected, so it is not possible to generalize about how they will effect a particular individual or facility. If there is a particular violation or regulated entity sector you are interested in, the Department recommends that you refer to the actual rule language to assess the potential impact of this proposal. If you have any questions during your review, please do not hesitate to call or e-mail Jane Hickman, from the Office of Compliance and Enforcement at (503) 229-5555 or hickman.jane@deq.state.or.us for clarification.

How will the rule be implemented?
OCE and the Department programs will provide implementation guidance to staff in the Compliance and Enforcement Guidance Manual, which is currently being updated to reflect changes in referral criteria (i.e., which violations should be referred for formal enforcement and which ones should not be referred until repeated occurrences). To promote consistency in enforcement across the different regions of the state, the guidance manual applies the statewide criteria for referral of some violations. DEQ's air, water and land quality programs have developed fact-specific guidance for referral of some violations.

In addition, OCE staff will visit DEQ's field offices to provide staff training on changes in the rules, along with changes in the Guidance. Consistent with current practice, the Department also will provide a copy of Division 12 to respondents along with the formal enforcement actions. In addition, the Department will develop an enforcement process fact sheet to clarify the major changes to the enforcement and civil penalty calculation processes.

Are there time constraints to this rule?
No.

Hearing Process Details
The Department is conducting public hearings at which comments will be accepted either orally or in writing.* Anne Price or Jane Hickman, Department employees, will be the Presiding Officer at the hearings. At each hearing location, the Department will hold a brief public information session at the times noted. The actual hearing will begin approximately 30 minutes after the start times listed below. The hearing locations and times are as follows:

Date: Monday, January 26, 2004
Time: 6:30 p.m.
Place: State Office Building
700 S.E. Emigrant, First Floor Conference Room, Room 130
Pendleton, Oregon

Date: Tuesday, January 27, 2004
Time: 6:30 p.m.
Place: DEQ Offices
2146 N.E. 4th
Bend, Oregon

Date: Wednesday, January 28, 2004
Time: 11:00 a.m.
Place: DEQ Offices
811 SW 6th Avenue, Conference Rm. 3A
Portland, Oregon

Date: Wednesday, January 28, 2004
Time: 6:30 p.m.
Place: DEQ Offices
750 Front Street N.E., Suite 120
Salem, Oregon

* PLEASE NOTIFY DEQ ABOUT ANY SPECIAL PHYSICAL OR LANGUAGE ACCOMODATIONS YOU MAY NEED AS FAR IN ADVANCE OF THE HEARING AS POSSIBLE. TO MAKE THESE ARRANGEMENTS, PLEASE CONTACT DEQ PUBLIC AFFAIRS AT 1-800-452-4011 IN OREGON OR 503-229-5317. PEOPLE WITH HEARING IMPAIRMENTS MAY CALL DEQ's TDD NUMBER AT 503-229-6993.

Date: Thursday, January 29, 2004
Time: 6:30 p.m.
Place: Community Justice Center
1101 W. Main Street, First Floor Conference Room
Medford, Oregon

Written comments can be presented at the hearing or to the Department any time prior to the date above. Comments should be sent to: Department of Environmental Quality, Attn: Anne Price, 811 S.W. 6th Avenue, Portland, Oregon 97204.

Deadline for submittal of Written Comments: January 30, 2004, 5:00 p.m.

In accordance with ORS 183.335(13), no comments from any party can be accepted after the deadline for submission of comments has passed. Thus, if you wish for your comments to be considered by the Department in the development of these rules, your comments must be received prior to the close of the comment period. The Department recommends that comments be submitted as early as possible to allow adequate review and evaluation of the comments submitted.

What's in this Package?
Attachments to this memorandum provide details on the proposal as follows:

Attachment A -- The official statement describing the fiscal and economic impact of the proposed rule.
Attachment B -- A statement providing assurance that the proposed rules are consistent with statewide land use goals and compatible with local land use plans.
Attachment C -- Questions to be Answered to Reveal Potential Justification for Differing from Federal Requirements.
Attachment D -- A Summary of Key Issues discussed during rule development.
Attachment E -- Advisory Group Membership List

If you would like a copy of the proposed rules, they may be obtained by request, by phone, mail, e-mail or fax to Jane Hickman at the contact numbers listed on the last page of this Memorandum. The proposed rules are also available online at http://www.deq.state.or.us/programs/enforcement/index.htm.

What Happens After the Public Comment Period Closes
Following close of the public comment period, the Presiding Officer will prepare a report that summarizes the oral testimony presented and identifies written comments submitted. The Environmental Quality Commission (EQC) will receive a copy of the Presiding Officer's report. The public hearing will be tape recorded, but the tape will not be transcribed.

The Department will review and evaluate the rulemaking proposal in light of all information received during the comment period. Following the review, the rules may be presented to the EQC as originally proposed or with modifications made in response to public comments received.

The EQC will consider the Department's recommendation for rule adoption during one of their regularly scheduled public meetings. The targeted meeting date for consideration of this rulemaking proposal is April 9, 2004. This date may be delayed if needed to provide additional time for evaluation and response to testimony received in the hearing process.

You will be notified of the time and place for final EQC action if you present oral testimony at the hearing or submit written comment during the comment period. Otherwise, if you wish to be kept advised of this proceeding, you should request that your name be placed on the mailing list.

Contact for more information

If you would like more information on this rulemaking proposal or would like to be added to the mailing list, please contact:

Jane K. Hickman
Department of Environmental Quality
811 S.W. 6th Avenue
Portland OR 97204
Phone (503) 229-5555; Fax (503) 229-6762
email: hickman.jane@deq.state.or.us

DEPARTMENT OF ENVIRONMENTAL QUALITY
Chapter 340
Proposed Rulemaking
STATEMENT OF NEED AND FISCAL AND ECONOMIC IMPACT
This form accompanies a Notice of Proposed Rulemaking

Title of Proposed Rulemaking:	Rule Revisions Regarding Enforcement Procedures and Assessment of Civil Penalties for Environmental Violations
Need for the Rule(s)	During the 2000-2001 legislative session, members of the legislature raised the issue of whether DEQ is fair and consistent in its formal enforcement actions. Stephanie Hallock, Director of the Department, asked the Office of Compliance and Enforcement (OCE) to conduct an in-depth review of its enforcement rules to ensure civil penalty assessments are appropriate and fair in achieving deterrence. The Director asked OCE to propose any changes necessary to make the enforcement process more equitable and understandable.
Documents Relied Upon for Rulemaking	The Department relied upon the following documents in developing this rule proposal: • DEQ Instructions for Rulemaking • The Department's Internal Management Directive entitled "Compliance and Enforcement Guidance for Field Staff, 2002" • EPA's RCRA Penalty Policy (1990)
Fiscal and Economic Impact	
Overview	It is unknown whether the proposed rules would result in a fiscal impact to the state. The state may incur a fiscal impact from these rules if the recipients of civil penalties file more appeals and seek a greater number of contested case hearings. For each contested case hearing, the state incurs the cost of the hearing officer and sometimes legal fees from the Department of Justice. If more cases are appealed to the state Circuit Court of Appeals as a result of these rule changes, the state would incur legal fees and costs. However, respondents seek contested case hearings for many reasons, including to contest the amount of the civil penalty, to argue the applicability of a regulation to their business and many others. Therefore, it is difficult to estimate the fiscal impact. Some penalties will be reduced, especially for those violators who have historically been more likely to seek a contested case hearing, so there may be fewer contested case hearings. The goal of the rulemaking is to ensure that the most serious violations receive penalties sufficient to achieve deterrence, without overly penalizing the smaller violators. Therefore, bigger businesses may be assessed larger penalties for serious violations and smaller businesses and individuals may receive smaller penalties for the same violations and for less serious violations.
General public	Civil penalties for violations committed by members of the general public, especially residential home owner-occupants, are likely to decrease due to penalty matrix reassignments.
Small Business	Civil penalties for some violations committed by small businesses are likely to decrease due to penalty matrix reassignments.
Large Business	Civil penalties for some violations committed by big businesses may increase, especially for certain violations of air quality and water quality permits, hazardous waste and emergency response rules.
Local Government	Civil penalties for some violations committed by local governments will likely decrease due to penalty matrix reassignments.
State Agencies	
DEQ	Adoption of these rules may result in a greater number of contested case hearings due to some higher penalties, or may result in fewer contested case hearings due to decreased civil penalties for some violations and violators. If the rules result in a greater number of contested case hearings, DEQ may incur a fiscal impact. DEQ pays an average cost of about $200 for the hearing officer per contested case hearing.
Other agencies	State agencies that violate certain laws or permits may be assessed higher civil penalties.
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.
Administrative Rule Advisory Committee	The Department established an external Advisory Group in January 2003, after the internal agency rulemaking team narrowed the scope of issues and developed an initial draft of proposed amendments.

	The Advisory Group was comprised of thirteen regular members and two auxiliary members. The regular members represented big and small businesses, small cities, public water management agencies, the Association of Oregon Industries and environmental groups. The auxiliary members represented Lane Regional Air Pollution Agency and the U.S. Environmental Protection Agency. The Advisory Group met seven times, from February 2003 to January 2004. The Advisory Group discussed enforcement policies and reviewed draft versions of the rules prior to the public comment period. Some Advisory Group submitted written comments on these early rule drafts. The Advisory Group was not charged with reaching consensus on recommendations and did not produce a written product. The Advisory Group process generated significant valuable discussion and input.

Jane K Hickman — Jane K. Hickman — 12/11/03

Prepared by — Printed name — Date

ISHAM ROBERTSON — 12/11/03

Approved by DEQ Budget Office — Printed name — Date

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking Proposal
for
Rule Revisions Regarding Civil Penalty Assessments

Land Use Evaluation Statement

1. Explain the purpose of the proposed rules.

This proposal would make the enforcement process more understandable and civil penalties more equitable while achieving compliance. The rule is updated to include violation classifications for new program requirements and statutory changes. This proposal would also amend a rule in the underground storage tanks program to provide that all Class II violations eligible for expedited enforcement will receive a $50 field penalty (some are currently set at $75).

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___ No X

   a. If yes, identify existing program/rule/activity:

   b. If yes, do the existing statewide goal compliance and local plan compatibility procedures adequately cover the proposed rules?

   Yes____ No____ (if no, explain):

   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.

The Department has reviewed the criteria and the proposed rules will not affect land use. The rules do not establish any new substantive program requirements but may affect the amount of civil penalty assessed for a violation of program requirements. The proposed rules do not affect the any existing land use programs.

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.

	[signature]	12-11-03
Division	Intergovernmental Coord.	Date

Relationship to Federal Requirements

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?** Not directly. There are no federal statutes or regulations that directly apply to DEQ's compliance and enforcement program, but DEQ's enforcement regulations and policies are developed in consultation with EPA. In order to keep delegation of federal environmental programs such as air quality, water quality and hazardous waste, EPA requires DEQ to adequately enforce state program requirements. EPA generally focuses on whether DEQ's civil penalties are high enough to promote specific and general deterrence from violations.

2. **Are the applicable federal requirements performance based, technology based, or both with the most stringent controlling?** N/A

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?** N/A

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?** There is no proposed requirement, as the proposed rules do not change substantice program requirements. The proposed rules may result in an increased or decreased civil penalty for a violation of program requirements, depending on the nature of the violation or violator. By making the enforcement process clearer, the penalty calculation process more flexible and some penalties higher, the proposed rules help the Department to ensure regulated individuals and businesses will invest in compliance rather than spend the extra money it takes to pay civil penalties and correct the environmental impacts of violations.

5. **Is there a timing issue which might justify changing the time frame for implementation of federal requirements?** N/A

6. **Will the proposed requirement assist in establishing and maintaining a reasonable margin for accommodation of uncertainty and future growth?** N/A

7. **Does the proposed requirement establish or maintain reasonable equity in the requirements for various sources?** N/A

8. **Would others face increased costs if a more stringent rule is not enacted?** N/A

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? N/A

10. Is demonstrated technology available to comply with the proposed requirement? N/A

11. Will the proposed requirement contribute to the prevention of pollution or address a potential problem and represent a more cost effective environmental gain? As stated in the answer to question 4, if the clearer process and higher penalties contained in these rules deter environmental violations, pollution will be prevented and less money will be spent on civil penalties and potentially expensive correction of violations.

Attachment D: Summary of Key Issues Discussed During Division 12 Rulemaking

The following list is not exhaustive. This has been an extended rulemaking with several drafts. An effort has been made to cover the main comment or issue areas, but others have been left out that related primarily to compliance and enforcement guidance or were too detailed to be of general interest.

Process Issues

Advisory Group Issue: The agency should add to the rule a formal process that allows the recipient of a pre-enforcement notice to meet with the Department and provide mitigating information before receipt of a civil penalty assessment. The rule should state that any information provided by a respondent during such a meeting would be for settlement purposes only and could not be used as an admission against the alleged violator or as part of the Department's case-in-chief.

Proposed Rule Approach: The Department has amended the rule to make clear that the recipient of a warning letter or a pre-enforcement notice may provide additional information to the Department. [See OAR 340-012-0038(1).] The Department believes that the current enforcement process already allows for a party to meet with the agency and to provide any additional information they wish. The Department does not think it practical to ask its regional technical staff, who are not attorneys, to follow rules of evidence applicable in civil litigation that would treat some information as inadmissible or confidential due to settlement discussions. In addition, the regional staff are not the appropriate party to be conducting "settlement" negotiations. At this early information-gathering stage in the enforcement process, the violations to be penalized and the amount of that penalty are not known for certain. Any information that a party wishes to have kept confidential is already assessed against state statutes for confidentiality. The Department is concerned that sophisticated violators might misuse what appears to be an additional confidentiality exemption.

Advisory Group Issue: There needs to be a time limit for how long a warning letter (formerly Notice of Noncompliance) is on a party's record. For example, an OR-OSHA violation is on record for a three-year period. If there is an additional violation of the OR-OSHA regulation within that period, the punishment (fine) is much greater. However, after the three-year period and with no additional violation, the slate is wiped clean. A three-year period is a reasonable time period for environmental violations as well.

Proposed Rule Approach: Warning letters will be sent for the first occurrence of some Class I violations and for the first, second or third occurrence of some Class II violations. The Guidance Manual will provide referral timeframes (e.g., for some class II violations, refer upon the second violation within 60 months). While the information gathered from a site visit or inspection that results in a Warning Letter of Pre-Enforcement Notice will remain in the agency files or databases, these referral policies have the effect of "wiping the slate clean" for Class II violations after a period of time, depending on the nature of the violation.

Advisory Group Issue: The draft rules (OAR 340-012-0038) provide that the Department "may" state in the Warning Letter the violations it has documented. The rule should state that the Department "will" state the violations. If the Department cannot clearly state the violations and what is necessary to ensure compliance, then the Department should not be citing violations.

Proposed Rule Approach: The Department has amended the rule accordingly.

Advisory Group Issue: EPA is encouraging looking at watersheds on an integrated, holistic basis in its new Watershed Rule. Part of fulfilling that vision may include issuance of watershed permits, which may include multiple facilities on one permit, or perhaps even multiple permittees on one permit. The so-called "three-strikes" rule relating to Notices of Noncompliance (NONs) and Notices of Permit Violations (NPVs) would discourage combining facilities into one permit. The prior significant acts (PSAs) serve as an aggravating factor (which remains in the draft rewrite) discourages combining multiple permittees on one permit.

Proposed Rule Approach: We have addressed the concern about counting PSAs against co-permittees by adding OAR 340-012-0160(3), which provides that the Department will, except in exceptional circumstances, issue each permittee on one permit a separate civil penalty assessment. This means that we will not count a permittee's prior significant acts against any of the other co-permittees. Regarding the number of warning letters it takes to trigger a civil penalty instead of a Notice of Permit Violation (NPV), OAR 340-012-0038 provides that permittees with a specified number of violations of state-only requirements of certain permits will be issued a Notice of Permit Violation (essentially a warning letter with no civil penalty). If there is more than one documented Class I violation or repeated or continuance Class II violations of the permit, then the Department may issue a civil penalty. Since the goal is to achieve compliance with permit conditions, the Department feels these penalty triggers are reasonable and appropriate.

Advisory Group Issue: The NPV section implies that penalties may not be issued for a permit violation if the facility comes into compliance. EPA does not consider a facility's coming back into compliance as a formal cause to forgive penalties.

Proposed Rule Approach: Oregon statute requires the Department to issue a Notice of Permit Violation instead of a civil penalty for certain violations if the facility comes back into compliance, so we are limited by statute regarding which facilities are eligible for civil penalty assessments. Facilities that commit intentional violations or who have received an NPV within the preceding 36 months are not eligible for an NPV. Facilities with permits from federally delegated programs are not eligible to receive NPVs.

Advisory Group Issue: A warning letter should always be issued and stay on the books for the specified time period regardless of whether or not the violation is addressed.

Proposed Rule Approach: The Department will track all warning letters in its database regardless of whether a violation is corrected.

Violation Classifications

Advisory Group Issue: The Department has reduced the total number of Class III violations. The result will be that more violations will be deemed Class II "by default." The Department should make more of an effort to specifically identify the least significant violations as Class III.

Proposed Rule Approach: The number of Class III violations over all programs is reduced from 36 to 30. Some programs have added Class IIIs (e.g., Spills and Air Quality); some have reduced the number of Class IIIs (primarily Hazardous Waste, which eliminated its 9 Class III violations).

The Department does not have the goal to assure even distribution of Class IIIs among the programs, because each program has a unique structure. Some programs (Air Quality, Water Quality, On-Site) rely heavily on permits to implement environmental requirements. Air and water quality permits have a great number of requirements that, while important, may be considered more as "paperwork" violations without a direct environmental impact. These are good Class III candidate violations. The Department does not issue permits to hazardous waste generators or transporters. And yet hazardous waste generators and transporters are required to document the handling of hazardous waste, from cradle (generation) to grave (disposal). Hazardous waste is inherently dangerous or potentially dangerous in almost every circumstance, and there is less likely to be a violation that would have no potential for environmental harm. Since it is the potential for environmental harm and the importance to the integrity of an environmental program that determines the classification of a violation, there are no Class III violations in Hazardous Waste. The actual harm caused by a particular violation depends on the circumstances of each case, and will be taken into account in the determination of environmental magnitude of each violation. In addition, hazardous waste treatment and disposal facilities may be inspected only once every five years, so a violation may go undetected and therefore uncorrected for a substantial period of time. The Hazardous Waste program is drafting referral guidance that will provide support for a Department decision to not refer, for formal enforcement, violations involving minor environmental impacts or deviations from the law.

Advisory Group Issue: The Department should classify all opacity limit exceedances as Class I violations and not make those that occur in attainment areas Class II violations. Maybe discriminating between Title V and all other types of sources would help.

Proposed Rule Approach: We have adopted this suggestion. Permit exceedances by major federal sources are all Class I.

Advisory Group Approach: You cannot base punishment only on actual impact. In some instances, especially air violations, it is impossible to determine with any specificity or accuracy the actual impact of a violation. The system should be based on the actual OR potential environmental impact of an action. Lack of a documented specific impact should not be an excuse for no enforcement action or for a lighter punishment.

Proposed Rule Approach: Violations are classified based, in part, on whether noncompliance is more or less likely to result in actual or potential impact to public health or the environment, without regard to the specific facts in a case. Class I violations have the greatest likelihood of actual or potential impact to public health or the environment or are of the greatest significance to the regulatory structure of the given environmental program. The enforcement guidance manual provides that Class I violations should be referred for formal enforcement upon the first occurrence except in exceptional circumstances, as specified by the programs in the guidance manual.

Magnitudes

Advisory Group Issue: The rule should provide that selected magnitudes create a rebuttable presumption that a certain violation resulted in the selected magnitude. The respondent should be able to present evidence that shows that a violation did not have the selected magnitude despite the existence of the factors underlying the finding for that selected magnitude.

Proposed Rule Approach: Creation of such a rebuttable presumption would defeat the purpose of the selected magnitudes, which were developed: (1) to provide certainty to the regulated community about the amount of penalty that will result in certain cases; and (2) to recognize the fact that by the time the Department discovers a violation has occurred, the evidence of the impact may no longer exist. The Department does not have the resources to conduct individual analyses on the impact of each violation. Based on experience and technical expertise, the Department has developed selected magnitudes that are intended to approximate the impact of a violation given the existence of certain underlying factors. The rules provide that when there is insufficient evidence to make a finding about the existence of these underlying factors, the Department must make a determination of magnitude using the "general" magnitude language based on the evidence it has. A respondent has always had and continues to have the ability to provide the Department with factual information that could result in a reduction in the magnitude of a violation occurrence (e.g., if the amount of asbestos openly accumulated is actually less than the Department's estimate and the Department agrees that the Respondent's information is more accurate).

Advisory Group Issue: The Department may be "double-counting" the environmental magnitude of a violation in its civil penalty assessments. The potential for harm is considered in determining the classification of each violation and also when determining selected magnitudes. Violation classifications should take into account only the potential for harm and selected magnitudes should only take into account actual harm. The necessary distinctions between potential and actual harm are not consistently applied in the rules used to set class and magnitude. Actual harm finds its way into some of the classifications and the potential for harm appears in some of the magnitudes.

Proposed Rule Approach: This has been a difficult issue for the Department. After receiving this comment and much discussion with the Advisory Group, the internal rulemaking team redrafted the violation classifications in an effort to omit any consideration of magnitude. For example, it modified the Class I violation of "conduct of an asbestos abatement project by a person not licensed as an abatement contractor that results in actual or potential public exposure to asbestos or actual or potential release of asbestos into the environment" to read "conduct of an asbestos abatement project by a person not licensed as an abatement contractor." The result of this change was to make all such violations a Class I violation. The air quality program would then be required to develop guidance on which of these violation occurrences to refer for formal enforcement. As a result of this effort, the Department concluded that removing all magnitude language from violation classifications made the classifications less meaningful and overly broad. Some of the rulemaking team and Advisory Group members expressed concern with leaving so much decision-making to guidance, which is not subject to public review.

For the most part, the rulemaking team decided to put magnitude-type language back into the classifications where it made sense for clarity. A full discussion of this issue, however, was of great benefit to the Department. It resulted in: significant adjustments to selected magnitudes, creation of pre-determined magnitudes in some instances (e.g., when the violation language is specific enough to support a prediction that that violation will always have a certain magnitude), and greater clarity in the general magnitude language and approach. As a result, while it may appear more complicated, the Department believes that consideration of violation magnitude is more clearly articulated than ever before.

Penalty Matrices

Advisory Group Issue: The Department has raised the penalty amounts too much without justification. If the agency feels the penalties are not large enough for the major violators, it should raise penalties only for those violators and not across-the-board. Facilities with an environmental manager care more about negative publicity than penalties, so larger penalties will not deter such violators. Individuals are more concerned about having to pay money and should receive larger penalties. Others on the Advisory Group felt that the increase in penalty amount was appropriate given the fact that the penalties have not increased in a number of years and that the matrices now do a better job of creating a level of deterrence relative to the type of violator; and that the Department's penalties are, for the most part, too small.

Proposed Rule Approach: The Department has increased the penalties in its highest penalty matrix, added a new intermediate matrix, increased the penalties slightly for the $2500 matrix, reduced the penalties in the $1,000 penalty matrix and eliminated the $500 matrix. [See OAR 340-012-0140.] The Department has not increased its penalty amounts since 1988. The cost of noncompliance has therefore not kept pace with the cost of living, which has increased by 160% since 1988, according to the U.S. Bureau of Labor Statistics. The proposed penalties do not exceed the maximum penalty amount of $10,000 per day per violation allowable by Oregon statute.

The U.S. EPA has delegated the authority to enforce many of its environmental laws to DEQ on the condition that DEQ adequately and effectively enforce the laws. EPA has referred to studies showing that DEQ's civil penalties are low compared to other western states. EPA has proposed that the civil penalty for each violation start at $10,000 and be increased or decreased according to aggravating or mitigating circumstances. EPA has insisted that DEQ cannot deprive itself of the ability to assess up to a $10,000 penalty for any violation. As a compromise, DEQ is proposing a provision in the rules that states that the Director may increase any civil penalty up to the statutory maximum in order to achieve deterrence. [See OAR 340-012-0160(2).]

One of the primary goals of this rulemaking has been to assure equity in enforcement, so that the largest violators are adequately penalized to achieve specific and general deterrence, but the small violators are not overly penalized to achieve deterrence. In general an effort was made to assign the most serious violations by the more sophisticated violators to the highest penalty matrices, while assigning less significant violations by smaller, less sophisticated violators to lower penalty matrices. In addition, the Compliance and Enforcement Guidance revisions are likely to result in violations of lesser importance being referred less often for formal enforcement. The Department believes the proposed penalty matrices, along with the referral guidance to be discussed in the Guidance Manual, will achieve an equitable balance.

Advisory Group Issue: Perhaps adding an aggravating or mitigating factor for source size would be beneficial. Incorporating some sort of factor for size would prevent the case where a company worth pennies is penalized the same as a company worth millions for a similar violation. Perhaps a factor for major Title V vs. ACDP vs. an inconsequential source could be developed. Recognizing source size might help the public or the small source better understand ODEQ enforcement priorities and, at the same time, increase the deterrent effect for more profitable and sophisticated sources.

Proposed Rule Approach: We have assigned smaller sources to lower penalty matrices to avoid disproportionate civil penalties.

Aggravating or Mitigating Factors

Advisory Group Issue: The U.S. EPA disagrees that a penalty should ever be assessed for less than the base penalty for a violation. For example, under the current and proposed penalty calculation formula, if all the factors are assigned a value of 0, but a respondent receives credit for cooperativeness, a base penalty could be reduced below the amounts set forth in the matrices. EPA proposes that the sum of all factors should never be less than zero.

Proposed Rule Approach: DEQ is not proposing to adopt this suggestion because it believes credit for cooperativeness (called Respondent's "efforts to correct" the violation in the proposal) serves as a valuable incentive for violators to come into compliance. [See OAR 340-012-0145(6).]

Advisory Group Issue: The Penalty Determination is heavily tipped towards punishment. Respondents receive little credit for doing the right thing, such as responding immediately to an issue or self-reporting, and are punished repeatedly for any prior penalties. Punishment is dealt out in the form of P (Prior Significant Actions), H (History), and O (Ongoing)–all of which are punishing for prior actions. In addition, prior actions can be any environmental action–even actions not related to the action under consideration for penalty--and these prior actions can go back 10 years into the past. To balance the P, H, and O, there is only C (Cooperativeness) which does not carry much weight.

Proposed Rule Approach: The Department currently has Self-Reporting Guidance that allows for a substantial mitigation of the penalty (i.e., 80% to 100%) for self reported violations meeting certain procedural and discovery requirements. The proposed penalty calculation has a greater potential for violators to receive more credit for their efforts to correct the violation. The "O" factor actually considers only the violation at issue in the current case and not past violations, i.e., whether that violation occurred repeatedly or more than one day. Other adjustments have been made to the aggravating and mitigating factors to more accurately reflect the range of cases and scenarios the Department regularly sees in its enforcement actions. [See OAR 340-012-0145.]

Advisory Group Issue: Ten years is too long for DEQ to count prior violations as an aggravating factor (see OAR 340-012-0145, providing that prior significant actions (PSAs) that are more than ten years old will not be used to increase a penalty). Prior violations should only be counted for five years after occurrence, similar to OSHA violations.

Proposed Rule Approach: Only violations that are finalized by order or payment are counted as PSAs. In addition, the weight given to PSAs, as an aggravating factor in the penalty calculation formula, decreases the older the PSAs are. If all the PSAs were issued more than three years before the current action, the P factor will be decreased by 2. If all PSAs were issued more than five years before, the P factor will be decreased by 4. If a PSA is more than ten years old, it will not be counted against the violator. Given that in some programs some sources are rarely inspected and violations may be discovered only once every five years, and that the weight given to PSAs depends on how serious the prior violations were (e.g., Class I violations are given more weight than Class IIs), the Department believes the proposed methodology for counting PSAs is fair and reasonable.

Advisory Group Issue: A respondent should not get credit for cooperativeness if he has waited until receiving a notice of violation and assessment of civil penalty (NOV) to correct the violation. The time for correcting provided in the rule should run from receipt of the pre-enforcement notice rather than receipt of an NOV.

Proposed Rule Approach: A respondent may have a good faith belief that it has not committed a violation and this is what the administrative review process affords the Respondent. It could be argued that a Respondent should not be penalized for waiting until it has met with the Department to clarify its position. Because there are some instances when failure to correct a situation quickly may lead to further human health or environmental impact, the Department has proposed a more case specific opportunity for evaluating a party's responsiveness. [See OAR 340-012-0145(6).]

Advisory Group Approach: Ignorance of the law should not be an excuse for not deserving a penalty. In re-evaluating the weight put toward "mental state," it should clearly not create scenarios that encourage folks to be ignorant.

Proposed Rule Approach: We have changed the mental state factor to aggravate a penalty when the violator "should have known" he or she was committing a violation.

Economic Benefit

Advisory Group Issue: It should be a rare exception for DEQ to have insufficient information to calculate economic benefit (EB). DEQ should get cost of compliance information from those who do comply. Compliers would provide such information in order to level the playing field. The rule should require DEQ to calculate EB in all cases, even if it has insufficient information and would have to input 0 with an answer of 0.

Proposed Rule Approach: The Department believes it is important to pursue economic benefit information to the extent practicable given the expertise of the regional staff and the expense of obtaining the necessary information. The Department has the ability to calculate an EB using estimated or generalized information which the respondent can augment with more accurate information at any time, but particularly at the informal meeting. The Department will draft an internal guidance document and provide training to provide more clarity to regional staff regarding the information that would be helpful to collect at the time of inspection to assist in running the specific economic benefit calculations in the different programs. However, given scarce state resources the Department does not believe it makes fiscal sense to require the staff time and effort to always calculate an EB that is de minimis just for the sake of saying it was done.

ATTACHMENT E
Department of Environmental Quality
Enforcement Rules Advisory Group
Membership as of 12/10/03

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Members:
Richard Angstrom – representing Oregon Concrete and Aggregate Producers Association

Rich Barrett – representing regulated industry, pulp and paper background

Roger Dilts – representing ACWA and Clean Water Services

Sarah Doll – representing Oregon Environmental Council

Jeff Dresser – representing Association of Oregon Industries

Bob Emrick – representing Oregon Refuse and Recyclers Association

Don Haagensen – representing regulated industry

Karen King – representing the City of Pendleton and Eastern Oregon interests

Rhett Lawrence – representing Oregon State Public Interest Research Group (OSPIRG)

Cliff Olson – representing Oregon Petroleum Marketers Association

Robert vanCreveld, RS – representing on-site sewerage treatment system businesses

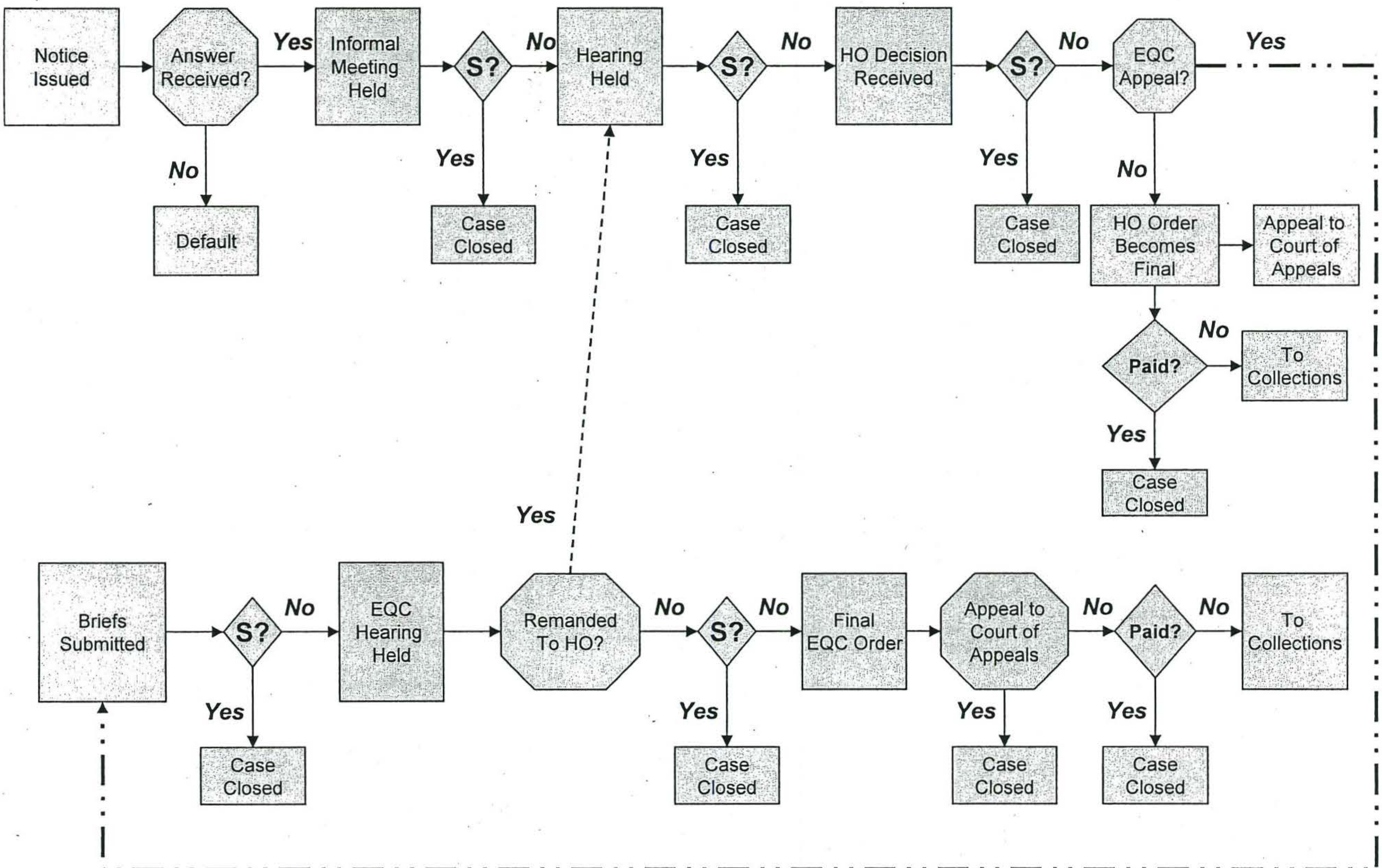
Bob Westcott – representing small businesses

Auxiliary Members:
Dave Bennett – representing US EPA – Region X, Seattle

Robert Koster – representing Lane County Regional Air Pollution Authority

Mike Slater – representing US EPA – Region X, Oregon Operations Office

Case Settlement and Appeal Process

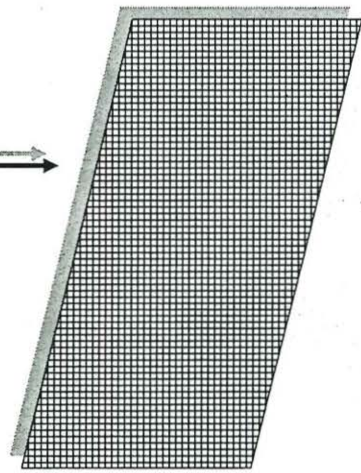


S? = Settlement?

From Discovery to Compliance Assistance or Enforcement-

What goes into determining who DEQ addresses and how?

Inspection
or complaint response conducted



Formal Enforcement

Division 12, Division 11 and other enforcement policies determine what the penalty and process is.

Non-Formal Enforcement

What happens varies by program:

- Technical assistance
- Notices of noncompliance w/ compliance schedules
- Other?

What determines who we inspect or visit in the first place?

- Priority Sectors
- Program Priorities
- Priority Complaints
- Other?

Enforcement Guidance

Provides the filter to determine who goes on to formal enforcement.
Includes notice of noncompliance response language.

Current Penalty Calculation Process

Class	Magnitude	Matrix	Aggravating & Mitigating Factors	Economic Benefit			
I II III	Major Moderate Minor	10,000 2,5000 1,000 500 100,000	Past Occurrences (P=0-10) History (H=-2 or 0) On-Going (O=0 or 2) Responsibility (R=0,2,6 or 10) Cooperativeness (C=-2,0 or 2)	EB	=	Total Penalty	Ability to Pay SEP

Class → Magnitude → Matrix → *Base Penalty+ [(.1X(P+H+O+R+C)]+EB = Total Penalty*

Definitions

Class:

Classification addresses the nature of the violation itself. The purpose of classifications is to separate the violations so that similar types of violations are treated with the same level of severity.

Class I represents those violations that have the potential to cause the greatest environmental or HH harm or are most critical to the structure of the program.

Magnitude:

Magnitudes are intended to differentiate between actual violation incidents on the basis of their specific impact. Thus violations creating a similar degree of environmental or human health impact are at the same magnitude, or violations with equally "nasty" impacts are treated equally.

Matrix:

The matrices can allow the type of violator to be weighed against the level of penalty needed to get specific deterrence. It's where the "who is the violator" factor is most considered.

Aggravating & Mitigating Factors:

Aggravating and mitigating factors allow case specific facts, other than the type of violation or magnitude of the violation to be considered. These factors are intended to aggravate or mitigate penalties similarly, given similar facts.

Economic Benefit:

Intended to level the economic playing field based on what the violator should have invested or spent in order to have achieved and maintained compliance. No consideration for who the violator is.

After the total penalty is assessed and issued:

Ability to Pay:
Procedures to determine actual ability to pay by the specific violator. Information is taken into consideration for settlement offer.
Supplemental Environmental Projects:
For penalties over $2,000, the opportunity to do env. enhancement projects to mitigate up to 80% of penalty amount, if approved by DEQ.

Penalty Calculation Process - Proposed Changes

Class	Magnitude	Matrix	Aggravating & Mitigating Factors	Economic Benefit			
I II III	Major Moderate Minor	8,000 6,000 2,500 1,000 100,000	Past Occurrences (P=0-10) History (H=-2, -1 or 0) On-Going (O =0, 2, 3, 4) Mental State (R=0,2,6 or 10) Efforts to Correct (C=-3,-2,-1,0 or 2)	EB	=	Total Penalty	Ability to Pay SEP

Class → Magnitude → Matrix → *Base Penalty+ [(.1X(P+H+O+R+C)]+EB = Total Penalty*

Main Proposed Changes:

Class:

All violations reviewed and updated by program. Changes include:

- Changes to classifications of specific violations
- Adding or deleting violations based on program rules
- Consistency review across programs

Magnitude:

Changes include:

- Modifications to specific magnitudes to create greater differentiation between different levels of impact
- Some magnitudes are "pre-determined"
- Clarifies gen. mag. applies if insufficient evidence for a selected magnitude exists

Matrix:

Changes to matrices designed to more equitably achieve specific deterrence:

- Increased base penalties for "large" violators or for most severe violations
- Added intermediate penalty ($6,000) matrix
- Eliminated $500 matrix
- Lowered base penalties for smaller entities, homeowners, individuals, small municipalities

Aggravating & Mitigating Factors:

Several detailed changes:

- H – added -1 to address uncorrectable, but reasonable efforts to minimize impacts
- O – Expanded range to address longer term violations
- R becomes M factor – tried to address definitional and proof issues
- C becomes Efforts to Correct – broader range available

Economic Benefit:

No major changes

Ability to Pay:
Policy will be drafted

Supplemental Environmental Projects:
Policy will be redrafted

2/5/04 EQC Meeting Item B Handouts

Overview of DEQ's Enforcement Process and Proposed Rules

EQC Presentation

February 5, 2004

Today's Topics

- Why Enforcement?
- Our Current Enforcement Process
- Overview of Proposed Changes

Enforcement goals

- To create "specific" deterrence
- To create "general" deterrence
- To ensure economic fairness
- To motivate voluntary initiative

Specific Deterrence

- The deterrent effect on the specific violator needed to:
  - Ensure the environmental problem is corrected
  - Get the attention of the person or company leadership
  - Dissuade future non-compliance

General Deterrence

- The deterrent effect on the related regulated population to:
  - Encourage compliance before DEQ oversight is involved
  - Make the risk of non-compliance great enough to encourage compliance
    - Appropriate penalty size
    - Economic benefit
    - Public awareness

Economic Fairness

- Compliance costs money -- or at least people think it will
- Violators can make money by avoiding the costs of compliance
- Compliers expect DEQ to ensure that violators are not allowed to save money through noncompliance because this puts compliers at an economic disadvantage

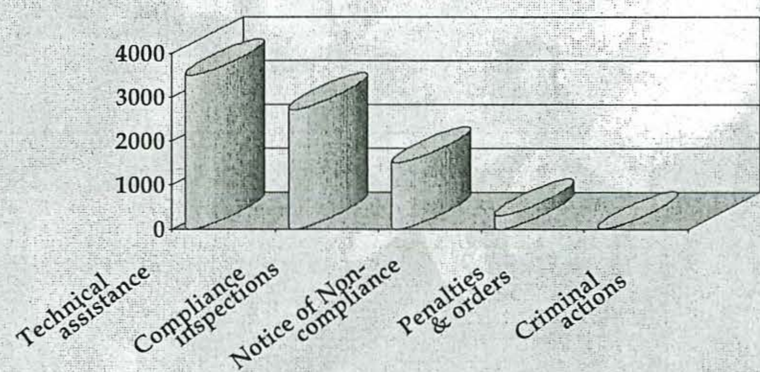
Motivating Voluntary Initiative

- People are busy and procrastinate
- Without some incentive, even those who want to comply may delay finding out how
- Hearing about other people receiving enforcement creates that incentive and stimulates voluntary compliance

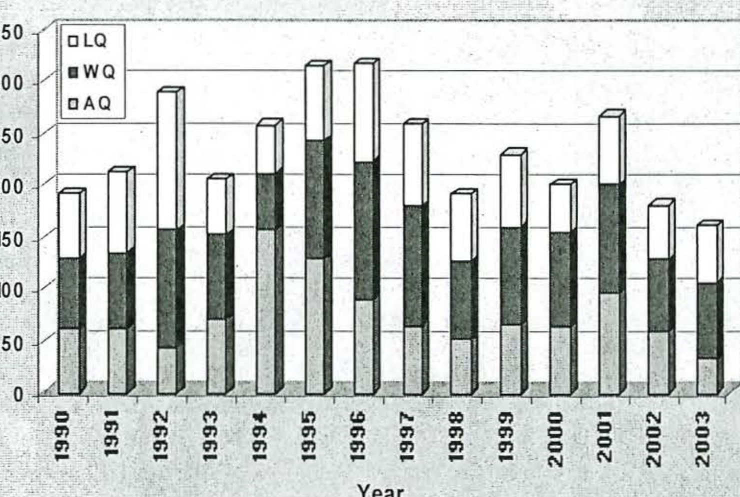
Compliance Tools

- Education
- Technical / compliance assistance
- Inspections
- Enforcement

Distribution of Cases per Year



Number of Cases by Program Area

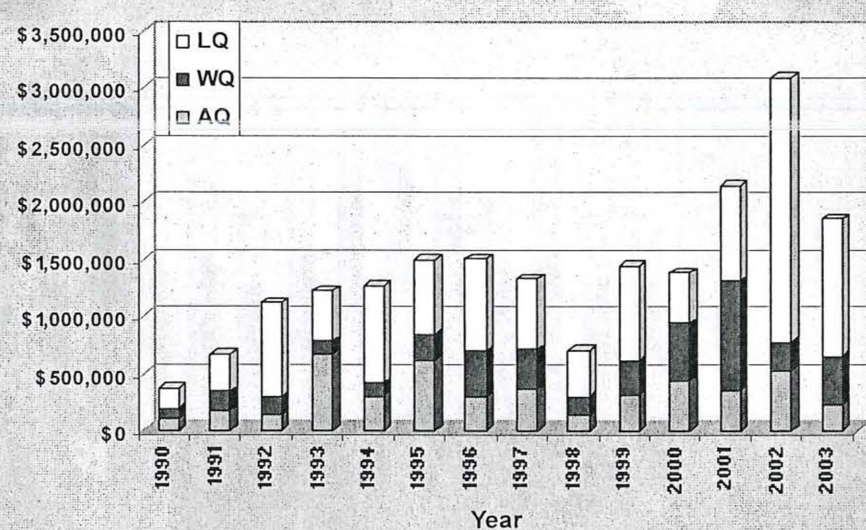


Number of cases issued by year and by program area

(as of 12/17/03)

Year	AQ	WQ	LQ	Total Cases Issued
1990	61	68	62	191
1991	62	72	78	212
1992	44	112	133	289
1993	71	81	53	205
1994	156	55	46	257
1995	128	114	72	314
1996	90	133	94	317
1997	65	115	78	258
1998	52	74	65	191
1999	66	94	69	229
2000	65	89	47	201
2001	96	104	67	267
2002	59	69	53	181
2003	34	72	55	161

Penalties Assessed by Case Type



Penalties assessed by year and by program area (as of 12/17/03)

Year	AQ	WQ	LQ	Total Penalties Assessed
1990	$109,665	$89,850	$170,040	$369,555
1991	$179,870	$163,640	$326,130	$669,640
1992	$137,797	$155,970	$822,521	$1,116,288
1993	$669,708	$114,125	$442,703	$1,226,536
1994	$303,875	$113,944	$847,432	$1,265,251
1995	$622,239	$218,881	$651,543	$1,492,663
1996	$304,337	$389,703	$812,609	$1,506,649
1997	$364,274	$352,605	$609,281	$1,326,160
1998	$139,686	$162,751	$408,018	$710,455
1999	$319,583	$302,272	$826,347	$1,448,202
2000	$447,438	$494,859	$439,897	$1,382,194
2001	$354,013	$957,043	$837,721	$2,148,777
2002	$533,929	$245,949	$2,315,941	$3,095,819
2003	$231,493	$421,230	$1,203,520	$1,856,243

Publicly Available Information

- Search the Enforcement Database - A database of formal enforcement actions (*i.e.*, department orders or civil penalties) that includes the date, respondent name, location, inspector, penalty and description of violation.
- Search the Notice of NonCompliance Database - A database of Notices of Noncompliance (*i.e.*, a notice from DEQ stating that a violation has been observed) that includes the source name of alleged violator, location, violation date and a description of the violation.
- Summary of Enforcement Actions
- Overview of Enforcement Process - (Guidelines if you receive a Notice of Assessment of Civil Penalty and/or Department Order.)

http://www.deq.state.or.us/programs/enforcement/

Our Current Enforcement Process

- **Program Priorities**
- **Regional Compliance**
- **Central Enforcement**
- **Enforcement Guidance, Rule and Policies**

Enforcement Guidance

- Outlines Director's expectations on process
- Creates consistency in:
  - NON response language
  - which cases are referred
  - which cases are not
- Allows for reasonable flexibility to consider mitigating or aggravating circumstances

Notices of Non-Compliance (NONs)

- Regions draft according to guidance
- States whether a case is being referred for formal enforcement
- If referred, then sent to Office of Compliance and Enforcement for evaluation and development of penalty and/or order

Drafting the Notice and Order

An environmental law specialist will review the referral, evidence, law, and other cases to determine:

- whether the laws give DEQ authority to take the recommended action
- whether the law and evidence exist to be reasonably sure we can meet our burden of proof on the elements that the violations occurred
- whether there are other violations not addressed by the referral – especially secondary media issues
- how to use the information provided to calculate a penalty and a reasonable estimate of economic benefit

Penalty Calculation Formula

BP + [(.1x BP) x (P + H + O + R + C)] + EB

- BP - Base Penalty
- P - Prior Significant Actions
- H - Prior Correction History
- O - Repeated or Ongoing Violation
- R - Responsibility
- C - Cooperativeness
- EB - Economic Benefit

Penalty Calculation System

- **Base Penalty**
- **Aggravating or Mitigating Factors**
- **Economic Benefit**

Base Penalty

- Class of Violation
  - Violations listed by program and then by classification
- Magnitude of Violation
  - Determine if specific magnitude applies
  - Otherwise apply general magnitude
- Penalty Matrix

Penalty Matrix

- Find the applicable matrix depending on "who" the violator is and the violation type (e.g., a small municipality solid waste violation)
- Look up the base penalty using the violation classification and magnitude.

$10,000 Penalty Matrix

Magnitude	Major	Moderate	Minor
Class			
I	$6,000	$3,000	$1,000
II	$2,000	$1,000	$ 500
III	$ 500	$ 250	$ 100

Aggravating or Mitigating Factors

- Prior Significant Actions
- Prior Correction History
- Repeated or Ongoing Violation
- Responsibility/Mental State
- Cooperativeness

Economic Benefit

- Avoided Costs
- Delayed Costs
- Wrongful Profits

Notice Process - continued

- The notice document is sent via certified mail to the registered agent for a corporation or to a responsible individual. In difficult cases we hire a private investigator to serve it personally.
- The Respondent has 20 days in which to send in payment or a written Request for Appeal.
- During this time the DEQ's Regional staff may be in contact with the Respondent, directing compliance with the order.

Informal Discussion

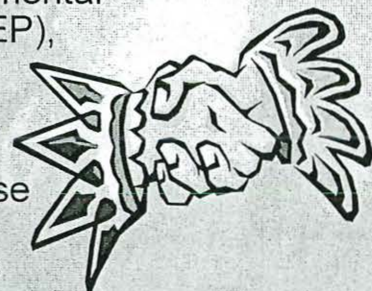
We meet with the Respondent to review the facts and evidence and to hear and weigh any mitigating information we have not previously heard

Reasons for Settlement

- Modifications to the facts based on informal meeting
- Supplemental Environmental Projects
- Payment Plan
- Extraordinary compliance
- Self-Disclosure Policy
- "Litigation" risk

Mutual Agreement and Order

- Agreement to settle
- Details of conditions (*e.g.*, new facts, mitigated penalty, Supplemental Environmental Project (SEP), payment plan, etc.)
- Waiver of appeal rights
- Acknowledgment that these violations constitute prior history for future penalties
- Final Order for penalty which generally must be submitted with the MAO



Contested Case Hearing Process

- **Similar to a court trial, but less formal**
- **Attended by an Administrative Law Judge, Respondent, ELS, and witnesses**

- The ELS must demonstrate that "more likely than not" DEQ's action is supported by true alleged facts and the law.
- The Administrative Law Judge drafts a "Proposed Final Order" that outlines whether we have met that burden on all the elements.
- That "Proposed Final Order" becomes a Final Order if no appeal to the EQC.

Appeal to Environmental Quality Commission

- **Option available to either DEQ or Respondent**
- **Both may appeal on separate issues**
- **EQC may initiate review of a case**
- **List of recent cases**

Appeal to Court of Appeals

- Available to Respondent after EQC appeal

Ability to Pay and Collections

- Payment plans sought first
- Ability to pay analysis available
- Ultimately if no payment, collection goes to Department of Revenue and/or a private collection service

Overview of Proposed Division 12 Rules

DEQ's Strategic Directions

Excellence Key Action: Ensure that DEQ implements an effective compliance and enforcement program; one that is:

- understandable,
- encourages compliance,
- is equitable, and
- appropriately reflects the severity of the violation

Division 12 Rulemaking Scope

- Review existing violations
- Review classification of violations
- Review violation magnitudes
- Review penalty matrices
- Review penalty equation, factors and economic benefit

Main Rule Changes:

- Reorganized to follow process flow
- More description of process in the rules (*e.g.*, -0045 – Civil Penalty Determination Procedure)
- Notices of Noncompliance = Warning Letters and Pre-Enforcement Notices

Rule Changes, cont'd

- Violations updated by all programs
- Similar violation classification across programs
- Magnitude process clarified
- Selected magnitudes updated and some are "pre-determined"

Penalty Matrix Changes

- Added a $6,000 penalty matrix
- Raised penalties in $8,000 matrix (former $10,000 matrix)
- Class III's – no magnitude required
- Adjusted penalties to achieve appropriate specific deterrence

Applicable Matrix Example

$8,000 – Permitted Solid Waste Facility & Jurisdictions over 25,000 population

$6,000 – Permitted Waste Tire Facility & Jurisdictions between 5,000 and 25,000 population

$2,500 – Jurisdictions below 5,000 population & Any General Public

$1,000 – Rigid plastic containers

$8,000 Penalty Matrix

Magnitude		Major	Moderate	Minor
Class				
I		$8,000	$4,000	$2,000
II		$4,000	$2,000	$1,000
III	$750	No magnitude required.		

- Director discretion to assess $10,000 penalty

Aggravating or Mitigating Factor Changes

- Greater impact if violation was on-going for a longer time (O factor)
- Tied mental state (M factor) more clearly to evidence available
- Changed C factor to "efforts to correct" and broadened range
- Clearer language overall

Enforcement Guidance and Training

- Viewed as the implementation plan for the Div. 12 rules
- Currently being updated to reflect rule and process changes (e.g., will clearly articulate when to send a warning letter or pre-enforcement notice)
- Training will be held for DEQ staff and others

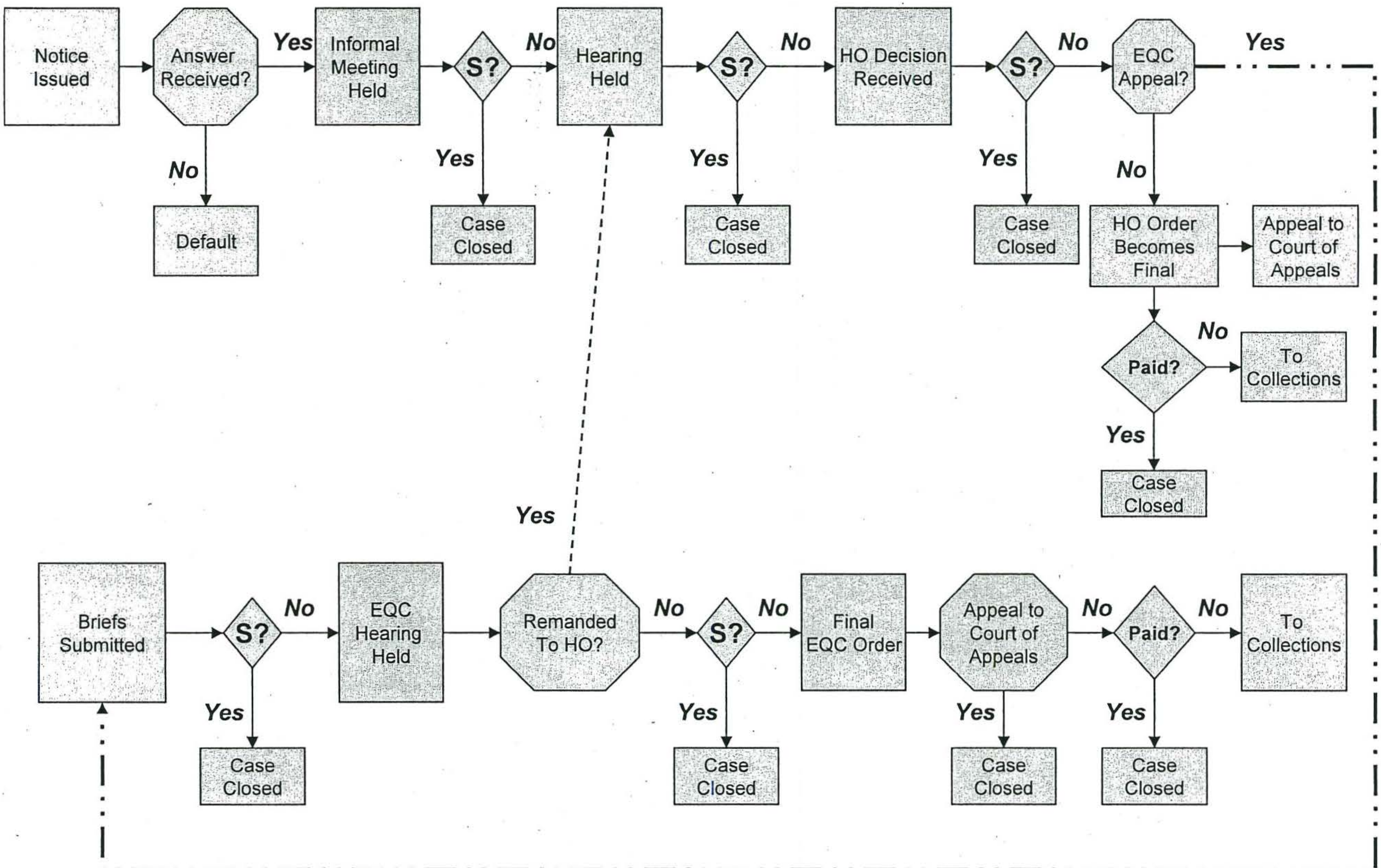
Additional Enforcement Policies to be addressed

- Daily or Multiple Penalties
- Ability to Pay
- Self-Disclosure
- Supplemental Environmental Projects

Rule Development Next Steps

- Comment period extended until March 1st at 5:00 p.m.
- Five hearings conducted across state
- Currently scheduled for May EQC meeting, depending on comment volume and content

Case Settlement and Appeal Process



S? = Settlement?

<u>List of EQC Decisions, January, 1996 -December, 2003</u>

<u>1. 01/18/1996, **McInnis**, David, Case No. WQIW-NWR-94-311</u>
Facts: McInnis's employees washed out chemical toilets and discharged automotive fluids on the property. The wash water ran off into a Portland storm sewer. After subsequent violations of automotive fluids into catch basins which drained into the Deering Canal, McInnis was fined by DEQ for discharging waste into the waters of the state.
Legal Issues: 1) Is discharging waste into a catch basin which drains into Deering Canal discharging into "waters of the state?"
*Hearing Office*r: Yes.
2) Were automotive fluids pollution under ORSB.005(3)?
Hearing Officer: Yes, because the definition is very broad and includes discharges that change the taste or odor of water. Automotive fluids change the taste and odor of water. The discharge would also tend to render such waters harmful to public health or to fish. Discharge of such fluids was pollution.
EQC Held: EQC upheld the hearing officer's Hearing Order.
Argument: Appellant McInnis argued on the facts not the law.

<u>2. 01/28/1997, **Henry**, Russell R., Case No. AQOB-WR-94-289</u>
Facts: Henry was fined for open burning of demolition waste within six miles of the corporate city limit of Salem.
Legal Issue: Are the DEQ and EQC bound by procedural court rules and custom?
Henry's Argument: DEQ's Notice of Appeal and Answering Brief and Motion to Deny should be dismissed for procedural shortcomings.
EQC Held: The EQC found that the EQC is not bound by court rules or customs regarding either form or style of pleadings. DEQ's Notice was legally adequate. The Commission can increase a civil penalty assessed without remand to the hearings officer if a) there is sufficient notice to the parties and b) the evidence to support the increase is in the record from the hearing below or the Commission can re-open the record for additional evidence if a party so moves. EQC upheld the decision of the hearings officer.
Appeal: Henry appealed the case to the court of appeals, but later settled with the DEQ, agreeing to pay a fine.

<u>3. 05/02/1997, **Compton, John M.**, Permit No. 95-014</u>
(Not a Division 12 case.)
Facts: Case involves the revocation and request to decommission a sewage disposal system.
Legal Issue: Can an on-site construction permit be revoked once construction is complete?
DEQ's Argument: DEQ can revoke an on-site construction permit once construction is complete.
Compton's Argument: DEQ has no legal authority to order the decommissioning of the system since there was no factual basis for the finding of the public health or water pollution hazard.

Hearing Officer Held: Once construction of the system is complete, the Department does not have authority to revoke the on-site construction permit and must seek decommissioning of the system through enforcement proceedings.
EQC Held: EQC confirmed the decision of the hearings officer. EQC agreed that under 340-71-160, DEQ is required to institute a separate enforcement proceeding to order decommissioning of an on-site system once construction has been completed and a Certificate of Satisfactory Completion has been issued.
Furthermore: EQC directs DEQ to proceed with rulemaking, as appropriate, to clarify whether an on-site construction permit continues as an operating permit after construction is completed.

4. 08/11/1998, **City of Coos Bay**, Case No. WQMW-WR-96-277
Facts: The city obtained an NPDES permit. After a pipe ruptured between the treatment plant and sludge lagoon, DEQ fined the city for discharging wastes that reduced the quality of state waters below the EQC's water quality standard. Additionally, the city was found in violation of a condition of its NPDES permit.
Legal Issue (1): Does the City incur liability under the statute and rules because of violations due to its failure to effect permanent repairs to the pressure pipeline prior to its rupture and spill?
City's Argument: Argues that not conducting a permanent repair was not a violation under the statutes and rules for which penalties or orders could be imposed.
EQC Held: The disposal of sewage can be hazardous to the health and welfare of the public. Even though the City did not intentionally direct the partially-treated sewage into the bay, its acts or omissions were the cause of the sewage entering the bay and were sufficient to meet any "placement," "cause pollution" or "discharge" requirements of the statutes or rules. Likewise, the City's choice not to repair the pipeline led to its permit violation, so it is responsible.
Legal Issue (2): Can a party be liable under ORS 468B.050(1) for a discharge when the party has an NPDES permit?
City's Argument: As long as it had a permit, it could not be held to violate ORS 468B.050(1).
EQC Held: The city is liable under ORS 468B.050. The city's interpretation is inconsistent with the express language in the statute and the statutory scheme as a whole.
Legal Issue (3): Can a party be liable under ORS 468B.050(1)(b) for discharging wastes into the waters of the state without a permit authorizing such discharge if it has not been proven the party had the intent to violate the statute?
City's Argument: Based on the word "discharge" in the statute, a party must intentionally mean to violate the statute for it to be a violation, and this *mens rea* must be proven.
EQC Held: No, strict liability applies for violations of ORS 468B.050. Strict liability is the longstanding custom of EQC and DEQ. Nothing in the statute leads the EQC to believe "discharge" was meant to be read to require intent. Strict liability for administrative violations follows from ORS 468.130(2)(f). When the legislature has intended to require a culpable mental state, it has generally done so expressly. Strict liability is more consistent with the general legislative policies governing water quality protection.

Legal Issue(4): Can a party be liable under ORS 468B.050(1)(b) for discharging wastes that reduce the quality of state waters below the water quality standard established by the EQC when it has not been proven the party had the intent to violate the statute?
City's Argument: a) There is a legislative scheme evident in ORS 468B.025(1)(a) which requires proof of negligence and in ORS 468B.025(1)(b) which requires proof of intent. b) The City argues the verbs "cause," "discharge" and "violate" in the statute show an intent requirement. c) The City argues that since the violations are also public nuisances, it should be inferred a culpable mental state is required.
EQC Held: Yes, a party is liable under this statute without proof of intent to violate the statute. a) The statutes referred to do not establish a widespread legislative intent to require proof of intent. When placed in their historical context, these statutes can not be viewed as proving any general rule regarding an intent requirement. b) The plain ordinary meaning of these verbs do not require or suggest intent be an element of the violation. c) The EQC finds no relevance in the fact that ORS 468B.025(3) finds these violations are also public nuisances. The legal authority relied upon by the City applies only to tort suits brought by a private party to recover money damages.
Appeal: The Oregon Court of Appeals reversed the EQC on the fine given under ORS 468B.050(1)(a) (*Legal Issue 2 above*). The Court of Appeals held that ORS 468B.050(1)(a) establishes when a permit is required but says nothing about violations of that permit. The EQC's contention that any discharge in violation of the conditions of a permit amounts to discharging without a permit in violation of 468B.050(1)(a) is wrong. The Court held that violations of a permit are covered under ORS 468B.025(2), and that the two statutes are designed to work together.

<u>5. 10/30/1998, **Ferguson, William H.**, Case No. AQFB-WR-96-351</u>
Facts: Ferguson (respondent) removed a sample of duct wrap for testing from a renovation project after he had been informed by a Department Asbestos Control Analyst that the wrap might contain asbestos. Respondent was fined for not following ORS and OAR asbestos rules.
Legal Issue (1): Was Respondent (Ferguson) engaged in an "asbestos abatement project" before his notification from the Asbestos analyst that his site might contain asbestos?
Hearing Officer: No. Despite the definition in OAR-340-032-5590(3) and the strict liability in ORS 468.140(1)(f), Respondent was not engaged in an asbestos abatement project before the asbestos notification. He had taken all reasonable steps, so liability did not attach prior to notification. (* For some reason, this led the hearings officer not to apply liability directly after notification as well, unlike the ECQ.)
DEQ: Strict liability applies to the respondent's violation.
ECQ Held: Strict liability does apply in this situation. When the Respondent handled the material after learning it might contain asbestos, liability attached. The hearings officer erred in his determinations on this matter.
Legal Issue (2): When the Respondent bagged and removed the material, did he violate OAR 340-32-5620(1) by failing to notify the DEQ of an asbestos abatement project?
ECQ held: Since the Respondent did not know the material in the building contained asbestos (because it had not yet been tested), and since the Respondent was only involved in the asbestos abatement to the extent that he bagged an initial sample, it is not appropriate to assess violation under this provision of the rule.

6. 03/17/2000, **Cascade General**, Case No. HW-NWR-97-176

Facts: Cascade flushed Tectyl products through the engines of a Navy ship. After the job, Cascade hired a company to take the used Tectyls, along with used oil, away for recycling.

Legal Issue 1: Were the Tectyls hazardous waste?

Cascade General's Argument: No, the Tectyls were used oil and, thus, exempt from the definition of hazardous waste and the manifest requirement.

DEQ's Argument: The Tectyls were hazardous waste because the flashpoints of Tectyls were less than 140 degrees Fahrenheit, a characteristic of hazardous waste. DEQ interpreted the definition of used oil in EQC's rules to exclude corrosion inhibitors such as Tectyls.

EQC held: The Tectyls were hazardous waste. Since the Tectyls have a low flashpoint characteristic of hazardous waste, Cascade General had the burden of proving they were not. Cascade General's affirmative defenses fail because a) the Tectyls were not a virgin commercial product; b) the Tectyls were not mixed with enough oil to raise their flashpoint above the hazardous waste characteristic, and the mixing took place after property transfer; and c) the Tectyls do not fall under the "used oil" exception because some of the Tectyls which were disposed of had not been run through the ship, so they were not "used." (The EQC did not reach the question of whether the Tectyls which had been run through the ship qualified as "used oil.")

Legal Issue 2: Did Cascade perform an adequate hazardous waste determination?

DEQ's Argument: Cascade General did not perform a correct determination as it did not arrive at an accurate conclusion.

Hearing Officer: Found Cascade did perform an adequate hazardous waste determination. Cascade's determination revealed the Tectyls had a characteristic of hazardous waste. It simply discounted the results.

EQC Held: A majority of the Commission failed to either affirm or reverse the Hearing Officer's decision, so the Hearing Officer's decision on this point stands.

7. 12/19/2001, **Reggie H. Huff**, Case No. WQ/I-NWR-00-125

Facts: Huff discharged a solution containing ethylene glycol and metal leaching into a storm drain, believing it was connected to the city's sanitary system.

Legal Issue 1: Was the waste "likely to escape or be carried into waters of the state" as prohibited in ORS 468B.025(1)?

Huff's Argument: The ethylene glycol solution was dumped down a storm drain which connected to a dry sump system. Since the solution would have been absorbed by the ground, the solution would never reach any waters of the state, including groundwater.

DEQ's Argument: The dry sump system is designed so fluid held within can seep into the surrounding ground, which can contain groundwater. Rainwater can flush the dry sump system, driving fluid into the ground and groundwater. Therefore, any fluid placed in a dry sump system can reach waters of the state.

Hearing Officer: Held that the fluid put into dry sump system fell under 468B.025 prohibition against placing waste in a location where such wastes are "likely to escape or be carried into the waters of the state by any means..."

EQC Held: The EQC affirmed the order of the Hearing Officer with the following clarification: "The Commission concludes the term "likely" as used in ORS468B.025 should be given its ordinary and common meaning and applied on a case-by-case basis. The Hearing Officer correctly found that the waste water was placed in a storm drain. The storm drain was designed to convey storm water into the surrounding ground and groundwater. Under these circumstances, the waste water was placed in a location where it was likely to reach waters of the state."
Appeal: Reggie Huff has appealed the EQC decision to the Court of Appeals. The appeal is ongoing.

8. 02/11/2002, **Ronald C. LaFranchi**, Case No. WP/M-SPWR-00-009
Facts: A LaFranchi truck carrying gasoline collided with a pickup truck. The tanks of gasoline rolled down an embankment near Knowles Creek. After all the clean up, some gasoline still made it into Knowles Creek. The LaFranchi truck driver was found negligent for his role in the accident.
Legal Issue: When a Respondent's employee acts negligently, is it correct to assign a negligent "R" factor to the Respondent when calculating the penalty formula?
LaFranchi's Argument: Ron LaFranchi was not negligent, so he should not be penalized for negligence.
DEQ's Argument: An employer is responsible for his employees.
Hearing Officer: The DEQ cannot penalize the Respondent for the negligence of his employee. The DEQ would have to establish that the Respondent himself acted negligently. In this case, the DEQ would have to prove the Respondent had knowledge that his employee was in some way deficient and failed to act on that knowledge.
EQC Held: Under OAR 349-012-0045(1)(C)(D), "the act of the respondent" includes both direct acts and also the acts of employees for which the Respondent is legally responsible. As long as an employee is acting within the scope of his employment, his employer is responsible for his actions. Therefore, the DEQ was correct in assessing the Respondent with a negligent "2" penalty in its penalty formula on the basis that the Respondent's employee was proven negligent in this action.

9. 08/20/2002, **City of Scappoose,** Case No. WQ/M-NWR-00-010
Facts: The City of Scappoose's representative incorrectly conducted NPDES monitoring tests and intentionally reported inaccurate data. A DEQ inspection led to the bad reporting becoming known.
Legal Issue 1: Did the respondent violate a condition of its NPDES permit by intentionally reporting false test results on its discharge monitoring report?
DEQ Argument: The City of Scappoose, acting through its plant superintendent, Wabschall, intentionally reported false test results on the monthly DMR for December 1998 the City filed with DEQ, and thus violated its NPDES permit.
The City's Argument: Wabschall's actions do not meet the definition of "intentional" in the DEQ administrative rules. Since Wabschall knew the data from the tests were inaccurate, his estimates based on that data were not intentionally false. He believed his estimates had a sound basis.
Hearing Officer: Under the permit conditions, the city was required to report accurate test results reached by following specified test methodology. Wabschall's estimating

obviously did not satisfy the permit requirements, so he was intentionally reporting inaccurate data. Thus, the City of Scappoose violated its NPDES permit monitoring condition.

Legal Issue 2: If respondent intentionally reported false test results, was its conduct flagrant?

DEQ Argument: When he reported inaccurate monitoring data, Wabschall committed a flagrant violation.

Hearing Officer: The DEQ did not prove by a preponderance of the evidence that Wabschall consciously set out to commit the violation. Acting fragrantly implies planning or deliberately setting out in advance to violate the law. Although Wabschall had a knowledge of the law and the NPDES permit provisions, the DEQ did not prove that he set out to violate the law. If Wabschall had planned to violate the law, he could have recorded false test data which would have made it nearly impossible to discover the violation. In this case, he recorded his flawed test results and admitted he had used estimates when asked. He did intentionally report false test values, but DEQ did not prove he flagrantly did so.

EQC Held: Affirmed the Hearing Order of the Hearing Officer.

Appeal: The City of Scappoose has appealed the EQC decision to the Court of Appeals on the grounds that the order erroneously interprets provisions of law and that a correct interpretation of the law would result in no civil penalty. The case has been settled and the City withdrew its appeal.

10. 01/09/2003, **Caleb Siaw,** Case No. WQ/D-NWR-99-186

Facts: Respondent signed an MAO with the DEQ regarding a sewage system the respondent operates at his mobile home park. Despite agreeing to in the MAO, the respondent failed to submit information to complete his application for a WPCF permit. Despite agreeing to in the MAO, the respondent failed to submit holding tank receipts for the previous month.

Issues: The main issues in the case do not involve any interpretation of DEQ Division 12 statutes or regulations and, therefore, are not reported here.

Legal Issue: Under ORS 468.140, does the DEQ have the discretion to issue a fine based upon one daily civil penalty for each month a violation occurred, or must the DEQ either issue a fine for only one day of violation or every day of violation?

Hearing Officer: The DEQ can assess a penalty based upon one daily civil penalty for each month a violation occurred. Although the DEQ did not specify the day of each month on which it sought penalty (which the DEQ should have done), it did state that it elected a penalty for each month in which a daily violation occurred. Thus, the DEQ was essentially acting within its statutory power.

EQC Held: Affirmed the Hearing Order of the Hearing Officer.

Appeal: Caleb Siaw has appealed the EQC decision to the Court of Appeals. The appeal is ongoing.

11. 01/30/2003(EQC Appeal date), **Jackson & Sons**, Case No. 02-GAP-00020
Facts: Jackson & Sons mounded pea gravel around a 2500 gallon aboveground tank full of gasoline and applied for and obtained an underground storage tank permit from the DEQ. After receiving a letter from DEQ to stop using the tank, Jackson & Sons removed the pea gravel.
Legal Issue: Does Jackson's tank meet the legal definition of an underground storage tank subject to EQC regulation?
Jackson Argument: Commonsense shows the tank was not beneath the surface of the ground. Since the regulations define underground storage tanks as those tanks "beneath the surface of the ground," this tank was not an underground storage tank.
DEQ Argument: A tank, including pipes, is an underground storage tank when ten percent or more is "beneath the surface of the ground." OAR 340-150-0010 (adopting by reference 40 CFR 280.12) defines "beneath the surface of the ground" as "beneath the surface of the ground or otherwise covered with earthen materials." Jackson's tank was not under the ground; however, the tank was more than ten percent covered with earthen materials, thus meeting the definition of "beneath the surface of the ground." Therefore, the tank was an underground storage tank under the EQC's rules.
Hearing Officer: Jackson's tank did not meet the definition of an underground storage tank because it was not beneath the surface of the ground. DEQ did not meet its burden of proof, showing this tank meet the definition. By administrative rule, DEQ adopted the definition of underground storage tank prescribed by the US EPA in 40 CFR 280. OAR 340-150-0002. These statutes and rules characterize an underground storage tank as "beneath the surface of the ground." The descriptive phrase "beneath the surface of the ground" is not given a specific or peculiar meaning by statute or rule.
EQC Held: At the hearing, the EQC affirmed the Hearing Officer's Hearing Order.

12. 05/08/2003, **Pegasus Corporation**, Case No. AQ/AB-WR-02-059
Facts: Pegasus Corporation (Pegasus) allowed a contractor to perform an asbestos abatement project without a license on a facility it operated.
Legal Issue: Was Pegasus an "owner or operator" such that it would be required to ensure that only licensed asbestos abatement contractors remove asbestos-containing siding from a FedEx Terminal in North Bend, Oregon?
Pegasus Argument: Pegasus argued that it was not the operator of the FedEx Terminal, and was not responsible for ensuring that only a licensed asbestos abatement contractor remove the asbestos-containing siding.
DEQ Argument: Pegasus was an operator of the FedEx Terminal, and was responsible for ensuring that only a licensed asbestos abatement contractor remove the asbestos-containing siding.
Hearing Officer: Although the term "owner or operator" was not defined at the time of the alleged violation, the term was defined under ORS 465.200(19) of the Hazardous Waste and Hazardous Materials I chapter, and because asbestos is defined as a hazardous substance under ORS 465.200(15), Pegasus had notice as a lessor and lessee of the FedEx Terminal that any act committed in violation of ORS 468.715(1) and OAR 340-248-0110(2) was done at its peril. DEQ's policy of treating lessors as "owners or operators" was consistent with the definition provided under ORS 465.200(15).
EQC Held: The EQC affirmed the Hearing Officer's Order.

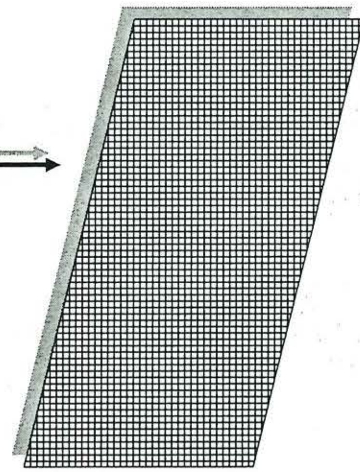
13. <u>12/4/03, **Luhr Jensen & Sons, Inc.**,</u> Case No. <u>LH/HW-ER-01-275</u>
Facts: Luhr Jensen & Sons, Inc. (Luhr Jensen) is a privately held Oregon corporation that manufactures fishing lures and other products in Hood River, Oregon. Luhr Jensen operates three facilities in Hood River. The fishing lure manufacturing process generates regulated hazardous wastes from electroplating and painting of lures and other products. As a result of DEQ inspections in August 2001, DEQ issued a Notice of Assessment of Civil Penalty in April 2002. The Notice alleged that Luhr Jensen committed 11 hazardous waste violations and three water quality violations and assessed penalties totaling $66,534 for the 14 alleged violations. Prior to the contested case hearing in this case, the Department amended its Notice and reduced the penalties for the hazardous waste violations from $66,354 to $34,801. The hearing officer upheld the amended proposed penalty in its entirety, and Luhr Jensen appealed to the Commission.
Legal Issues: Did Respondent commit several of the hazardous waste violations? Did Respondent violate its general NPDES permit by failing to monitor stormwater and submit discharge monitoring reports? Is the proposed civil penalty warranted?
Hearing Officer: Upheld all of the civil penalties in total.
EQC Held: Respondent committed all of the alleged violations. During the argument, the Department agreed with the petitioner to reduce the "R" factor for one of the hazardous waste violations from 6 ("intentional") to 2 ("negligent"), thereby reducing the penalty from $34,801 to $34,401.

14. <u>12/4/03, **American Exchange Services, Inc.,**</u> Case No. <u>AQ/A-WR-98-186</u>
Facts: Respondent is an Oregon corporation that acts as a facilitator for tax-deferred exchange transactions under the Internal Revenue Code. As part of these tax-deferred exchanges, Respondent temporarily holds legal title to real property on behalf of its customers so they can take advantage of tax deferrals. Respondent held legal title to real property and its improvements in Medford. Respondent entered into a real property exchange agreement with its agent William Ferguson giving Ferguson authority to manage, operate, maintain and repair the property. During the course of the agreement, Ferguson had the building on the property demolished. The building contained asbestos.
Legal Issues: Who is responsible for the asbestos-related violations? As a section 1031 exchange company, is Respondent exempt from liability? Can Respondent assert affirmative defenses not raised in its answer? Can the negligence of Respondent's agent be imputed to Respondent when the negligence is at least in part based on the agent's prior knowledge?
Hearing Officer: Upheld the violation citations and the penalty, except gave Respondent credit for cooperativeness for having the openly accumulated asbestos-containing material cleaned up, which the Department had not.
EQC Held: The Commission upheld the hearing officer's decision in its entirety. Respondent cannot assert affirmative defenses or legal arguments that were not raised in its answer. Ferguson's negligence can be imputed to Respondent even though the negligence is at least in part based on Ferguson's prior knowledge.

From Discovery to Compliance Assistance or Enforcement-

What goes into determining who DEQ addresses and how?

Inspection
or complaint
response
conducted



What determines who we inspect or visit in the first place?

- Priority Sectors
- Program Priorities
- Priority Complaints
- Other?

Enforcement Guidance

Provides the filter to determine who goes on to formal enforcement.
Includes notice of noncompliance response language.

Formal Enforcement

Division 12, Division 11 and other enforcement policies determine what the penalty and process is.

Non-Formal Enforcement

What happens varies by program:

- Technical assistance
- Notices of noncompliance w/ compliance schedules
- Other?

Current Penalty Calculation Process

Class	Magnitude	Matrix	Aggravating & Mitigating Factors	Economic Benefit		
I II III	Major Moderate Minor	10,000 2,5000 1,000 500 100,000	Past Occurrences (P=0-10) History (H=-2 or 0) On-Going (O=0 or 2) Responsibility (R=0,2,6 or 10) Cooperativeness (C=-2,0 or 2)	EB	= Total Penalty	Ability to Pay SEP

Class → Magnitude → Matrix → *Base Penalty+ [(.1X(P+H+O+R+C)]+EB = Total Penalty*

Definitions

Class:

Classification addresses the nature of the violation itself. The purpose of classifications is to separate the violations so that similar types of violations are treated with the same level of severity.

Class I represents those violations that have the potential to cause the greatest environmental or HH harm or are most critical to the structure of the program.

Magnitude:

Magnitudes are intended to differentiate between actual violation incidents on the basis of their specific impact. Thus violations creating a similar degree of environmental or human health impact are at the same magnitude, or violations with equally "nasty" impacts are treated equally.

Matrix:

The matrices can allow the type of violator to be weighed against the level of penalty needed to get specific deterrence. It's where the "who is the violator" factor is most considered.

Aggravating & Mitigating Factors:

Aggravating and mitigating factors allow case specific facts, other than the type of violation or magnitude of the violation to be considered. These factors are intended to aggravate or mitigate penalties similarly, given similar facts.

Economic Benefit:

Intended to level the economic playing field based on what the violator should have invested or spent in order to have achieved and maintained compliance. No consideration for who the violator is.

After the total penalty is assessed and issued:

Ability to Pay:
Procedures to determine actual ability to pay by the specific violator. Information is taken into consideration for settlement offer.
Supplemental Environmental Projects:
For penalties over $2,000, the opportunity to do env. enhancement projects to mitigate up to 80% of penalty amount, if approved by DEQ.

Penalty Calculation Process - Proposed Changes

Class	Magnitude	Matrix	Aggravating & Mitigating Factors	Economic Benefit			
I II III	Major Moderate Minor	8,000 6,000 2,500 1,000 100,000	Past Occurrences (P=0-10) History (H=-2, -1 or 0) On-Going (O =0, 2, 3, 4) Mental State (R=0,2,6 or 10) Efforts to Correct (C=-3,-2,-1,0 or 2)	EB	=	Total Penalty	Ability to Pay SEP

Class → Magnitude → Matrix → *Base Penalty+ [(.1X(P+H+O+R+C)]+EB = Total Penalty*

Main Proposed Changes:

Class:

All violations reviewed and updated by program. Changes include:

- Changes to classifications of specific violations
- Adding or deleting violations based on program rules
- Consistency review across programs

Magnitude:

Changes include:

- Modifications to specific magnitudes to create greater differentiation between different levels of impact
- Some magnitudes are "pre-determined"
- Clarifies gen. mag. applies if insufficient evidence for a selected magnitude exists

Matrix:

Changes to matrices designed to more equitably achieve specific deterrence:

- Increased base penalties for "large" violators or for most severe violations
- Added intermediate penalty ($6,000) matrix
- Eliminated $500 matrix
- Lowered base penalties for smaller entities, homeowners, individuals, small municipalities

Aggravating & Mitigating Factors:

Several detailed changes:

- H – added -1 to address uncorrectable, but reasonable efforts to minimize impacts
- O – Expanded range to address longer term violations
- R becomes M factor – tried to address definitional and proof issues
- C becomes Efforts to Correct – broader range available

Economic Benefit:

No major changes

Ability to Pay:
Policy will be drafted

Supplemental Environmental Projects:
Policy will be redrafted

State of Oregon
Department of Environmental Quality — Memorandum

Date: January 15, 2004

To: Environmental Quality Commission

From: Stephanie Hallock, Director S. Hallock

Subject: Agenda Item C, Informational Item: DEQ's Strategic Directions, 2004 Draft
February 4, 2004 EQC Meeting

Purpose of Item

We are in the process of finalizing our new DEQ Strategic Directions document and would like your input on the final draft. During the meeting, we will review with you the key changes made to the *2002 Strategic Directions* document, and summarize how we incorporated some of your suggestions from our August 2003 Environmental Quality Commission (EQC) – Executive Management Team (EMT) retreat.

Background

Over the past two years, the Commission has been vitally involved in developing DEQ's Strategic Directions – four high-level priorities that direct the agency's decisions on resource use, policy development, and daily workload management and service activities:

1. delivering excellence in performance and product
2. protecting Oregon's water
3. protecting human health and the environment from toxics
4. involving Oregonians in solving environmental problems

With the Commission's support, DEQ adopted the *Strategic Directions 2002* and corresponding key actions in December 2001 (Attachment A). In August 2003, we talked with you about DEQ's accomplishments to date, the next steps for our work, and proposed modifications for each key action under the Strategic Directions. Your guidance and comments from DEQ managers were reviewed in detail by the Executive Management Team in November 2003, and Attachment B provides a summary of the changes we considered. This work has culminated in a draft *Strategic Directions 2004* (Attachment C[1]), which we intend to finalize and distribute to the public this spring.

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[1] We are finalizing the draft *Strategic Directions 2004* now, and will send copies to be added to this staff report during the week of January 19, 2004.

Key Changes

The draft *2004 Strategic Directions* document includes a number of key changes from the 2002 version that reflect accomplishments to date and new directives from Governor Kulongoski on regulatory streamlining, sustainability, and the availability of industrial lands. The changes include:

- A greater focus on *partnering* with other agencies to implement the Governor's Sustainability, Regulatory Streamlining and Industrial Lands Executive Orders, and to build stronger connections between DEQ and the State Public Health Division to support more integrated and improved decision making.

- A greater focus on *working holistically* as "one DEQ" to solve complex environmental problems locally, considering air, water and land quality issues together. We are advancing this "cross-media" approach to address all sources of pollution and provide the best protection to the environment and public health.

- A greater focus on *collaboration* and working with a customer service orientation. We modified key actions under *Excellence in Performance and Product* to demonstrate that employees come first, realizing that investing in DEQ's work force and creating a culture that supports excellence will advance all of the key actions. In addition, we committed to tailor strategies and tools for achieving environmental results to the many different segments of the regulated community that we work with.

- Under *Protect Oregon's Water*, new key actions focus on cleaning up the Willamette River system, addressing multiple environmental impacts on watersheds, and issuing timely and environmentally protective permits.

- Under *Protect Human Health and the Environment from Toxics,* key actions were modified to emphasize the reduction of air toxics and the promotion of clean diesel engines and fuel, and to ensure that our environmental laboratory is capable of handling unknown samples associated with terrorist threats.

- Under *Involve Oregonians in Solving Environmental Problems,* key actions were updated to guide partnerships with non-profit organizations, businesses, other agencies and interest groups to raise public awareness and complete projects that benefit public health and the environment, and to address emerging issues like electronics recycling. Key actions also reflect commitments to improve public access to DEQ information and use the new public health and environmental laboratory as an information resource center for agencies and the public.

Next Steps

With input from the Commission and stakeholders on this draft in February, we will finalize the *2004 Strategic Directions* document and publish and distribute copies to stakeholder groups and the public this spring.

In addition, Strategic Directions will inform the development of DEQ's 2005-2007 budget, which we will bring to you for initial review this summer. Strategic Directions will also inform DEQ's work priorities and planning at all levels of the agency, from the Division and program level to individual employee work plans, and continue to serve as an overall framework for evaluating DEQ's performance and product.

EQC Involvement

As you review the key changes made, please provide us any comments you have on the draft *2004 Strategic Directions* document. We will make every effort to incorporate your suggestions in the final product.

Attachments

A. 2002 Strategic Directions
B. Recommended Content points for the Revised Strategic Directions, November 2003
C. Draft 2004 Strategic Directions (to be mailed to you during the week of January 19, 2004)

Report prepared by: Mikell O'Mealy

Phone: (503) 229-5301

Attachment B

Discussion Document: Recommended Content Points for the Revised Strategic Directions, November 2003

Priority 1: Excellence in Performance and Product	
Subgroup's Recommended Refinements	**Use of Manager Feedback (notes in italic)**
1. Deliver outstanding service • Continue customer surveys for permitted facilities in AQ, WQ, and the On-site program • Provide customer service training for the rest of staff statewide • Identify and implement a range of strategies to meet the needs of our internal and external customers • Implement activities to streamline interaction with customers, which may include rule review, improvements in program delivery, and specific customer service actions (reference Regulatory Streamlining EO) • Design differing strategies to more effectively achieve environmental results in working with individuals Oregonians, small, medium and large business sizes, local governments and municipalities. <u>Add to document in another place</u>: A definition of "outstanding service" and the Communication Credo; maybe we can put these on the back page of the document?	➢ Customer service references should be clear about what we mean. *(Comment incorporated)* ➢ Edit third bullet. "Implement activities to streamline interaction with customers, which may include rule review, improvements in program delivery, and specific customer service actions." *(Comment incorporated)* ➢ Recognize that "customers" includes each other. *(Comment incorporated)* ➢ "Terrific" is a poor choice for describing for external customers *(Comment incorporated)*
2. Provide a work climate that supports excellence • Implement newly improved performance management system to achieve greater collaboration, increased trust, improved communication and more open, useful and timely feedback between staff and managers. The expectation is that this new system will improve morale and increase employee satisfaction with DEQ as a place to work. • Identify what is needed to make DEQ a rewarding place to work; a place where employees are challenged, enjoy the work climate, can grow and make a difference. • Evaluate hiring and employee development processes so DEQ has a strong staffing base from which future DEQ leaders can emerge. • Cultivate and implement employee suggestions to improve work climate and efficiency. <u>What was dropped</u>: ➢ Reference to fiscal accountability. The subgroup was not able to identify what is more, better or different about this activity. ➢ All direct reference to "employer of choice"; language is not popular with managers and staff. ➢ Reference to making DEQ's values live; to "soft" according to managers and staff. ➢ The ENGAGE project; although we referenced employee suggestions. <u>Remains unresolved:</u> Should this Key Action be the first Key Action under the Excellence Priority	➢ If we care for employee needs, the external needs will also be managed." *(Consider using in text write-up)* ➢ Eliminate reference to TriMet *(Incorporated comment)* ➢ Make a reference to having computer hardware and database support for staff *(Group believes this issue will be addressed in Information Management Plan).* ➢ "Making values live" sounds too "fluffy", and "what are our values anyway?" *(Reference to values were removed)* ➢ If we really want to be the employer of choice we should ensure that we have current rules *(Group was unclear about this issue, and felt it was covered under the next key action)* ➢ Shouldn't there be a more direct reference to health and safety here? *(Group removed reference to values, and agreed that H&S should be a value).* ➢ This should be the first key action under this priority, not the second. *(Left for Stephanie to decide)*

Discussion Document: Recommended Content Points for the Revised Strategic Directions.

<table>
<tr><th colspan="2">Priority 1: Excellence in Performance and Product</th></tr>
<tr><th>Subgroup's Recommended Refinements</th><th>Use of Manager Feedback (notes in italic)</th></tr>
<tr><td>3. Make effective environmental decisions that consider ways to reduce pollution from multiple sources simultaneously
• Provide a more holistic, integrated approach to achieve environmental results
• Partner with other agencies to solve environmental problems
• Evaluate how to best support integrated policy development and decisions.
• Determine strategies for getting broader and more meaningful public involvement.
• Work toward integrated technical assistance (e.g. pilots)
• Establish a joint DEQ and Health lab to help make stronger links between environmental and public health information to support more integrated and improved environmental decisions

<u>What was dropped</u>:
The concept of integrated inspections – industry doesn't want this, staff find them too time consuming for results.

<u>Remains unresolved</u>:
➢ Where should the science and information concept go? The group put it in both Priority 1 and 4 with the focus in Priority 1is on linking science and information. In priority 4 the focus is on making more information available to more Oregonians.
➢ What is the EMT's vision for the link between public heath and environmental management? The group felt an EMT discussion on this topic to achieve a shared vision was important.</td><td>➢ Consider options for putting folks together physically, this helps to break down barriers. (Group liked this idea, but it's too detailed for this document)
➢ Avoid cross-program/cross-media language. (Group replaced with " integrated environmental results")
➢ Evaluate how policies are made, in addition to how we implement. (Comment incorporated)

The group felt these comments could be used or were already present in the old descriptive text for this action.
➢ Cross-program efforts should occur at the lowest possible level in the Agency.
➢ Our cross-agency work needs to find ways to work together in new ways, and smarter.</td></tr>
<tr><td>4. Ensure understandable and equitable compliance and enforcement
• Implement Division 12 rules modifications and adjust procedures where necessary to ensure understandable and equitable compliance and enforcement.
• Continue to improve data management and timeliness tracking efforts
• Look at ways to integrate environmental management tools – including incentives with enforcement to achieve compliance

<u>What was dropped</u>:
The group moved all references to TA to the 3rd Key Action.</td><td>➢ Should compliance and TA be linked? (Is this the white or black hat discussion? All references to TA were moved to the previous action)
➢ There was support for continuing to focus on compliance and enforcement timeliness and eliminating any disconnects. (Great)
➢ Should we have cross-media TA? There was some discussion about this, but the issue remains unresolved. (Group agreed with cross-media TA being a concept in the action above)
➢ Better guidance was one area brought up by my staff, although they did not give me specifics. (Not enough information to address)</td></tr>
</table>

Discussion Document: Recommended Content Points for the Revised Strategic Directions.

<table>
<tr><th colspan="2">Priority 2: Protect Oregon's Water</th></tr>
<tr><th>Subgroup's Recommended Refinements</th><th>Use of Manager Feedback (notes in italic)</th></tr>
<tr><td>1. Improve water quality through a comprehensive agency-wide watershed approach
• Complete and implement watershed plans (including TMDL implementation plans) for impaired waterbodies by 2010.
• Evaluate progress in improving water quality where watershed plans are complete
• Develop funding strategy for TMDL implementation
• Aggressively market DEQ's loan program for nonpoint source projects (SRF)

<u>Include in the Text:</u>
➢ A definition of "comprehensive" being inclusive of air, water and land.
➢ The need to address both point and nonpoint sources of water pollution as well as air and land sources.</td><td>➢ Is there the opportunity for broader goals to be accomplished through TMDLs? (Comment incorporated)
➢ Identify watershed actions beyond WQ such as TA, abandoned mines, target clean-ups and assessments. (Comment incorporated)
➢ Raise other programs contributions to WQ through a key action (how other program implement/contribute to WQ priorities) (Comment incorporated)
➢ If WQ is more important than AQ, can't we find a way to put AQ resources into WQ? (Yes, discussion for PMTs)
➢ Bring in the need to focus on non-point source pollution. (Comment incorporated)
➢ Update WQ monitoring to include toxics. (Added to Priority 3)
➢ Add groundwater (Recycle text from current document)
➢ Interest in recognizing "anti-degradation" and drinking water from a few folks who feel like risk-based approaches are letting down the environment (This appears to be a policy debate, address in another forum)</td></tr>
<tr><td>2. Improve water quality by issuing timely and updated permits
• Complete wastewater program evaluation by the Blue Ribbon Committee which will identify strategies for minimizing permit backlog and stabilizing program funding
• Implement backlog reduction plan that reduces the NPDES majors from 57% to 30% and minors from 43% to 21%

<u>Note:</u>
The Subgroup considered moving this to Excellence; however, decided that keeping this as a Key Action under water provided greater visibility for the issue and the topic is more relevant to the water priority.</td><td>➢ Shouldn't we be careful communicating that we aren't focusing on compliance? Shouldn't we have a strategy that shows we care about compliance? (Blue Ribbon Committee will resolve)
➢ HW disposal via stormwater, are we missing a cross-program opportunity here to integrate this into permits? (A potential activity for above action)
➢ Don't use "accurate" in the action language. (Comment incorporated)
➢ Consider key action language change to "issue effective permits to regulate discharges" (Discussed concept, Stephanie to decide on final language)
➢ Is this more an excellence issue? (Discussed, but group agreed to keep it in Water priority)
➢ Add a reference to limiting HW discharges to water (A potential activity for above action)</td></tr>
</table>

Discussion Document: Recommended Content Points for the Revised Strategic Directions.

<table>
<tr><th colspan="2">Priority 2: Protect Oregon's Water</th></tr>
<tr><th>Subgroup's Recommended Refinements</th><th>Use of Manager Feedback (notes in italic)</th></tr>
<tr><td>3. Encourage broader reuse of wastewater
• Foster water reuse by working with others to address public health concerns, provide information on new technologies, and develop incentives
• Build awareness of reuse benefits including water conservation

<u>Include in the Text:</u>
A reference to this action being consistent with the Governor's Sustainability Executive Order.</td><td>➢ Eliminate the word "strategy" in the key action (Comment incorporated)
➢ The sustainability reference just seems to be thrown in – sustainability goes beyond reuse. (Removed as a bullet, address when revising text)</td></tr>
<tr><td>4. Cleanup the Willamette River system
• Complete and implement the Watershed Plan for the mainstem and sub-basins of the Willamette
• Develop a funding strategy for the Willamette River Watershed Plan implementation
• Address issues related to abandoned mines on the Willamette
• Manage Portland Harbor Cleanup

<u>Include in the Text:</u>
➢ Information from the slide "Cleaning up the Willamette to characterize this action."
➢ A reference to this action being consistent with the Governor's Sustainability Executive Order.</td><td>➢ This priority should not be viewed as a WQ program priority, we need to look at and communicate what other programs are doing for water. (Comment incorporated)
➢ Should this action be rolled into S.D. #1? (Discussed, will be an example in first action but remain a separate Key Action)</td></tr>
</table>

Discussion Document: Recommended Content Points for the Revised Strategic Directions.

<table>
<tr><th colspan="2">Priority 3: Protect Human Health and the Environment from Toxics</th></tr>
<tr><th>Subgroup's Recommended Refinements</th><th>Use of Manager Feedback (notes in italic)</th></tr>
<tr><td>1. Prepare for and minimize the danger posed by catastrophic release of dangerous chemicals
• Continue ensuring that the public and environment are protected from risk associated with storage and destruction of chemical agents at Umatilla Depot
• Develop and implement emergency response plans which will enhance DEQ's capability to respond to environmental and public health emergencies
• Establish a public health and environmental laboratory facility that is equipped to handle unknown samples.</td><td>The group felt these comments could be used or were already present in the old descriptive text for this action.
➢ Need more connection between DEQ's and Umatilla's response plans.
➢ Partner with the health division…?</td></tr>
<tr><td>2. Reduce and prevent toxic releases to air, water and land
• Implement cross-program mercury reduction strategies, measures and targets as agency sustainability priority
• Reduce air toxics through implementing the air toxics program. Once aspect of this program is to promote clean diesel engines and fuels as part of the Governor's sustainability efforts
• Develop broader Toxics reduction strategy to identify, prioritize, and define reductions efforts.
• Plan for developing an information infrastructure (includes monitoring and data management)
• Adopt updates to WQ standards (toxics criteria)

<u>Include in the Text:</u>
➢ A reference to the need to base our toxics reduction efforts on good science and information
➢ A reference to the links between toxics, health and the environment – to tell the story why toxics are a priority

<u>Left Unresolved:</u>
Originally "Toxics" was intended to be a substitute word for "PBT". This is no longer the case based on the draft Toxics Reduction Strategy. We seem to have lost the more focused approach to this action, having it be on the Governor's PBT EO. Is this an issue?</td><td>➢ We struggle with what we know about toxics, can we create more "common knowledge" about what we already know. (Comment incorporated)
➢ Need more of a plug here for water. Water reasonable potential analysis could be linked here. (Incorporated WQ standards updates)
➢ We need a good story that communicates why toxics are a problem. (Good idea, this would be part of text write up)
➢ Toxics criteria, we need training. (Yes, but too detailed for this document)

The group felt these comments could be used when writing new text or were already present in the old descriptive text for this action.
➢ Can we leverage, link more directly or support the Toxics Release Inventory
➢ We need to identify and address data gaps.
➢ We should recognize the expertise that DEQ brings to complex issues and play off our strengths. (part of Strategy)
➢ This action is too broad, can it be made more specific? (Examples in text should address this)
➢ Add reference to HHW (could fall under Priority #4)</td></tr>
</table>

Discussion Document: Recommended Content Points for the Revised Strategic Directions.

Priority 3: Protect Human Health and the Environment from Toxics	
Subgroup's Recommended Refinements	**Use of Manager Feedback (notes in italic)**
3. Cleanup and reduce risk from toxic contaminants already in our environment • Continue work underway related to abandoned mines, sediments, and Brownfields emphasizing the partnering efforts associated with this work and the ability to reclaim land for industrial use • Identify funding sources for cleanup efforts, which will be different depending on the type of mine (abandoned vs. inactive) *Include in the Text:* Context that informs the reader that this action relates to legacy problems caused by old air, water and land pollution practices.	➢ What about this key action is "more, better, different"? *(Discussed, focus on cross-media, mines, sediments, etc.)* ➢ Can we make a reference here to addressing toxics that have been identified as a concern on the 303(d) list? *(Address in Priority 2)* ➢ Numbers 2 & 3 are broad enough to be linked *(The group discussed and decided this is focused differently from #2, will clarify distinctions in text)* *The group felt these comments could be used when writing new text or were already present in the old descriptive text for this action.* ➢ Scientific approach to understanding risk is important to ensuring we allocate resources to environmental priorities (e.g. sediments, not just mines) ➢ Add a reference to Brownfields and industrial land reuse

Priority 4: Involve Oregonians in Solving Environmental Problems	
Subgroup's Recommended Refinements	**Use of Manager Feedback (notes in italic)**
1. Encourage personal actions by Oregonians to protect the environment • Enhance efforts to educate Oregonians on ways to reduce their impact on the environment. One example is to implement natural lawn care education pilot. • Engage public and support efforts to meet new waste reduction and recycling challenges. • Develop partnerships with private non-profits, NGOs, private sector, and other agencies to raise public awareness and do projects that benefit public health and the environment. This includes sponsoring events and striving to raise the level of volunteerism at environment improvement events (e.g. tree plantings, beach cleanups, etc.) *Remains unresolved:* Group would like to be more specific on bullet two (recycling). Can this be narrowly focused to electronics recycling, or since recycling rates are down, do we focus it more generally?	Ways to Engage Oregonians: ➢ Get their interest so they understand it's a problem ➢ Grade school education ➢ Create opportunities for people and thank them for helping ➢ Focus on communities to solve environmental problems ➢ Money, incentives for good things, less fees for less pollution ➢ Tax incentives ➢ Get info to public on problems ➢ Walk the talk (sponsorships/partnerships) ➢ Pitch in to help clean up something ➢ Apply common sense *The group reviewed the ideas and made some modifications. Most of these idea are at the next level of detail from the concepts, so they might be used when drafting the text.*

Discussion Document: Recommended Content Points for the Revised Strategic Directions.

Priority 4: Involve Oregonians in Solving Environmental Problems	
Subgroup's Recommended Refinements	**Use of Manager Feedback (notes in italic)**
2. Provide Oregonians with better access to information on local environmental conditions and issues • Increase DEQ's information management efficiency and effectiveness through implementing the information management plan that prioritizes resources and sets long-term goals for continued improvement of the information management function. • Improve public awareness and access to existing DEQ information. (e.g. Clean Air Action Days, DEQ Q&A, etc.) • Use the joint DEQ and Public Health lab as an information resource center for DEQ, the Health Division, other agencies, and the public. This center will increase the availability and accessibility of agency data and strive to make more information of interest available to Oregonians.	Great Access to Information: ➢ Take information to where the people already go ➢ SIC serves as marketing tool for what we do ➢ Reward employees for publication and interpretation of data ➢ Good questions and answers ➢ Focus resources on what DEQ does best and what others can't (stats and trends monitoring, ex.) ➢ DEQ cable TV slots ➢ Fun and interactive information ➢ Information is accessible and understandable ➢ Leverage credibility around science ➢ Allocate resources for data interpretation ➢ Be experts at using information on jobs ➢ Partnership ➢ Help DEQ employees work better on the job ➢ We think these are all addressed. *The group reviewed the ideas and made some modifications. Most of these idea are at the next level of detail from the concepts, so they might be used when drafting the text.*
3. Help communities prosper in environmentally beneficial and sustainable ways • Use the Economic Revitalization Teams to focus on the Governor's goal of enhancing services that make it easier for businesses to locate and thrive in Oregon. This includes implementing the Industrial Lands and Regulatory Streamlining Executive Orders and finding ways to marrying economy, community and natural environment goals to create sustainable local development (Sustainability EO). • Improve community based problem solving capabilities throughout DEQ • Partner with the other agencies to help communities solve local environmental problems. For example: Partner with the Division of Health Services to work with communities to protect their drinking water supplies. *What was dropped*: All referenced to CSTs and EPOC.	Help Communities Prosper: ➢ Holistic thinking ➢ Be good listeners ➢ Give them money ➢ Streamline ➢ Help them anticipate and solve problems ➢ Do things they can understand ➢ Adopt cost effective regulations ➢ Partners with communities, build relationships ➢ Live in community, understand philosophies ➢ Ask them what problems are ➢ One DEQ *The group reviewed the ideas and made some modifications. Most of these idea are at the next level of detail from the concepts, so they might be used when drafting the text.*

Discussion Document: Recommended Content Points for the Revised Strategic Directions.

Priority 4: Involve Oregonians in Solving Environmental Problems	
Subgroup's Recommended Refinements	**Use of Manager Feedback (notes in italic)**
4. Work with multiple partners toward sustainable solutions to environmental problems such as climate change, renewable energy, forest health, and adequate water supplies. *What was dropped*: The group recommends dropping this whole Key Action and incorporating these thoughts into Stephanie's cover memo/ letter.	➢ This action is way out there, and the scope is huge ➢ This action relates to being an active force (leader). ➢ This might be an way to take DEQ successes and share them with other agencies, and an opportunity to hear from other agencies ➢ Might be a way to find underlying issues that cross agencies – think more holistically and sustainable. Look to Sustainability EO for examples ➢ Many opportunities; Natural Step, SOLV we need to stay involved in other efforts. *Consider these comments when drafting document introduction or Director's letter.*

State of Oregon

Department of Environmental Quality — Memorandum

Date: January 16, 2004

To: Environmental Quality Commission (EQC)

From: Stephanie Hallock, Director S. Hallock

Subject: Agenda Item D, Informational Item: DEQ's Executive Measures Update and Report

Purpose of Item

DEQ's Executive Management Team (EMT) uses a series of *Executive Measures* to evaluate the agency's performance and guide senior level decision making. This agenda item will provide the Commission with a report on the state of *Executive Measures* at DEQ.

Executive Measures History

In September 2001, the EQC reviewed a draft set of Executive Measures which were created to answer the checkpoint questions in the Strategic Directions 2002. Throughout 2002, the EMT conducted measures evaluation sessions which led to changes in the measures. Managers and staff implemented tracking systems to provide necessary information on the measures. In October 2002, the EQC reviewed progress on the Strategic Directions 2002 using some of the Executive Measures.

In November 2002, the EMT reviewed the measures development progress to date and concluded that the measures needed to be more results oriented to better support senior level decision making. This led to the formation of the Executive Measures Advisory Group (the EMAG), a 5-member EMT subgroup. The EMAG is committed to continually improving the Executive Measures while working toward a goal of making performance measures and evaluation inherent in how we do business at DEQ.[1]

The EMAG is currently working on finalizing DEQ's first Annual Executive Measures Report for 2003. This report will be presented during your February 5, 2004 meeting.

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[1] EMAG members are: Mary Abrams, Laboratory Administrator; Helen Lottridge, Management Services Administrator; Kerri Nelson, Western Region Administrator; Dick Pedersen, Land Quality Administrator; Paul Slyman, Deputy Director; and staff support from Dawn Farr. The EMAG plans to rotate two EMT members in February to allow new EMT members the opportunity to participate.

Executive Measures Overview

Executive Measures are performance measures that the EMT and I use to evaluate the agency's performance and guide our decision making. DEQ's Executive Measures are divided into three categories that address different performance views:

- Strategic Directions Measures (SDM). SDM help the EMT evaluate whether we are achieving our intended results on DEQ's Strategic Directions.
- Agency Performance Measures (APM). APM are the measures we report to Department of Administrative Services (DAS) and the Oregon Progress Board; they inform on DEQ's overall agency performance.
- Oregon Benchmarks (OBM). OBM are measures DEQ reports to the Oregon Progress Board, and are part of the measures framework that informs on Oregon State's performance.

In November 2003, another dimension was added to DEQ's measurement framework; Agency Head Performance Expectations. These expectations were discussed at the December 2003 EQC meeting (see Attachment A.) A visual overview of Oregon's measures types, players, and their sphere of influence is presented in Attachment B.

A complete list of Executive Measures is available in Attachment C. This document will look familiar to some Commissioners, as an earlier version of this table was presented to the Commission in September 2001. The table provides a snapshot of how DEQ's Executive Measures link to the newly revised Strategic Directions' Key Actions. It also illustrates the overlap between the different measures categories, and provides the most current performance data and target information for each measure.

Executive Measures Reports

DEQ currently has the following Executive Measures related reports:

- *Quarterly Executive Measures Reports.* These reports provide performance information on a rotating subset of the Executive Measures. The EMT and Managers use these reports to evaluate whether there is a need to adjust performance during the calendar year.

- *The Annual Executive Measures Report.* These reports provide a comprehensive assessment of Executive Measures performance. The EMAG uses this report to plan the next steps to continuously improve the Executive Measures. The full EMT and Managers can use this report when planning for the upcoming calendar year.

- *Agency Performance Progress Report*. This report provides an annual report on just the APM category to meet DAS and Oregon Progress Board's reporting requirements.[2]

Next Steps

The immediate next step is to finalize the Annual Executive Measures Report for 2003, and create the electronic version so this information can be easily accessed on DEQ's Web-site. The goal is to launch this addition to the Web-site with the revised Strategic Directions 2004.

Once the Strategic Directions 2004 document is finalized, the EMAG will identify and direct changes to the Executive Measures so that they better align them with DEQ's Strategic Directions 2004.

EQC Involvement

EQC review and feedback on our progress to date, and their guidance for future efforts will be incorporated into our next steps.

Attachments

A. DEQ Director's Performance Expectations
B. Oregon's Measures World
C. Revised Overview of DEQ's Strategic Directions and Related Executive Measures

Approved:

Section: Helen Toth

Division: Helen Toth

Report Prepared By: Dawn Farr
Phone: (503) 229-6935

[2] For more information about the Oregon Progress Board, Agency Performance Measurement Requirements and Oregon Benchmarks visit http://www.econ.state.or.us/opb/

STATE OF OREGON

AGENCY HEAD PERFORMANCE EXPECTATIONS

Agency Name: Department of Environmental Quality **Agency Head:** Stephanie Hallock
Dates: From: September 1, 2003 **To:** June 30, 2005

- **Purpose** The "Agency Head Performance Expectations" document represents the commitment of agency leadership to assist the Governor in achieving the administration's priorities.

- **Agency-Specific Results** In addition to the statewide standards cited below, the Agency Head commits to the following projects/activities during the 2003-2005 biennium:

Activity/Project Name	Anticipated Outcome(s)	Key Milestones/Dates	Targeted Completion Date
Provide a climate that supports excellence and outstanding customer service.	Improved customer satisfaction with service provided by DEQ.	• Spring 2004, conduct second survey of air and water quality permitted sources. • December 2004, evaluate survey findings and other efforts to date and make adjustments to our customer service improvement plan.	Improvement efforts are ongoing.
Clean up the Willamette River System.	Total Maximum Daily Loads (TMDL) completed for the Willamette Mainstem.		June 2004
	Comprehensive assessment of work and strategy for improving the Willamette River Basin.		June 2004
	Streamline DEQ's Wastewater Permitting Program.	• April 2004, Blue Ribbon Advisory Committee recommends program changes. • June 2004, reduced permit backlog for "major" dischargers from 57% to 30%, and for "minors" from 43% to 21%.	To be determined after recommendations from Blue Ribbon Committee are presented.
	Increase the number of Portland Harbor Superfund sites that require no further clean up action.	• July 2004, commence capping of sediments at the McCormick & Baxter site.	Late 2005, complete cleanup of the McCormick & Baxter site. Completion dates for cleanup of

Activity/Project Name	Anticipated Outcome(s)	Key Milestones/Dates	Targeted Completion Date
			other Portland Harbor sites are to be determined.
Encourage broader reuse of wastewater.	Increased percentage of permitted facilities reusing wastewater.		By 2005, 10% of permitted facilities will be reusing wastewater.
Reduce toxic releases to air, water and land, and clean up toxic contaminants already in the environment.	Reduced risk associated with chemical agent stored at the Umatilla Chemical Depot through the safe destruction of weapons.	Mid to late 2004, start the destruction of chemical weapons at the Umatilla Chemical Depot.	To be determined based on the start date of destruction.
	A strategy for reducing toxics.	December 2003, present a framework for the strategy to the Environmental Quality Commission, receive guidance.	Late 2004, strategy established for reducing toxics in the environment, presented to the Commission.
	Introduce ultra low sulfur diesel fuel in Oregon, provide electrification at truck stops as envisioned by Governor's Climate Change Initiative, and retrofit trucks with clean burning engines when ultra low sulfur fuel is secured.	Spring 2004, secure ultra low sulfur fuel in Oregon if economically feasible.	To be determined.
	Assess abandoned or inactive mines in Oregon for toxics.	December 2003, assess a cumulative total of 77 abandoned or inactive mines.	Future targets to be determined in early 2004.
	Reduce mercury in our environment.	December 2003, remove 40 pounds of mercury through DEQ's mercury reduction efforts.	Future targets to be determined in early 2004.
Provide Oregonians with better access to information on local environmental conditions and issues.	A plan completed for the creation of a center for environmental science and information as part of the new DEQ and Public Health Division Laboratory.	Spring 2004, select a site for the new DEQ and Public Health Division Laboratory.	December 2004, plan for science and information center completed.
Support communities in solving environmental and economic problems.	DEQ actively participates in the goals and activities outlined by the Governor's Economic Recovery Teams.		DEQ's participation in GERTs is funded through June 2004.

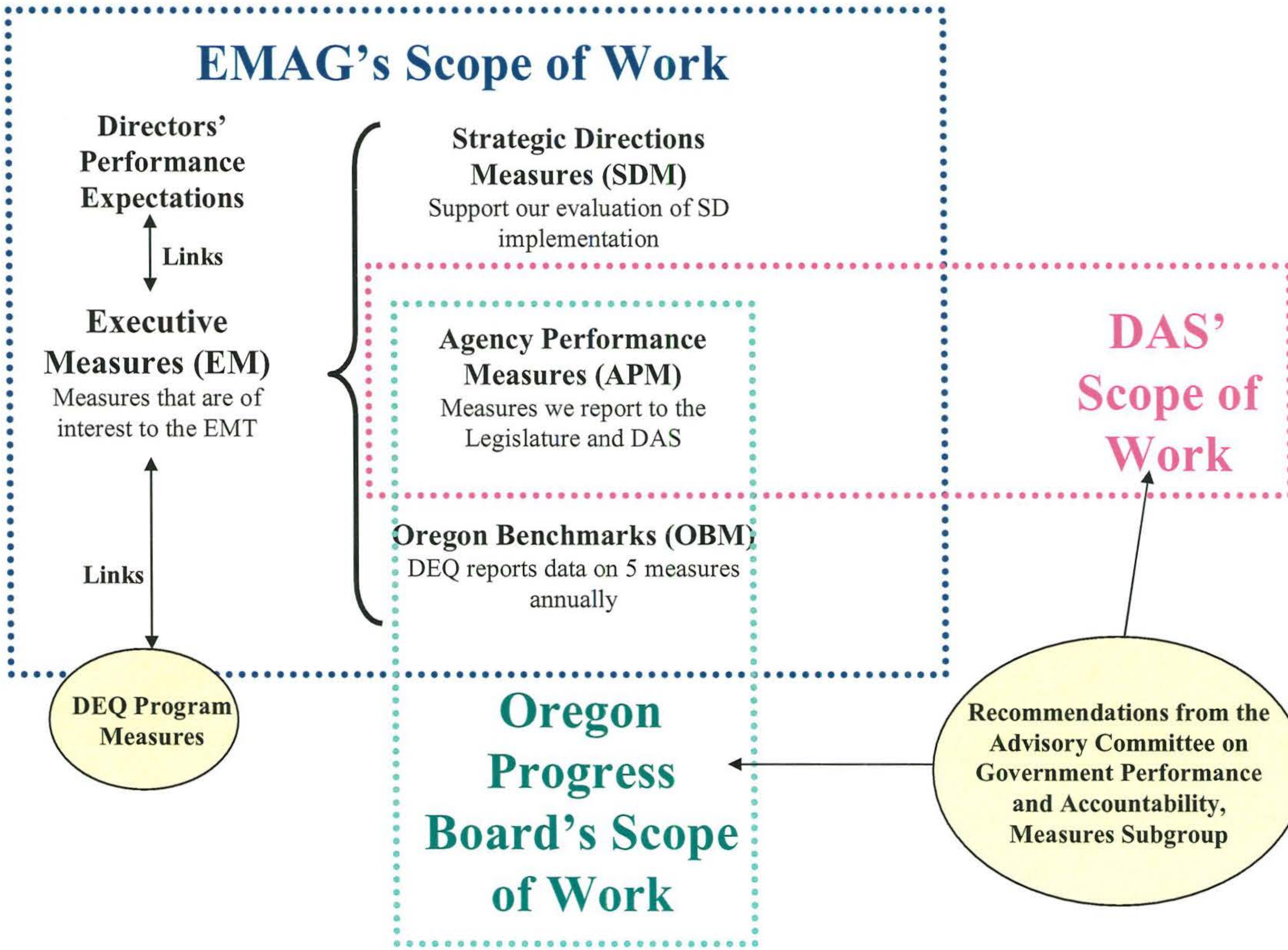
For information on how these activities fit with DEQ's four Strategic Directions, see the attached summary of "Supporting a Healthy, Sustainable Environment and Economy," submitted to the Governor's office in December 2003.

- **Statewide Management Standards**
  All Agency Heads are expected to provide agency and statewide leadership in the following areas:

  - Diverse Workforce as evidenced by a culturally competent workforce.
  - Financial Accountability as evidenced by managing within legislatively-approved budgets; accurate financial forecasting and reporting; ongoing cash flow analysis; and early identification of problems and potential solutions.
  - Excellent Customer Service as evidenced by positive feedback from customers, particularly in the areas of providing credible information, responsiveness, professionalism, and problem-solving.
  - Collaborative Planning with other State and Local Agencies as evidenced by their participation in planning and initiatives that impact their constituents.
  - Regulatory Streamlining Processes as evidenced by a review of all regulations, policies, and procedures; implementation of business process re-engineering activities; and coordination with other local and state agencies to eliminate redundant processes.
  - Sustainability Practices as evidenced by implementation of Governor's Executive Order.
  - Statewide Efficiency Initiatives as evidenced by participation in development and training as well as pro-active communication to staff to support the outcomes.
  - Ensure that issues/problems identified by Internal Auditors or the Secretary of State Audits are adequately addressed and not recurring.

- **Reviewing Results**
  The Agency Head agrees to the following:
  - To meet the statewide management requirements.
  - To accomplish the results specified above.
  - To notify the Director of Government Operations of obstacles that may hinder or impede, or opportunities that may increase, the Agency Head's ability to carry out the activities required to achieve results.
  - At least quarterly, to discuss and share data with the Director of Government Operations related to the progress in meeting the results. This will include a discussion of opportunities to improve matters, resolve problems and enhance progress.
  - At least yearly, to meet with the Governor to review the performance of the agency and the results.

Attachment B: Oregon's Measures World



꞉Q's Strategic Directions and Related Executive Measures

꞉ecutive Measures	Measures Type SDM	APM	OBM	Current Value	Current Target	DA Lead
꞉rmance appraisals; annual average	X			68%$_{2003}$	90%$_{2003}$	Helen
operating budget within a 10% variance	X			91%$_{2002/F}$	95%$_{2003/FY}$	Lauri
loyees	X			65%$_{2002}$	75%$_{2004}$	Helen
Q permitted sources that rate DEQ's ꞉g or exceeding expectations	X	X		65%$_{2002}$	75%$_{2004}$	Nina
ınt discharge permits issues within the ꞉0a)		X	X	88%$_{2003}$	85%$_{2005}$	Andy
discharge permits issued within the target		X	X	45%$_{2002}$	40%$_{2005}$	Mike
measure to be determine	X			NA	NA	NA
ıtage for enforcement rule revisions	X			80%$_{2003}$	100%$_{2003}$[1]	Anne
compliance and enforcement process	X			NA	NA	Anne
꞉MDLS completed according to the 2000	X	X		34%$_{2003}$	41%$_{2005}$	Mike
꞉erbody miles for which a TMDL has been	X	X		17%$_{2003}$	49%$_{2004}$	Mike
m sites with significantly increasing ꞉ (OBM #78)	X		X	51%$_{2001}$	75%$_{2005}$	Mary
꞉m sites with decreasing trends in water	X		X	46%$_{2001}$	40%$_{2005}$	Mary
m sites with water quality in good to ꞉BM #78)	X		X	5%$_{2001}$	0%$_{2005}$	Mary
neasure to be determine	X			NA	NA	NA
꞉rmits developed on a watershed basis	X	X		26%$_{2002}$	60%$_{2003}$	Mike
꞉rmits expired	X	X		14%$_{2003}$[2]	15%$_{2003}$	Mike
ilities that produce reclaimed water for use	X	X		7.3%$_{2003}$	10%$_{2005}$	Mike

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Q's Strategic Directions and Related Executive Measures

ecutive Measures	Measures Type SDM	APM	OBM	Current Value	Current Target	DA Lead
ssment	X			NA	NA	Dick
meline project	X			NA	NA	Dennis
destroyed (Umatilla)	X	X		NA	$20\%_{2005}$	Dennis
ver time due to destruction of chemical	X			NA	NA	Dennis
ved through DEQ's reduction efforts	X	X		$35lbs_{2002}$	$40lbs_{2003}$	Dick
ssessed	X	X		75_{2003}	77_{2003}	Dick
nt milestones completed	X			NA	NA	Dick
egon hazardous waste sites cleaned up		X	X	$88.2\%_{2002}$	$79\%_{2005}$	Dick
vho have modified behaviors	X			NA	NA	Nina
air is healthy to breathe for all Oregonians			X	$100\%_{2001}$	$100\%_{2005}$	Andy
al solid waste landfilled or incinerated per			X	1521_{2001}	1575_{2005}	Dick
f web page-views per month	X	X		$346k_{2003}$	$350k_{2005}$	Helen
nities with priority environmental issues	X	X		$59\%_{2002}$	$35\%_{2003}$	Kerri

2/5/04 EQC Meeting; Item D Handout

DRAFT: Revised 1/28/04

State of Oregon
Department of Environmental Quality

Department of Environmental Quality

Annual Executive Measures Report for 2003

DRAFT

[The Final Will Be Available in March 2004]

For the timeframe January 1 to December 31, 2003

Presented by DEQ's Executive Measures Advisory Group (EMAG)

Message from the Director

DEQ's mission is to be a leader in restoring, maintaining and enhancing the quality of Oregon's air, water and land.

DEQ's staff are highly committed to restoring and protecting public health and Oregon's environment. We monitor and assess environmental conditions, establish policies and rules, issue permits, clean up environmental contamination, implement environmental laws, and educate businesses and citizens to encourage pollution prevention. To find out whether we are fulfilling our mission, we periodically ask ourselves, *are we achieving our intended results?*

Historically we have measured success by our outputs, such as the number of inspections or permits completed, and we regularly report this type of information to our stakeholders and customers. However, we've found that we need to pay attention to other larger questions as well – questions that will tell us whether we are doing the right work, or whether we're following through on the things we said we'd do – such as:

- Are Oregonians reducing the use of toxic chemicals and the generation of hazardous waste?
- Are DEQ enforcement actions equitable, consistent, understandable and timely?
- Are Oregonians getting the information they want and need?

In 2002, DEQ's senior management team embarked on a process to identify and report on Executive Measures that will help us answer these types of questions and enhance our leadership of the agency.

This report summarizes our progress during 2003; however, this is only a beginning. Over time and with the accumulation of trend information, we will be able to provide a more comprehensive assessment of DEQ's performance and, therefore, be able to more effectively manage for intended results. I look forward to sharing our findings with you in the years to come.

Thank you for your interest in following our continuing journey toward excellence.

Stephanie Hallock, DEQ Director

Executive Measures Overview

What are Executive Measures?

Executive Measures are performance measures that DEQ's Director and senior management team use to evaluate the agency's performance and guide their decision making. The measures provide information to answer three important overarching questions:

- *Are we achieving intended results on priority work?*
- *Are we performing successfully as an agency?*
- *Are we contributing to Oregon's success?*

A subset of Executive Measures was created to answer each of the above questions. The use of measures subsets also facilitates the agency's external measures reporting requirements to the Department of Administrative Services and Oregon Progress Board. The subsets are as follows:

Key Question	Executive Measures Subset
Are we achieving intended results on priority work?	**Strategic Directions Measures (SDM).** These measures answer Strategic Direction checkpoint questions. DEQ's senior management team reviews select checkpoint questions each quarter to identify potential problems and to make adjustments where needed to maximize results. A comprehensive assessment of checkpoint questions for the Strategic Directions 2002 is presented in Attachment A.
Are we performing successfully as an agency?	**Agency Performance Measures (APM).** This subset of measures is used to prepare measures reports to the Legislature, as stipulated in the *Performance Measures Guidelines* prepared by the Oregon Progress Board.[1] APMs provide a more holistic picture of DEQ's performance, and are evaluated annually by senior management. The most current Annual Performance Measures Report is available in Attachment B.
Are we contributing to Oregon's success?	**The Oregon Benchmarks (OBM).** DEQ provides information annually to the Oregon Progress Board for five Oregon Benchmarks, which measure progress towards Oregon's strategic vision, *Oregon Shines*. DEQ's senior management reviews the results of its five Oregon Benchmarks annually.

[1] For more information on the Performance Measures Guidelines visit the Oregon Progress Board Web-site at http://www.econ.state.or.us/opb/

About this Report

The Annual Executive Measures Report provides information on DEQ's Executive Measures activities and progress for the 2003 calendar year. The Report is part of the DEQ's continuing efforts to increase transparency and accountability, which are important components associated with DEQ's Strategic Priority 1: Providing Excellence in Performance and Products. Much of the report's performance assessment is focused on process rather than outcomes because most of the measures are new, and there are no data trends to support a more quantitative analysis. DEQ's senior management team agreed that publishing an annual report, in these early stages, was critical to communicating the importance of DEQ's emerging performance measurement system.

The report is organized into three sections, one for each Executive Measures subset. Each section presents a snapshot of measures data and performance for 2003. Attachments A and B provide a more comprehensive assessment of performance for the Strategic Directions and Agency Performance Measures.

For more information about DEQ's Executive Measures contact Dawn Farr at farr.dawn@deq.state.or.us or phone 503-229-6935.

Section I: Strategic Directions Measures

Are we achieving intended results on priority work?

The agency made substantial progress implementing the Key Actions that were identified in the Strategic Directions 2002. DEQ's senior management team evaluates Strategic Directions progress by answering checkpoint questions which are directly linked to the Key Actions. Strategic Directions Measures (SDM) were developed to help answer most of the checkpoints questions. Where measures have not been identified, implementation progress of the Key Actions is monitored through tracking the completion of key activities.

A high level assessment of Strategic Directions implementation progress follows. One page is dedicated to each of the four Priorities that form the basic framework of the Strategic Directions:

- Priority 1: Excellence in Performance and Product
- Priority 2: Protect Oregon's Water
- Priority 3: Protect Human Health and the Environment from Toxics
- Priority 4: Involve Oregonians in Solving Environmental Problems

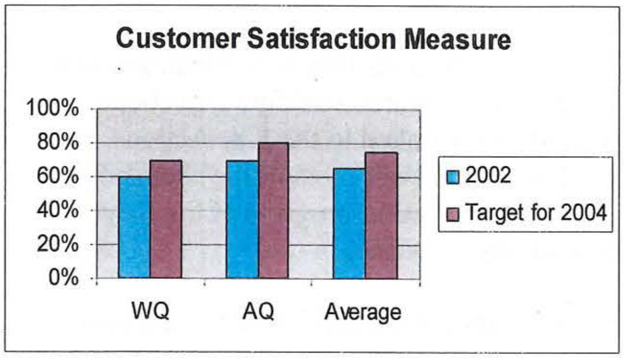
Each page lists Key Actions, related Checkpoints and a Progress Summary. Progress Summaries are characterized using the following performance categories to provide consistency to the Checkpoints evaluation.

Category	Category Definition
Yes	Measures indicate that we've met or exceeded our expected outcome or target.
Qualified Yes	Measures are in place, baseline data has been gathered, and actions are being taken to achieve our target.
No	Measures indicate that we are not making appropriate progress toward our expected outcome or target.
We're Making Progress	We are monitoring our activities because we need to develop data systems or collect sufficient data to begin to report on the selected measures.
Yet to be Determined	We are monitoring our activities until outcome oriented performance measures are developed.

A more detailed response to each Strategic Directions checkpoint questions can be found in Attachment A.

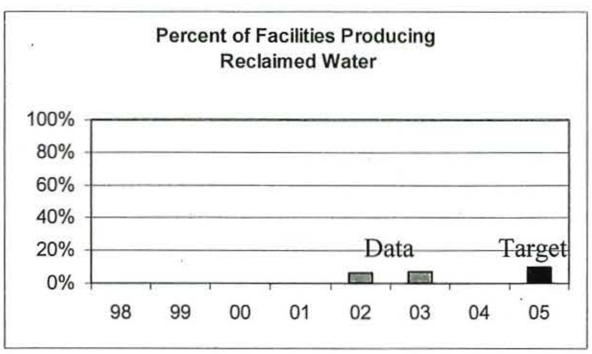
Priority 1: Excellence in Performance and Product

Key Actions	Checkpoints	Progress Summary
Make it easier to do business with DEQ	*Are our customers satisfied with the service DEQ provides?*	**Qualified Yes.** In 2002, 60% of water quality and 70% of air quality permitted sources rated DEQ's performance as meeting or exceeding expectations making the performance average 65%. Front-line staff are receiving customer service training which focuses on interpersonal communication and negotiation skills. These trainings are expected to improve the service provided by DEQ and increase customer satisfaction levels. In 2004 and 2006, follow-up surveys will be administered. The target is to increase customer satisfaction by 10 percentage points in both the Air and Water Quality Programs for an overall satisfaction target of 75%.
Reinforce effective management	*Is DEQ operating within its budget?*	**Yes.** DEQ operated within its budget through the numerous special sessions and absorbed necessary budget reductions while maintaining key services.
	Do DEQ employees receive the direction and feedback they need to be effective?	**No.** Over the last year, the total percentage of completed performance appraisals has declined to 61% from a first quarter high of 76%. DEQ is currently transitioning to a new performance management system, which is one explanation for this drop.
Emphasize cross-program environmental problem-solving	*Is cross-program coordination improving?*	**We're Making Progress.** In 2001, DEQ identified 10 cross-program management actions to improve cross-program coordination. The EMT started out monitoring implementation of these actions; however, monitoring was suspended in February 2003. The EMT determined that the actions, by themselves, were not a good indication of improved cross-program coordination.
Ensure understandable and equitable compliance and enforcement	*Are DEQ enforcement actions equitable, consistent, understandable and timely?*	**No.** A first step toward equitable, consistent and understandable enforcement is to ensure the rules governing enforcement support these goals. During 2003 DEQ expected to complete a comprehensive review of Division 12 (enforcement) rules. The complexity of the rule revision pushed the deadline back to Spring 2004. Concurrent with this effort, data systems are being created to provide information on enforcement timeliness.



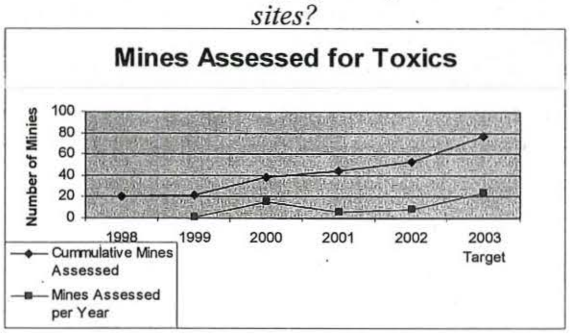
Priority 2: Protect Oregon's Water

Key Actions	Checkpoints	Progress Summary
Implement a comprehensive watershed approach	*Are we meeting our schedule for reducing permit backlogs and completing TMDLs?*	**Permits: Qualified Yes.** Structure changes were implemented in the wastewater permitting program that directed more resources toward reducing the permit backlog. The first step was to create a backlog reduction plan to significantly reduce the backlog over the 2003 and 2004 calendar years. A Blue Ribbon Advisory Committee was established to provide feedback on wastewater program improvements and options for reducing the permit backlog. This group will provide recommendations in the Spring 2004. **TMDLs: Yes.** DEQ is currently operating ahead of the TMDL issuance schedule that was prescribed under the 2000 Consent Decree. However, unanticipated program budget reductions have forced the program to extended the development schedule to 2010.
	Are plans being implemented as developed to meet TMDL specifications?	**Yet to be Determined.** DEQ's TMDL implementation team has been developing guidance on implementation. The next step will be to develop systems for monitoring implementation and measures of success.
Develop a strategy to encourage broader reuse of wastewater	*Has wastewater reuse increased?*	**Qualified Yes**. In 2003 approximately 7.3% of permitted facilities produced reclaimed water for use. This is a slight increase over the baseline of 6.5%. A target of 10% is set for 2005. Steps are being taking to implement a more reliable data collection process, and the team assigned to this action is developing strategies for increasing wastewater reuse. Some strategies being considered are rule revisions, incentives for reuse and guidance documents.



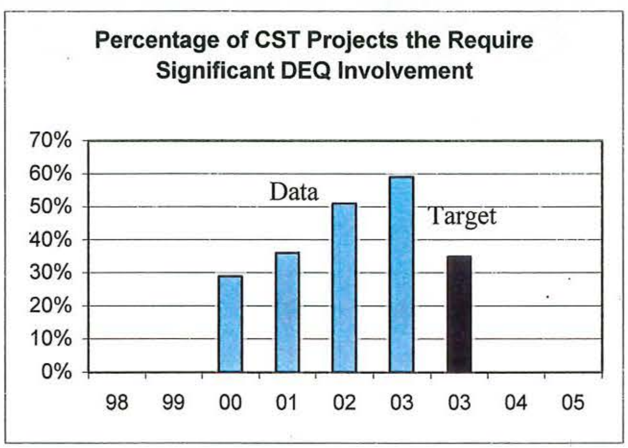
Priority 3: Protect Human Health and the Environment from Toxics

Key Actions	Checkpoints	Progress Summary
Prepare for and minimize the danger posed by catastrophic release of dangerous chemicals	*Are we prepared to appropriately respond to chemical attacks?*	**We're Making Progress.** DEQ's senior management team approved a plan for modifying DEQ's emergency response plan to consider the potential new threats in the post September 11 timeframe. DEQ's laboratory has also increased its capabilities to assist in the identification of unknown substances associated with a threat.
	Have we reduced risk through elimination of chemical agents at the Umatilla Army Depot?	**We're Making Progress.** Measures are in place to evaluate reductions in risk associated with destruction of chemicals at the Umatilla Army Depot. Tracking will begin when the munitions elimination process starts. Operations are expected to begin in 2004.
Develop and implement a strategy to reduce toxic releases to air, water and land	*Are we reducing the use of toxic chemicals and the generation of hazardous waste?*	**Qualified Yes.** DEQ elected to focus initial toxics reductions efforts on mercury. During 2002, 35 pounds of mercury were removed from the environment through DEQ's efforts, a value for 2003 is not yet available. Other toxics efforts include the development of a more comprehensive toxics reduction strategy, and adoption of air toxics rules.
Reduce risk from toxic contaminants already in our environment	*Have we identified and prioritized abandoned mines that pose the greatest risk?*	**Yes.** DEQ assessed 22 mines in 2003 for a cumulative total of 75 mines, which is slightly below the target set of 77 mines. Mines that pose the greatest environment risk are the highest priority.
	Have we started cleanup at high-priority abandoned mine sites?	**We're Making Progress.** Abandoned mines cleanup poses the unique challenge of not having a responsible party to finance cleanup costs. To gain access to alternative funding options, an abandoned mine must be classified as an "orphan." This past year, DEQ declared three mine sites as orphans, bringing the total number of orphaned mine sites to six. The next hurdle is distributing the limited available funding among the list of potential sites. DEQ continues to collaborate with state and federal agencies to leverage available funding.
	Have cross-program approaches been implemented to integrate and streamline contaminated sediments cleanup and source control?	**We're Making Progress.** A cross-media team identified strategies for streamlining the cleanup of contaminated sediments. Strategy development is being monitored as an indicator of progress. More results focused measures are still being developed.



Priority 4: Involve Oregonians in Solving Environmental Problems

Key Actions	Checkpoints	Progress Summary
Encourage personal actions by Oregonians to protect the environment	*Are Oregonians more aware of actions they can take to protect the environment, and have they modified their actions?*	**Yet to be Determined.** A pilot project is underway to reduce the use of lawn pesticides in two communities, Tualatin and Eugene. Some initial behavior research has been done, and DEQ plans to launch an educational campaign in early 2004. The specific criteria for measures are still being developed.
Provide Oregonians with better access to information on local environmental conditions and issues	*How are Oregonians asking for information, and are they getting the information they want and need?*	**We're Making Progress.** The first activity under this key action was to conduct a comprehensive audit of DEQ's information management functions. The steps of this audit were monitored by senior management to ensure that the project was developed in a timely manner. Unfortunately, the audit recommendations were largely placed on hold due to budget restrictions. An Information Management Advisory Council (IMAC) was formed to oversee agency-wide information management planning and decision-making. IMAC is currently drafting an agency-wide information management plan that will provide a roadmap for information management investments for the next 2-4 years. This plan will be available in Spring 2004.
Support communities in solving local problems	*Are CST and EPOC efforts helping DEQ assist communities to solve local problems?*	**Qualified Yes.** DEQ has played a significant leadership role in the majority of Community Solution Team (CST) projects. In April 2003, budget cuts to CST efforts forced the elimination of dedicated CST staff. The Legislature ultimately reinstated 4 positions to support the Governor's Economic Revitalization Teams (GERT), a succession of the CST model. The GERTs have been largely focused on industrial land development, which typically involves significant environmental issues. As a result 59% of projects have a significant environmental component which requires that DEQ assume a leadership role. This value is significantly above the target of 35%.



Section II: Agency Performance Measures

Are we performing successfully as an agency?

House Bill 3358 requires agencies to report annually to the Legislature on a set of key performance measures. This category of measures was added to DEQ's Executive Measures in November 2002. Several of the measures in this subset are drawn from DEQ's Strategic Directions Measures or from DEQ's Oregon Benchmarks Measures.

The Performance Measures Review Committee, charged with evaluating agencies' proposed performance measures, concluded:

> *DEQ lists 15 key performance measures linked to four goals, five benchmarks and one additional high level outcome. The goals and performance measures appear to cover most of the operation of the department. All high level outcomes appear pertinent to the agency's mission. The 2002 data values are included for most performance measures. Targets are provided although not all are as far out as 2005. The department also provides an explanation regarding how the 2003-05 measures were developed.*

The data presented in this section is drawn from DEQ's 2003 Annual Performance Measures Progress Report to the Oregon Progress Board. The table that follows provides the most current data report, and Attachment B provides a more comprehensive assessment of progress for each of the 15 measures.

Performance Measure	Data					Targets		
	1999	2000	2001	2002	2003	2003	2004	2005
01: Average percent of Air and Water Quality permitted sources that rate the Department's performance as meeting or exceeding expectations.				65%	NA		75%	
02: Completion percentage for DEQ's enforcement rule revision project.				25%	80%	100%[2]		
03: Percentage of air contaminant discharge permits issued within the target period (Oregon Benchmark #10a)	61%	68%	90%	90%	88%			85%
04: Percentage of wastewater discharge permits issued within the target period (Oregon Benchmark #10b)	25%	38%	51%	45%	NA			40%

[2] Project target completion date was extended to Spring 2004.

Performance Measure	Data					Targets		
	1999	2000	2001	2002	2003	2003	2004	2005
05: Cumulative percentage of waterbody segments with approved Total Maximum Daily Load (TMDL), according to the 2000 EPA Consent Decree.		6%	23%	29%	34%		27%	41%
06: Percent of impaired waterbody miles for which a TMDL has been approved.				16%	17%		49%	
07: Percent of individual permits developed on a watershed basis.				26%	NA[3]	60%	70%	80%
08: Percent of total permits that are expired (backlogged)	10%	14%	11%	18%	14%[4]	15%	10%	
09: Percent of permitted facilities that produce reclaimed water for use.				6.5%	7.3%			10%
10: Cumulative percent of chemical agent destroyed at Umatilla Depot.				NA	NA			20%[5]
11: Pounds of mercury removed from the environment through DEQ's efforts				35lbs	NA	40lbs		
12: Percentage of identified Oregon hazardous waste sites cleaned up (Oregon Benchmark #84)	76.3%	82.9%	86.5%	88.2%	NA			79%
13: Cumulative number of abandoned mines assessed for toxic contaminants	22	38	44	53	75	77		
14: Average number of web page-views per month		82,378	143,718	247,585	346,937			350,000
15: Percent of Community Solutions Team (CST) projects with environmental issues that require significant DEQ involvement.		29%	36%	51%	59%	35%		

[3] Reporting on this measure is currently on hold due to the Backlog Reduction Plan replacing the watershed based permit schedule.
[4] This is a measure of backlog reduction so good performance is when the current value is below the target.
[5] Chemical agent destruction was moved to Spring 2004 so this target will need to be modified.

Section III: Oregon Benchmarks

Are we contributing to Oregon's success?

The Oregon Benchmarks measure progress towards Oregon's strategic vision, *Oregon Shines*. DEQ reports on five Oregon Benchmarks, one related to the economy and four that link to the environment. The Oregon Progress Board's recent report, *2003 Benchmark Performance Report,*[6] gives the Environment a "Qualified Yes" performance rating, indicating:

> *While the air, water and land measures indicate improvements, plant and wildlife indicators have mixed results and Oregon's recreation indicators have not kept up with population growth.*

What follows is a list of the DEQ reported Benchmarks, the latest reported value, the current target and the Oregon Progress Board's Comments on Progress,

Benchmark	Value	Target 2005	Oregon Progress Board's Comments on Progress
10a Percent of Air permits issued within the target time period or less	88% for 2003	85%	***Yes.*** *Air permitting has improved dramatically since 1996. On-time permits are critical in helping businesses seeking to build or expand. Roughly gauges regulatory friendliness in Oregon.*
10b Percent of Water permits issued within the target time period or less	45% for 2002	40%	***Yes.*** *On-time wastewater permitting has improved substantially recently but is still below 50%.*
75 Percent of time that the air is healthy to breath for all Oregonians	100% for 2002	100%	***Yes.*** *Oregon's air quality had held its own. This is based on carbon monoxide, ozone, fine particulates, and other air pollutants.*

[6] Access the 2003 Benchmark Performance Report at http://www.econ.state.or.us/opb/2003report/2003BPR.htm

Benchmark	2002 Value	Target 2005	Oregon Progress Board's Comments on Progress
78a Percent of monitored stream sites with significantly increasing trends in water quality	51% for 2002	75%	***Yes, but.*** *The 2001 drop in the number of sites with improving water quality trends reflects a tapering off of the benefit from new water quality management plans implemented in the early 1990s. Among other things, these plans limited point source pollutant emissions.*
78b Percent of monitored stream sites with decreasing trends in water quality	5% for 2002	0%	***Yes, but.*** *Despite the long term improvement, the percent of streams with decreasing water quality went up in 2001.*
78c Percent of monitored stream sites with water quality in good to excellent condition	46% for 2002	40%	***Yes.*** *The percent of streams that are rated good or excellent has increased steadily since 1995. Measurements are not continuous but taken at specific points in time.*
83 Pounds of municipal solid waste landfilled or incinerated per capita	1531 for 2002	1575	***No But.*** *The long term trend is worsening, but since 1999, the amount of municipal waste disposed in Oregon has fallen dramatically to near 1992 levels. This benchmark does not include industrial waste.*
84a Percent of identified Oregon hazardous waste sites cleaned up or being cleaned up (tanks)	87% for 2002	80%	***Yes.*** *Addresses the cleanup of petroleum contamination from regulated underground storage tanks like those at gas stations. Oregon has made marked progress since 1998.*
84b Percent of identified Oregon hazardous waste sites cleaned up or being cleaned up (other hazardous substances)	75.2% for 2002	76%	***No But.*** *Addresses the cleanup of hazardous substances from industrial processes and improper storage and disposal of hazardous wastes. Despite the fact that Oregon has made substantial progress since 1990, the percent of sites completed is decreasing because more and more sites needing cleanup are being identified.*

DRAFT: 1/28/04

ATTACHMENT A

Detailed Responses to the Checkpoints

Priority 1: Deliver Excellence in Performance and Product

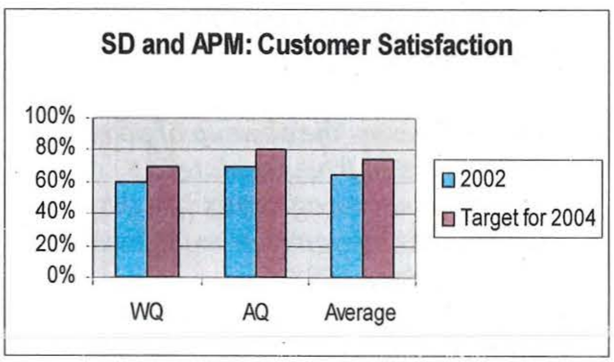
Key Action: Make it easier to do business with DEQ

DEQ's efforts under this action focus on improving service delivery and streamlining our regulatory process.

Checkpoint: Are our customers satisfied with the service DEQ provides?

Qualified Yes. In early 2002, DEQ selected Bardsley & Neidhart Inc. to conduct a survey of the Air and Water Quality regulated community that was designed to achieve three objectives:

- Obtain benchmark measurements of perceptions of DEQ within the regulated community
- Ascertain their satisfaction with DEQ
- Identify what, if anything, DEQ can do to better serve its permitted customers



Results from this survey were:

- Air quality customers have a positive impression of the program as 70% of survey respondents rate the program as meeting or exceeding expectations.
- Water quality customers have favorable impressions of the program as 60% of respondents rate the program as meeting or exceeding expectations.

A target of 10 percentage point improvement in overall satisfaction was set for 2004. Customer service training was designed to target service improvement opportunities areas such as interpersonal communication and dispute resolution skills. These trainings were provided first to air and water quality staff, and will later include to all DEQ front-line employees. Through 2003, 20% of DEQ's staff has participated in training.

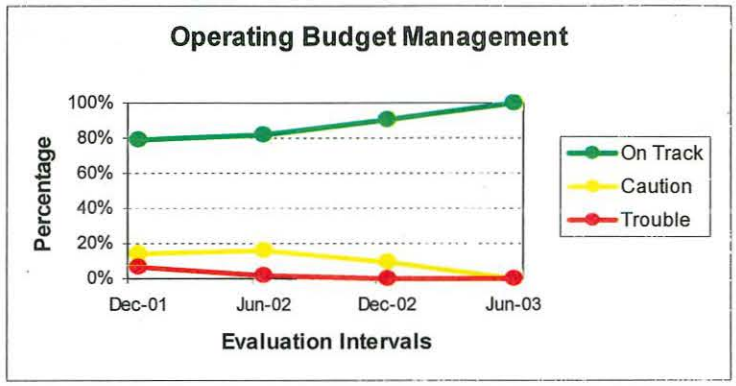
DEQ plans to conduct two future surveys (2004 and 2006) as a follow-up to this benchmark study to assess if there are shifts in perceptions and satisfaction among the regulated community over time. Efforts to expand customer service surveying to other customer types will be consider as funding allows.

Key Action: Reinforce Effective Management

Many aspects define effective management; however, DEQ's emphasis has been on improving operating budget management and performance evaluation methods.

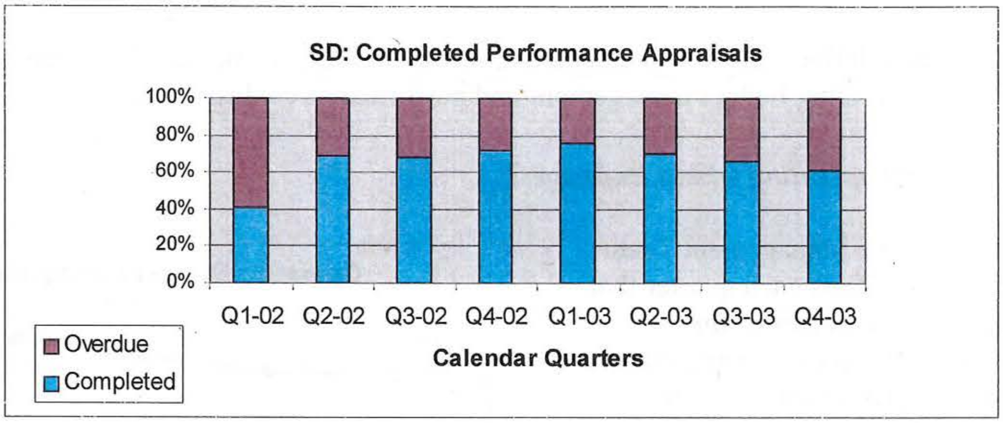
Checkpoint: Is DEQ operating within its budget?

Yes. DEQ's Executive Management Team reviews "stop-light" charts each quarter that provide a high level summary of the agency's budget performance. Subprograms "on-track" receive green lights, which indicate that spending and revenue forecasts are aligned to keep the agency operating within budget. Red lights are assigned when program spending or revenue forecasts indicate "trouble" or potential problems with our operating budget. Yellow lights are a "caution" indicator, which suggests a need to monitor the situation more closely.



Over time, DEQ has reduced the number of "trouble" and "caution" indicators to zero and increased the number of "on-track" indicators to 100%. This system allowed DEQ to focus problem solving on areas that warranted the most attention. The result was that DEQ was able to operate within budget through numerous special sessions and absorb necessary budget reductions without staff layoffs.

Checkpoint: Do DEQ employees receive the direction and feedback they need to be effective?



No. The primary measure used to answer this question is the percentage of completed performance appraisals. A completed performance appraisal means that the employee received their annual performance evaluation within 13 months of the preceding evaluation. Over the last year, the total percentage of completed performance appraisals has declined. One explanation for this decline is that the agency is transitioning to a new performance management system. In early 2002, a team took on the task of evaluating the existing performance management system. The new system provides employees with the opportunity to be more engaged in work planning and review, and to evaluate their manager's performance. The new system also supports section work plans, and creates the opportunity for work groups or teams to opt for team evaluations. DEQ launched the new performance management system in the second quarter of 2003, and expects to be fully transitioned into the new system by June 30, 2005.

Key Action: Emphasize cross-program environmental problem

In 2001, the Department assigned a workgroup to evaluate barriers and to identify recommendations for greater cross-program coordination and problem solving. The work group identified several recommendations that were packaged as 10 cross-program management actions. The implementation of these actions was the initial focus of this Key Action.

Checkpoint: Is cross-program coordination improving?

We're Making Progress. DEQ's strategy for improving cross-program coordination was to implement 10 cross-program management actions. In February 2003, the Executive Measures Advisory Council recommended that senior management not continue to monitor progress on implementation of these actions because this was not a direct measure of improvement in cross-program coordination. This recommendation was accepted and the role of identifying measures that better inform on our improvements in cross-program coordination was assigned to the newly formed Cross-Program Management Team. Work does continue on some of the original management actions. A summary table that identifies the final disposition of each of the actions is presented in Appendix A.

Key Action: Ensure understandable and equitable compliance and enforcement

This action committed DEQ to assess and modify compliance and enforcement procedures and rules to ensure consistent, understandable and timely enforcement.

Checkpoint: Are DEQ enforcement actions equitable, consistent, understandable and timely?

No. DEQ's Office of Compliance and Enforcement (OCE) is engaged in a process of reviewing and revising Division 12 Rules, the primary rules governing enforcement actions. The rules revision process has involved a stakeholder Advisory Group and an internal agency-wide rulemaking team. Through this effort many guidance and implementation issues have been identified and are being addressed as the rulemaking progresses. The final proposed revised rules were scheduled for consideration by the Environmental Quality Commission in the December 2003; however, the complicated nature of this rulemaking has pushed that timeframe into early 2004. Completion of the rule review and the adoption of revisions will be a major first step toward insuring "equitable, consistent and understandable" enforcement actions. Many policy and implementation issues will need to be addressed after the rulemaking is promulgated.

Concurrent with this effort, the OCE conducted an assessment of DEQ's enforcement data systems to determine how to provide reliable enforcement process timeliness data, from the date of inspection through to issuance of the notice of violation. Modifications were made to the agency's information systems and our methods for tracking and entering data, to address issues discovered during the assessment. We now have timeliness data entered from January 2002 to present. Reports using this initial information have helped DEQ identify timeliness inconsistencies across DEQ's three Regions and across different case types. The OCE is continuing to address data quality issues and is working with the Regional Administrators to address consistency issues.

Priority 2: Protect Oregon's Water

Key Action: Develop a comprehensive watershed approach

Addressing multiple points of pollution on a watershed basis offers a more integrated and efficient approach to restoring and protecting water quality. DEQ is committed to adopting a watershed approach to Total Maximum Daily Loads (TMDL) development and permit renewal processing. Another goal of this action is to minimize the wastewater permit backlog.

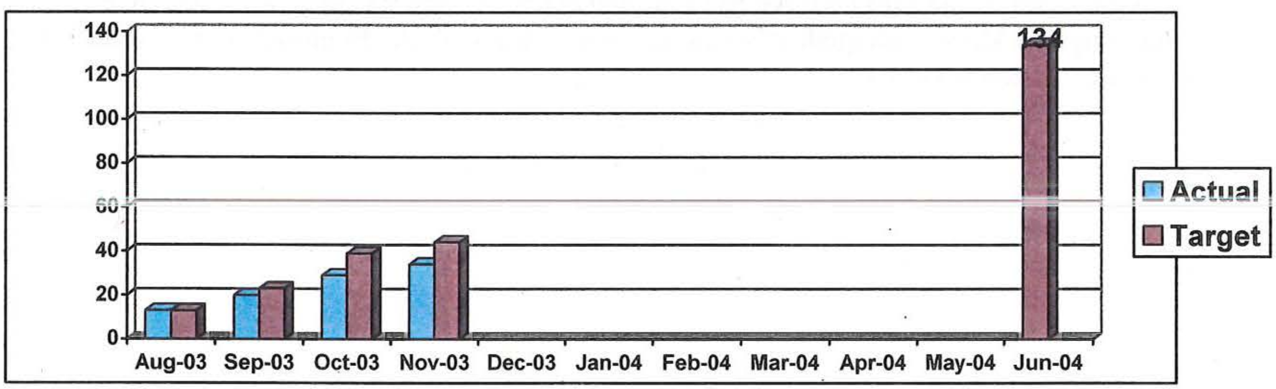
Checkpoint: Are we meeting our schedule for reducing permit backlog?

Qualified Yes. In May 2003, DEQ formed a team of internal experts to develop a strategy and plan for significantly reducing permit backlog.

Backlog Reduction Goal

As of July 1, 2003, the overall permitting backlog was 57% for National Pollution Discharge Elimination System (NPDES) majors and 43% for NPDES minors. After completing the permit issuance plan for FY2004, the overall permitting backlog for NPDES majors will be 30% and for NPDES minors will be 21%. In addition, the program will renew expired General Permits, improving the overall backlog numbers.

CumulativeTotal Backloged Permits Issued

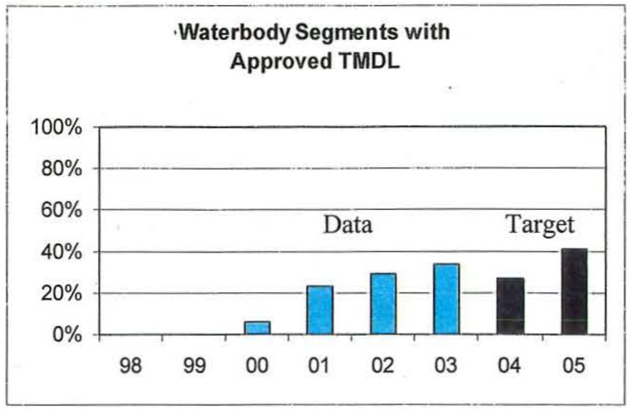


Measuring Progress

The permit issuance plan sets a baseline performance standard that allows the program to report monthly on the percent of permits on schedule. As of November 2003, 34 permits have been issued which is slightly below the target of 44. Several permits that were schedule to be issued at the end of 2003 have been moved to early January. The program expects to be back on target by February 2004.

Checkpoint: Are we meeting our schedule for completing TMDLs?

Yes. The data reveals that DEQ is ahead of the 2000 EPA consent decree target for 2004. This reflects the success in completing a number of TMDLs for river subbasins that include many water quality segments requiring TMDLs. Staff cuts resulting from the legislative special sessions in 2002-03 required DEQ to revise the TMDL schedule and extend TMDL development to 2010. This will make it harder to reach the targets later this decade.



Checkpoint: Are plans being implemented as developed to meet TMDL specifications?

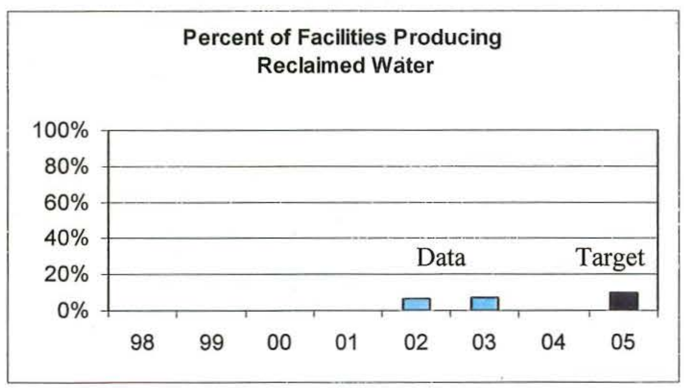
Yet to be Determined. TMDL implementation efforts are just beginning to get underway in basins where TMDLs have been completed, with the exception of a few watersheds where TMDLs were completed a number of years ago. TMDLs are implemented through the Oregon Forest Practices Act, Agricultural Water Quality Management Plans (Senate Bill 1010), and individual implementation plans developed by Designated Management Agencies such as local governments and federal land management agencies. DEQ is developing methodologies for tracking implementation efforts and measuring water quality improvements. In most cases, it will take several years before water quality improvements can be detected.

Key Action: Develop a strategy to encourage broader reuse of wastewater

The goals of this action are to identify strategies that will foster opportunities for increased water reuse.

Checkpoint: Has wastewater reuse increased?

Qualified Yes. DEQ is making progress toward the 2005 goal; however, the agency needs to implement more reliable data collection processes.



Over the last year, DEQ has formed an internal workgroup to identify incentives and barriers to water reuse, and to develop recommendations for next steps. One incentive has already been put in place – recent revisions to DEQ's State Revolving Loan Fund rules make reuse projects more likely to be eligible for low interest loans. Next steps may include rule revisions, revisions to internal data systems, and education/outreach. DEQ's wastewater reuse initiative was endorsed during the 2003 Legislative Session with the passage of Senate Bill 820, which directs DEQ to "foster and encourage wastewater reuse in urban areas..."

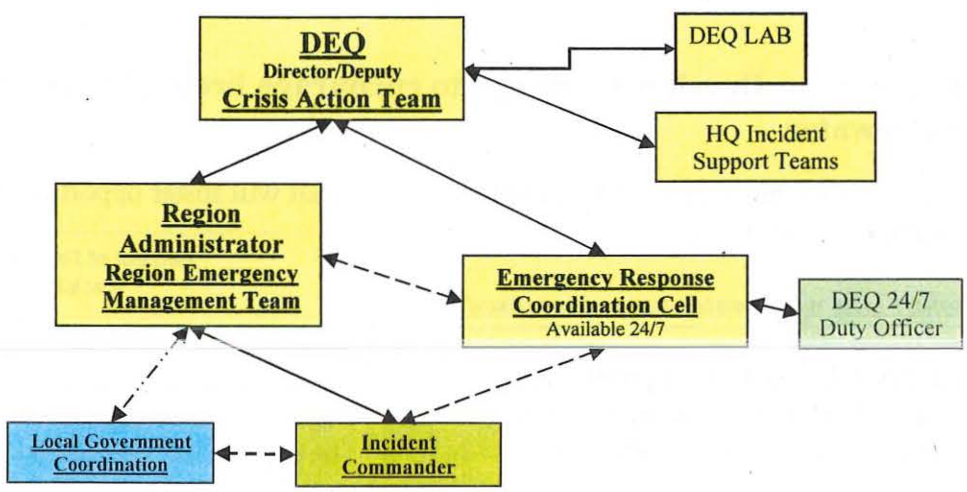
Priority 3: Protect Human Health and the Environment from Toxics

Key Action: Prepare for and minimize the danger posed by catastrophic release of dangerous chemicals

In the wake of September 11, 2001, DEQ committed to expanding the Agency's preparedness to deal with potential terrorist threats, and to ensuring that the laboratory was prepared to safely analyze unidentified substances. DEQ also works to protect the public and environment from risks associated with storage and destruction of chemical agents at the Umatilla Depot.

Checkpoint: Are we prepared to appropriately respond to chemical attacks?

We're Making Progress. DEQ has the basic structures and planning in place to allow a reasonable response time to a wide range of possible events. More importantly, we have the executive level support and interest necessary to continue to improve the Agency's readiness. DEQ has improved its Emergency Response Organization and drafted an Emergency Response and Recovery Plan which describes roles and responsibilities consistent with the State of Oregon Emergency Operations Plan and the Northwest Area Contingency Plan. The following graphic depicts DEQ's preparedness structure.



Other preparedness activities include writing the Chemical Terrorism annex for the Oregon Emergency Operations plan, ongoing coordination with other federal, state and local agencies, and the refinement of protocols at DEQ's and the state Public Health Labs for receiving and analyzing unknown samples.

Priority 3: Protect Human Health and the Environment from Toxics

Checkpoint: Have we reduced risk through elimination of chemical agents at the Umatilla Army Depot?

We're Making Progress. DEQ continues to make progress toward the elimination of chemical agents at the Umatilla Army Depot. Over the last year, the Department has authorized surrogate operations, approved trial burn plans, completed one surrogate trial burn and issued, for public review, the draft Hazardous Waste Storage Permit. Incinerator start-up has been delayed until the Spring 2004. Once start-up begins, DEQ will track and report progress through two measures: 1) Percent of chemical agent destroyed; and, 2) Percent of risk reduced over time

Key Action: Develop and implement a strategy to reduce toxic releases to air, water and land

The focus of this action is on developing community based air toxics reduction plans, and seeking new ways to help Oregonians reduce the use and release of toxic chemicals and generation of hazardous waste. This action requires that DEQ work with stakeholders to find cost-effective, comprehensive solutions to reducing toxic pollutants–focusing first on mercury.

Checkpoint: Are we reducing the use of toxic chemicals and the generation of hazardous waste?

Qualified Yes.

The Pringle Watershed Enhancement Team (WET) is a private-public partnership effort that directly involves DEQ, local businesses, volunteers, and agencies in actions to prevent or reduce pollutants entering Pringle Creek watershed in South Salem. A total of 177 businesses made changes to the way they managed waste and over 7500 educational flyers were distributed to residents, asking them to take the pledge to improve their watershed. This community-based effort significantly reduced waste going into the watershed.

DEQ's Mercury Reduction Strategy was adopted by the EQC in December 2002. This strategy identified sources of mercury in Oregon and outlined a series of mercury reduction activities to be implemented through cooperative and voluntary measures. Mercury reduction efforts planned or underway include working with the Oregon Dental Association to enhance best management plans for dental offices, expanding the mercury thermostat recycling program, providing technical assistance to vehicle recycling yards, and providing mercury-free dairy manometers to dairy farmers around the state. Many of these efforts will be incorporated into implementation of the mercury TMDL for the Willamette River Basin. A follow-up report was delivered to EQC in December 2003 that describes a process for assessing the effectiveness of mercury reductions by measuring reduction activities, emissions, concentrations and effects on human and ecological health.

DEQ has tasked an agency toxics workgroup to develop a framework for an Agency Toxics Strategy. Over the next year, we will consult with DEQ staff and representatives from industry environmental groups and government to develop and implement a coordinated, cross program approach to reducing the use, release and risk of toxic pollution (beyond just mercury) to human health and Oregon's environment. The initial framework for this strategy will be presented to the Environmental Quality Commission (EQC) in December 2003.

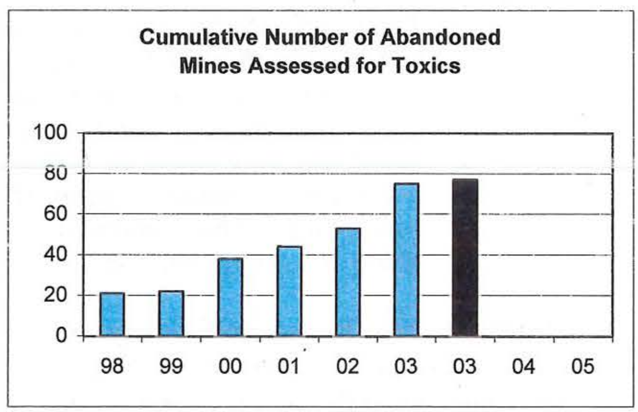
At its October 2003 meeting the EQC considered adoption of new rules to reduce toxic chemical releases to the air. Developed over five years, with the help of two advisory committees, the Department will use these rules to reduce the health risk from these chemicals for Oregonians. Supported by our current funding level, the Department's first steps will include setting ambient concentration benchmarks and working on the Portland area emissions reduction plan. Reductions from other air programs, such as particulate and ozone reduction strategies and federal regulations for vehicles, fuels and industrial sources, will also reduce air toxics.

Key Action: Reduce risks from toxic contaminants already in our environment

Work to identify abandoned mines and streamline strategies to address contaminated sediments cleanup and source control

Checkpoint: Have we identified and prioritized abandoned mines that pose the greatest risk?

Yes. A 2003 cumulative total of 75 completed abandoned mine site assessments closely approaches DEQ's target of 77, and represents a significant increase in the number of annual assessments over previous years. DEQ continues to work with other state and federal agencies to identify the mine sites that pose the most serious risk to the environment. In the future, work will shift from assessment to prioritization for clean up; although clean up efforts will be limited to available funding for this work.



Checkpoint: Have we started cleanup at high-priority abandoned mine sites?

We're Making Progress. DEQ continues to make progress in cleaning up high priority abandoned mine sites through:

- Utilization of the Orphan Site account funds. In the past year, DEQ has declared three additional mine sites as orphans, bring the total declared orphan mine sites to six. This declaration makes the mines eligible for cleanup using Orphan Site account funds.
- Continuing our collaboration with state and federal agencies also working on abandoned mine clean ups (specifically, USFS and BLM). DEQ participates in an inter-agency mines workgroup, and we are working closely with our federal partners to develop efficient ways to achieve acceptable cleanups of Orphan sites, and leverage any available funding.

Another important element to this work is the continued exploration of how abandoned mines affect the health of watersheds, and how we can use tools available to us to achieve an effective reduction of toxic effects of these sources.

Since a new Orphan Bond Sale was not approved by the 2003 Legislature, DEQ's future efforts will largely focus on securing additional funding for mine cleanups, using our remaining resources efficiently, and continuing to coordinate with other Federal and State agencies involved in mine cleanups.

Checkpoint: Have cross-program approaches been implemented, resulting in integrated and streamlined contaminated sediments cleanup and source control?

We're Making Progress. DEQ considers the management of contaminated sediments and coordinating source control issues an important cross-media priority that requires an integrated approach.

> *A DEQ team with representatives from all media areas continues to work to identify ways to streamline sediment cleanup activities. One of the team's first accomplishments was endorsing the adoption of a Hazardous Waste Identification Rule that allows sediments to be managed as non-hazardous waste. The team continues to identify other processes that will improve our management of contaminated sediments.*

DEQ's sediment team is currently focusing on releasing an updated of the Sediment Evaluation Guidance, clarifying the role of Solid Waste Statute with respect to clean sediment, and working collaboratively with stakeholders and other state and federal agencies to focus our efforts more on assessing and managing contaminated sediments.

Priority 4: Involve Oregonians in Solving Environmental Problems

Key Action: Encourage personal actions by Oregonians to protect the environment

Efforts under this Key Action educate Oregonians on ways to reduce their impact on the environment. To determine if these efforts are successful, Oregonians are surveyed to identify where changes in their actions resulted in the most environment improvements.

Checkpoint: Are Oregonians more aware of actions they can take to protect the environment, and have they modified their actions?

Yet to be Determined. Increasing Oregonians' level of awareness and encouraging behavior change about how to best protect the environment is an important activity for DEQ that doesn't come with any dedicated funding. Progress in this area is only achieved through finding creative solutions and partners willing to support the efforts. One project underway is a pilot program to reduce the use of lawn pesticides in two communities, Tualatin and Eugene. Our partners have conducted some initial behavior research, and we plan to launch an educational campaign early in 2004. DEQ plans to do follow-up surveying to determine if our educational efforts actually resulted in modifications to Oregonians' behaviors.

Other examples of DEQ work that supports increased awareness are:

- Drive-by Vehicle Inspection Programs
- Earth Day and County and State fair exhibits
- Freeway reader board messages on Clean Air Action Days

Key Action: Provide Oregonians with better access to information on local environmental conditions and issues

DEQ is committed to increasing the quality and quantity of environmental information available to Oregonians. Specifically, the commitment is to make environmental monitoring data accessible, expand methods for accessing information, and to improve the electronic infrastructure. As a first step toward this goal, DEQ will develop a comprehensive, agency-wide information management strategy.

Checkpoint: How are Oregonians asking for information, and are they getting the information they want and need?

We're Making Progress. In 2002, DEQ initiated a comprehensive audit of information management practices, the Information Management Assessment Project (IMAP). This audit culminated in 10 recommendations designed to build a consistent agency infrastructure, increase information capacity and to improve customer satisfaction. Budget constraints limited the implementation of these recommendations in the short term to the formation of an Information

Management Advisory Council (IMAC) and the development of an agency-wide information management plan. The plan, due in the Spring 2004, will provide a roadmap for the implementation of the remaining IMAP recommendations.

In addition, several projects were developed over the last two years that increase the quantity and quality of information available to Oregonians. Some examples are:

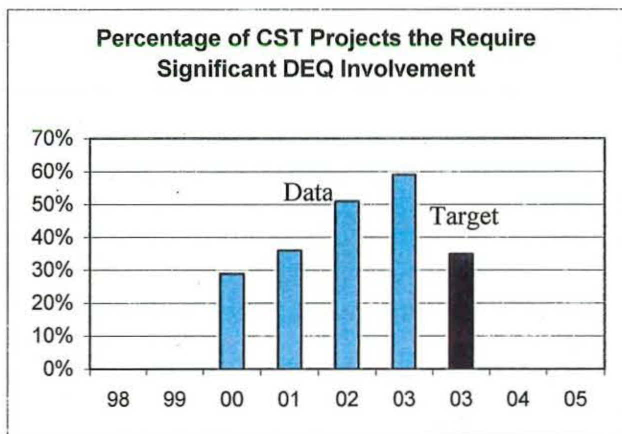
- Updated Facility Profiler tool which provides detail about all regulatory programs
- Published compliance data on the web
- Automated report filing for consultants evaluating underground storage

Key Action: Support Communities in solving local problems

DEQ participates on state agency Community Solutions Teams (CST), and uses the CST model and Environmental Partnerships for Oregon Communities (EPOC) Program to support community-based problem solving

Checkpoint: Are CST and EPOC efforts helping DEQ assist communities to solve local problems?

Qualified Yes. The 2003 value of 59% is significantly above the target of 35%. This increase is attributed to the Legislature ultimately reinstating 4 positions to support the Governor's Economic Revitalization Teams (GERT), a succession of the CST model. The GERTs have been largely focused on industrial land development, which typically involves significant environmental issues. DEQ will evaluate this measure to determine if it needs to be modified to more accurately reflect DEQ's contribution to the GERT process and support for local problem solving.



Appendix A
Status of 10 Cross Program Management Actions

Actions Taken	Accomplishments and Status of Action
1. Let's declare victory--stop talking about the problem and make it better.	The 10 management actions were designed to get the agency to stop talking about cross-program issues as barriers and to move into action. When the EMT endorsed the implementation of the actions, it was an important first step towards "victory".
2. Rely more on environmental outcomes as measures of our success.	This action was integrated into work overseen by DEQ's internal Measures Advisory Group (MAG). The MAG is an EMT subgroup that champions integrating measurement into how we work at all levels of the agency. This first Annual Executive Measures Report is one demonstration of agency's increased commitment for using measures at DEQ.
3. Integrate geographic priorities into the next round of strategic planning.	The management of geographic priorities and related operational decisions was assumed by Regional Administrators. In the future, links between geographic priorities and work in the Performance Partnership Agreements needs to be made.
4. Account for cross-program and other "homeless" activities as part of workload planning.	This action was folded into the new performance management system, which requires that managers and staff work collaboratively to define work agreements. Managers and staff will have at least quarterly check-ins to make work load adjustments when needed.
5. Provide more budget flexibility for Regional Administrators to address local problems and issues.	Each Program Division will provide each Regional Division with at least $10,000 per biennium to address local problems and issues.
6. Provide clear expectations, procedures and accountability for ad hoc cross program teams.	In 2002 procedures were set for elevating new cross program issues to senior management. A cross program management team formed to be the forum for identifying and developing cross program issues prior to presenting them to senior management.
7. Incorporate collaboration and teamwork skills as an integral part of our hiring, performance evaluation and training practices.	The new performance management system largely addresses the issues associated with this action, so it has been integrated into the implementation of the new system. Training will be provided to increase our ability to "hire for attitude."
8. Develop and invest in the technology to help the Department utilize information in an integrated fashion.	This action was integrated into the comprehensive Information Management Assessment Project (IMAP), which was completed in the Fall 2002.
9. Implement integrated inspection and technical assistance programs targeted at small businesses.	A team evaluated the feasibility of conducting integrated technical assistance, but funding has limited the ability of this action to move forward. DEQ's Western Region is currently conducting a pilot integrated technical assistance project. Results of this pilot will influence future investments in integrated technical assistance.
10. Assign a task force to look at possible efficiencies from consolidating various administrative functions at HQ.	A taskforce looked at this issue and determined that it was not feasible to make the investment necessary to accomplish this action at this time. Future actions taken in this area will be directed by DEQ's Information Management Advisory Council.

ATTACHMENT B

Annual Performance Measures Progress Report

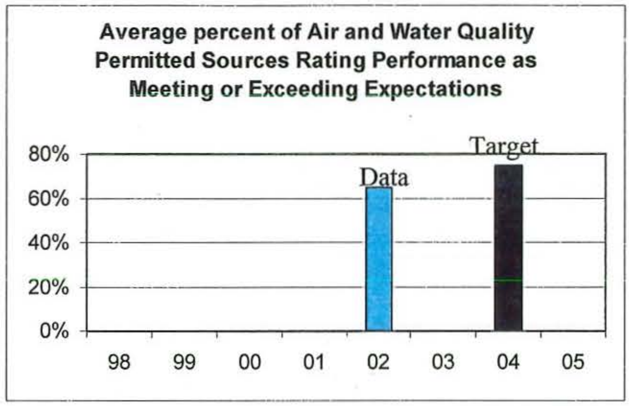
Performance measure with number.

34000-01. Average percent of Air and Water Quality permitted sources who rate the Department's performance as meeting or exceeding expectations.

Data						Targets		
1998	**1999**	**2000**	**2001**	**2002**	**2003**	**2003**	**2004**	**2005**
				65%	NA	NA	75%	

To what goal or goals is this performance measure linked?

Goal 1: Deliver excellence in performance and product.



What does the performance measure demonstrate about the goal?

DEQ has defined outstanding customer service as an important aspect of delivering excellence. As a regulatory entity, an important customer group for DEQ is our permitted sources. This measure is an important indicator of DEQ's success at meeting customer expectations.

What does the data reveal?

The initial data point suggests that the majority of permitted sources are satisfied with DEQ's service. Information received from the 2002 Customer Service Survey was used to develop a Customer Service Improvement Plan. Information collected from future surveys will be used to evaluate the success of this plan.

What is an example of a department activity related to the measure?

One component of the Customer Service Improvement Plan is that all staff participate in customer service training. Through December, 2003, 20% of DEQ's staff has participated in training.

What needs to be done as a result of your analysis?

DEQ will continue to track progress on implementing the Customer Service Improvement Plan, and will administer the Customer Service Survey in the Spring 2004.

What is the data source?

Data reported comes from a customer service survey conducted by an external consultant. The survey will be repeated in 2004 and 2006.

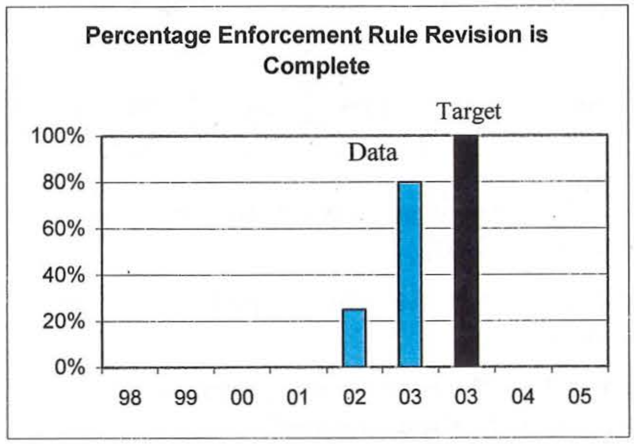
Performance measure with number.

34000-02: Completion percentage for DEQ's enforcement rule revision project.

Data						Targets		
1998	**1999**	**2000**	**2001**	**2002**	**2003**	**2003**	**2004**	**2005**
				25%	80%	100%		

To what goal or goals is this performance measure linked?

Goal 1: Deliver excellence in performance and product.



What does the performance measure demonstrate about the goal?

An important objective of excellence is providing understandable and equitable enforcement. DEQ's first important step toward this objective is ensuring that the rules governing our actions are understandable and equitable.

What does the data reveal?

The data reveals that DEQ is behind schedule on our efforts to revise our enforcement rules. DEQ extended the schedule in order to more fully utilize the input of the Agency's external advisory group (i.e., an additional advisory group meeting was added to discuss critical issues) and to allow for meaningful public participation away from the busy holiday season (i.e., moving the public comment period from December to January).

What is an example of a department activity related to the measure?

Rule revisions define DEQ's regulatory practices, so rule revisions are an important way for DEQ to improve processes.

What needs to be done as a result of your analysis?

The target completion date has been moved to April 2004. The information regarding the schedule changes for this rulemaking will be communicated to other on-going rulemakings for the agency and used in developing future rulemaking schedules. This measure will need to be modified when the rule revision is completed.

What is the data source?

Data reported comes from records in the Office of Compliance and Enforcement.

Performance measure with number.

34000-03: Percent of air contaminant discharge permits issued within the target period (Oregon Benchmark #10a)

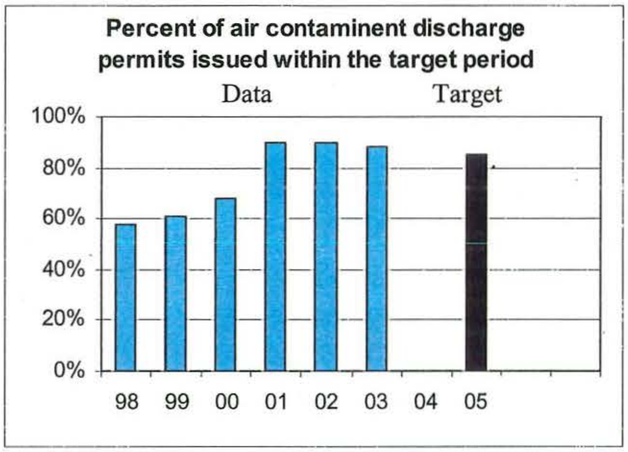
Data						Targets		
1998	**1999**	**2000**	**2001**	**2002**	**2003**	**2003**	**2004**	**2005**
58%	61%	68%	90%	90%	88%			85%

To what goal or goals is this performance measure linked?

Agency Goal 1: Deliver excellence in performance and product

What does the performance measure demonstrate about the goal?

The performance measure provides important information on permitting timeliness, which is a critical agency measure of excellence.



What does the data reveal?

There was a slight drop in performance over last year; however, DEQ's performance has surpassed the 2005 target for the last three years and been relatively consistent. In 2001, DEQ streamlined the Air Contaminant Discharge Permit (ACDP) process and rules which significantly increased timeliness. Further, DEQ lowered the "target period" for timely processing from an average of 167 days to an average of 69 days and the target is still being met.

What is an example of a department activity related to the measure?

ACDPs are required for new businesses, and existing permit holders must request permit modifications before expansion can occur. The quicker DEQ issues these permits, the sooner new or expanded operations may begin, which saves permittees money and helps with economic recovery.

What needs to be done as a result of your analysis?

This measure has a target of 85%. DEQ will review this target over the next year to determine if there is a need for revision.

What is the data source?

The data source is DEQ's air quality permit tracking database.

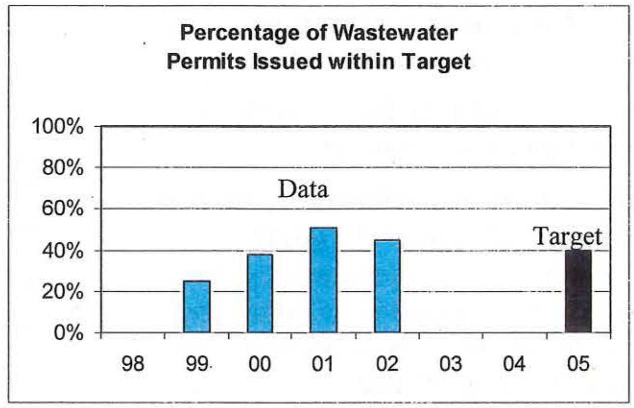
Performance measure with number.

34000-04: Percentage of wastewater discharge permits issued within the target period (Oregon Benchmark #10b)

Data						Targets		
1998	**1999**	**2000**	**2001**	**2002**	**2003**	**2003**	**2004**	**2005**
	25%	38%	51%	45%	NA[1]			40%[2]

To what goal or goals is this performance measure linked?

Goal 1: Deliver excellence in performance and product.



What does the performance measure demonstrate about the goal?

The performance measure provides important information on permitting timeliness, which is a critical agency measure of excellence.

What does the data reveal?

Fewer than half of the permits are being issued within the target period; however, in issuing 45% of permits within the target period, we exceeded the target goal of 40%.

What is an example of a department activity related to the measure?

In July 2003, DEQ initiated a one-year focused effort to reduce the backlogged permits. This effort is resulting in permits being issued more quickly; 2003 data is expected to show a significant improvement in this measure.

What needs to be done as a result of your analysis?

Continue to focus on reducing the backlog.

What is the data source?

Water Quality program databases.

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[1] Data for 2003 will be reported in the 3rd Quarter of 2004.

[2] Targets will be revised in conjunction with the next Oregon Progress Board update to Benchmarks.

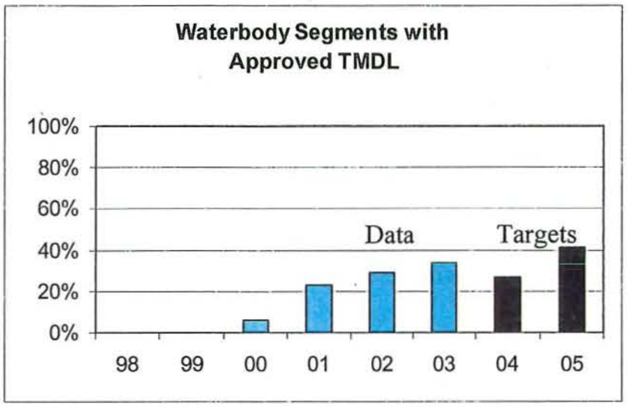
Performance measure with number.

34000-05: Cumulative percentage of waterbody segments with approved Total Maximum Daily Load (TMDL), according to the 2000 EPA consent decree.

Data						Targets		
1998	**1999**	**2000**	**2001**	**2002**	**2003**	**2003**	**2004**	**2005**
NA	NA	6%	23%	29%	34%	NA	27%	41%

To what goal or goals is this performance measure linked?

Goal 2: Protect Oregon's water.



What does the performance measure demonstrate about the goal?

TMDLs are analytical studies conducted on waterbodies that do not meet water quality standards. TMDLs identify the cause of the pollution and actions needed to restore water quality, and provide a process to achieve water quality improvements over time.

What does the data reveal?

The data reveals that DEQ is slightly ahead of the 2000 EPA consent decree target for 2004. This reflects the success in completing a number of TMDLs for river subbasins that include many water quality segments requiring TMDLs. Staff cuts resulting from the legislative special sessions in 2002-03 required DEQ to revise the TMDL schedule and extend TMDL development an additional three years. This will make it harder to reach the targets later this decade.

What is an example of a department activity related to the measure?

Key activities involved in completing a TMDL are appropriate data collection, sound modeling and good public involvement.

What needs to be done as a result of your analysis?

Staffing reductions required DEQ to create a revised TMDL development schedule. All efforts will be made to ensure that DEQ meets the 2010 consent decree target of 1,153 completed TMDLs.

What is the data source?

Water Quality Program database, and the number of TMDLs approved by EPA.

Performance measure with number.

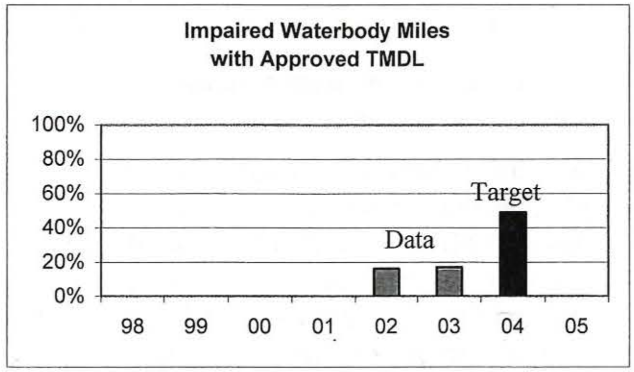
34000-06: Percent of impaired waterbody miles for which a TMDL has been approved.

Data						Targets		
1998	**1999**	**2000**	**2001**	**2002**	**2003**	**2003**	**2004**	**2005**
				16%	17%		49%	

The 2003 data and 2004 Target were calculated using the 2002 303(d) list, while the 2002 data is based on the 1998 303(d) list.

To what goal or goals is this performance measure linked?

Goal 2: Protect Oregon's water.



What does the performance measure demonstrate about the goal?

TMDLs are required when a waterbody does not meet a particular criteria pollutant standard. A 303(d) list is the tool that tracks the total stream miles that require a TMDL. The previous performance measure is an indication of DEQ's progress toward completing a legal mandate, which does not include all outstanding TMDLs. This measure provides information on DEQ's progress toward completing all outstanding TMDLs.

What does the data reveal?

The data reveals that DEQ is behind in meeting its 2004 target. Several major TMDLs that were scheduled for completion in 2003 will now be completed in 2004 due to staffing cuts during the 2002-03 legislative special sessions.

What is an example of a department activity related to the measure?

Key activities involved in completing a TMDL are appropriate data collection, sound modeling and good public involvement.

What needs to be done as a result of your analysis?

DEQ will continue to develop TMDLs for waterbody listings found on the 303(d) list. There have been several conversations internally about how to best calculate this measure because the 303(d) list is updated every 2 years. These discussions will likely result in a request to modify this performance measure in the future.

What is the data source?

Water Quality Program database, and the number of TMDLs approved by EPA.

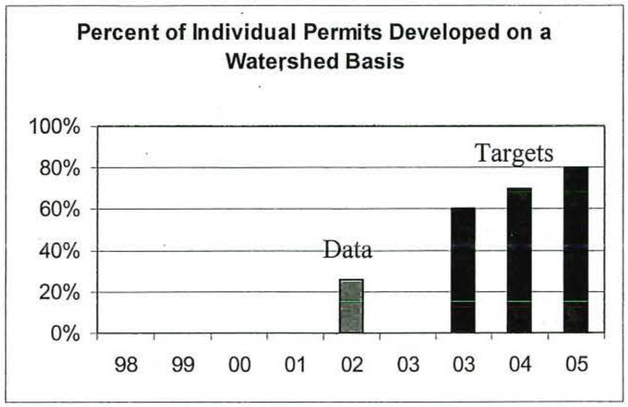
Performance measure with number.

34000-07: Percent of individual permits developed on a watershed basis.

Data						Targets		
1998	**1999**	**2000**	**2001**	**2002**	**2003**	**2003**	**2004**	**2005**
				26%	NA	60%	70%	80%

To what goal or goals is this performance measure linked?

Goal 2: Protect Oregon's water.



What does the performance measure demonstrate about the goal?
Issuing permits on a watershed basis provides the ability to consider the cumulative impact of permits issued within a watershed, which enhances DEQ's ability to protect Oregon's water.

What does the data reveal?

In 2003, DEQ created an initiative that focused resources on reducing the permit backlog. (See measure 34000-08). The watershed based permit issuance schedule was replaced with an interim backlog reduction schedule, so reporting on this measure is not possible until 2005.

What is an example of a department activity related to the measure?

DEQ is working on long-term improvements to the wastewater permitting program, including a refinement of the watershed basis for wastewater permitting. The result will be improved watershed permitting.

What needs to be done as a result of your analysis?

Complete the backlog reduction effort and issue an updated schedule for watershed permitting. The targets for 2003-05 need to be modified.

What is the data source?

Water Quality program databases.

Performance measure with number.

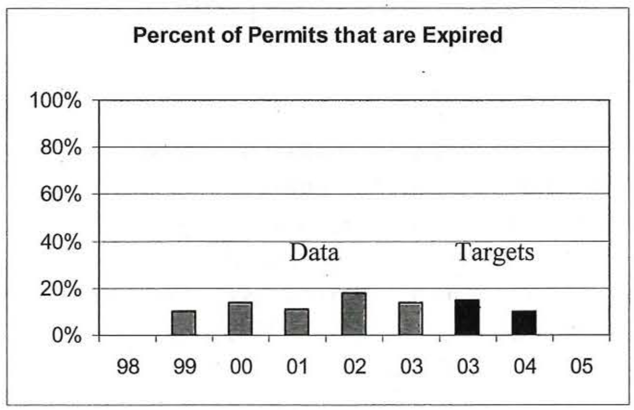
34000-08: Percent of total permits that are expired (backlogged).

Data						Targets		
1998	**1999**	**2000**	**2001**	**2002**	**2003**	**2003**	**2004**	**2005**
	10%	14%	11%	18%	14%	15%	10%	

To what goal or goals is this performance measure linked?

Goal 2: Protect Oregon's water.

What does the performance measure demonstrate about the goal?
Expired permits often do not include the most current technology or effluent requirements. As permits are renewed, water quality is better protected as the most current requirements are incorporated into the permits.



What does the data reveal?

Since the goal is a low backlog, data reflecting a backlog lower than the target backlog is good. DEQ has improved the permit backlog, performing slightly better than the 2003 target.

What is an example of a department activity related to the measure?

In July 2003, DEQ initiated a focused effort to reduce the backlogged individual permits and created the permit backlog reduction schedule.

What needs to be done as a result of your analysis?

Continue with the backlog reduction effort, which includes issuing permits according to the schedule. DEQ will consider modifying this measure because this it is inconsistent with the other measures where targets represent improvements in performance.

What is the data source?

Water Quality program databases.

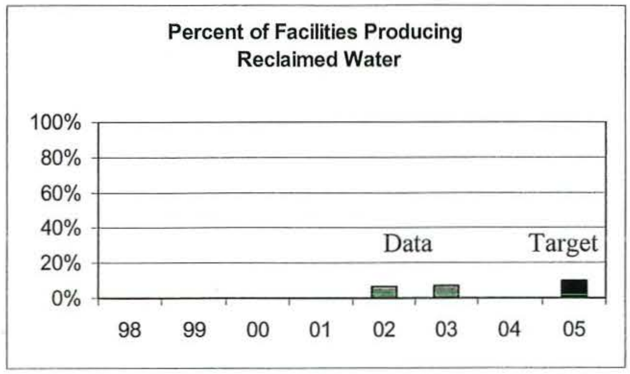
Performance measure with number.

34000-09: Percent of permitted facilities that produce reclaimed water for use.

Data						Targets		
1998	**1999**	**2000**	**2001**	**2002**	**2003**	**2003**	**2004**	**2005**
				6.5%	7.3%			10%

To what goal or goals is this performance measure linked?

Goal 2: Protect Oregon's Water.



What does the performance measure demonstrate about the goal?

Increased use of reclaimed water reduces the amount of lesser treated water returned to the watershed or groundwater.

What does the data reveal?

DEQ is making progress toward the 2005 goal; however, the agency needs to implement more reliable data collection processes.

What is an example of a department activity related to the measure?

DEQ revised requirements in our State Revolving Fund Program to provide funding for reclaimed wastewater projects.

What needs to be done as a result of your analysis?

While DEQ is making progress toward the target, the agency needs more robust information to continue reporting on this measure. To this end, the Water Quality Program will implement electronic data collection via Discharge Monitoring Reporting (DMR), which will provide more reliable and accessible information on wastewater reuse.

What is the data source?

The source of data is currently a survey of permitting staff that asks for the number of new wastewater treatment facilities that have been permitted for wastewater reuse since the previous year.

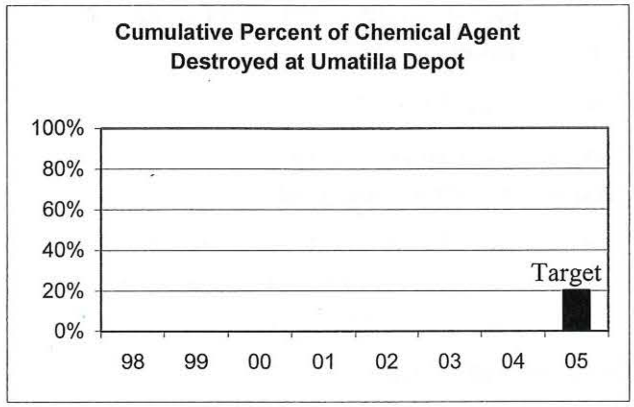
Performance measure with number.

34000-10: Cumulative percent of chemical agent destroyed at Umatilla Depot.

Data						Targets		
1998	**1999**	**2000**	**2001**	**2002**	**2003**	**2003**	**2004**	**2005**
				NA	NA			20%

To what goal or goals is this performance measure linked?

Goal 3: Protect human health and the environment from toxics.



What does the performance measure demonstrate about the goal?

The measure provides information on how much of the stockpile of chemical weapons agent at the Umatilla chemical Depot has been destroyed.

What does the data reveal?

The facility has not yet begun destroying chemical weapons. The target for 2005 will likely need to be lowered due to changes in the anticipated start date for agent destruction operations. A revised target is best established once agent operations begin.

What is an example of a department activity related to the measure?

The key activities that will lead to operations authorization are the review and approval of surrogate trial burn plans, and completing reports for each of the four incinerator systems. DEQ will also inspect for regulatory compliance and process permit modification requests after agent destruction begins.

What needs to be done as a result of your analysis?

Chemical Demilitarization Program staff for DEQ will continue all regulatory oversight activities in support of the timely start and operations of agent destruction at the Umatilla Chemical Agent Disposal Facility.

What is the data source?

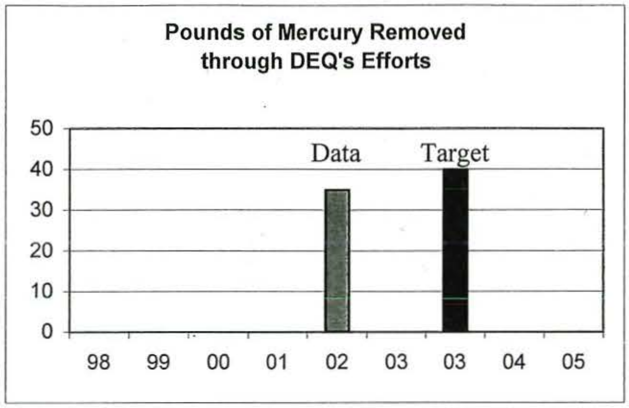
Once available, the data on the quantity of chemical agent destroyed will come from the Army and its contractor at the Umatilla Chemical Agent Disposal Facility, as verified by international treaty observers.

Performance measure with number.

34000-11: Pounds of mercury removed from the environment through DEQ's efforts.

Data						Targets		
1998	**1999**	**2000**	**2001**	**2002**	**2003**	**2003**	**2004**	**2005**
				35lbs	NA	40lbs		

To what goal or goals is this performance measure linked?



Goal 3: Protect human health and the environment from toxics.

What does the performance measure demonstrate about the goal?

DEQ's goal is to reduce the use and release of mercury by promoting the collection of mercury and mercury-containing products for recycling. The measure tracks the amount of mercury collected as a result of DEQ-supported initiatives and programs. Calculation of the measure is complicated by the dispersed nature of collection activities and the fact that mercury is often mingled with other substances.

What does the data reveal?

Data for calendar year 2003 will not be available until March 2004.

What is an example of a department activity related to the measure?

DEQ provides technical and financial assistance to help communities sponsor household and small quantity generator hazardous waste programs. In addition, DEQ helps groups to implement pollution prevention grants that collect mercury, such as dairy manometer exchange and thermostat exchange programs. DEQ also works with other organizations, such as the Oregon Dental Association, to develop best management practices for mercury management.

What needs to be done as a result of your analysis?

The Department has developed a mercury reduction plan, approved by the state's Environmental Quality Commission (EQC) in December 2002 and updated in December 2003. The December 2003 report discussed performance measures for evaluating the progress of the State in safe management of mercury. DEQ and the EQC are particularly interested in developing longer-term measures, such as reductions in mercury releases, ambient mercury concentrations, and fish tissue concentrations, on the effect of DEQ's activities on human health and the environment. DEQ has identified specific projects to implement over time; completion of these projects should result in collection of mercury from additional new sources.

What is the data source? Consultation with DEQ staff involved in household hazardous waste (managed by the solid waste program) and hazardous waste management efforts for compilation of available information from collection events.

Performance measure with number.

34000-12: Percentage of identified Oregon hazardous waste sites cleaned up (Oregon Benchmark #84)

Data						Targets		
1998	**1999**	**2000**	**2001**	**2002**	**2003**	**2003**	**2004**	**2005**
61.8%	76.3%	82.9%	86.5%	88.2%	NA			79%

To what goal or goals is this performance measure linked?

Goal 3: Protect human health and the environment from toxics.

What does the performance measure demonstrate about the goal?

The performance measure indicates the agency's success in ensuring that sites known to be contaminated with hazardous and toxic wastes are cleaned up.

What does the data reveal?

The percentage of sites cleaned up continues to rise. DEQ has implemented a number of program and process improvement projects over the past several years that have made it easier and cheaper for the regulated community to do business with DEQ. Those efforts have resulted in more sites coming into the Voluntary Cleanup Program than would otherwise have done so.

What is an example of a department activity related to the measure?

DEQ has made a concerted effort to contact site owners in the Underground Storage Tanks Program and move forward in cleaning up those sites. The agency is reviewing the cleanup processes in the Underground Storage Tank Program to determine if additional streamlining or customer service initiatives will result in more sites being cleaned up in that program.

What needs to be done as a result of your analysis?

DEQ plans to continue current efforts that support increasing the percentage of hazardous waste sites that are cleaned up. Since DEQ has exceeded the 2005 target for the last four years, the 2005 target of 79% should be revised.

What is the data source?

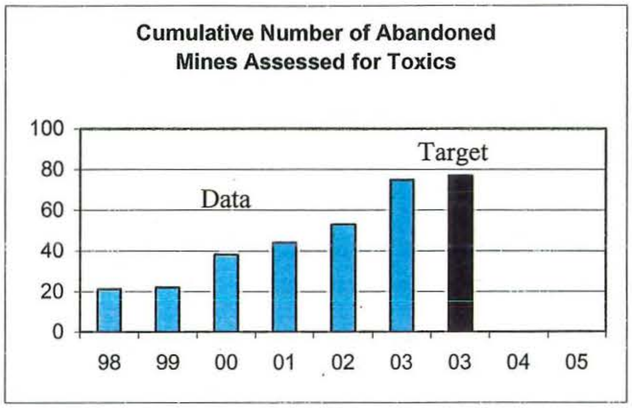
Data comes from records kept by DEQ on sites cleaned up in various programs.

Performance measure with number.

34000-13: Cumulative number of abandoned mines assessed for toxic contaminants.

Data						Targets		
1998	**1999**	**2000**	**2001**	**2002**	**2003**	**2003**	**2004**	**2005**
21	22	38	44	53	75	77[3]		

To what goal or goals is this performance measure linked?



Goal 3: Protect human health and the environment from toxics.

What does the performance measure demonstrate about the goal?

Assessing abandoned mines for toxics is a key objective identified for protecting human health and the environment from toxics.

What does the data reveal?

A 2003 cumulative total of 75 completed abandoned mine site assessments closely approaches DEQ's target of 77, and represents a significant increase in the number of annual assessments over previous years.

What is an example of a department activity related to the measure?

The assessment itself is an example of a department activity. Following the assessment, if additional site work is required, detailed site investigations and/or cleanup actions may be performed.

What needs to be done as a result of your analysis?

DEQ is aware of the need for better and more robust measures reflecting the full range of activities required to prioritize and clean up abandoned mine sites, in addition to developing measures of the effect of these activities on human health and the environment. However, collection of data regarding environmental conditions is resource-intensive as results must be measured over several years to see significant progress. DEQ will continue to consider ways to improve upon this measure.

In addition, most abandoned mine sites are "orphan sites" where viable responsible parties are not known. Funding for Orphan Site Cleanups is very limited, which affects DEQ's ability to take action. This requires DEQ to continually monitor the focus of our resources to achieve the greatest gains in protecting human health and the environment from toxics.

What is the data source?

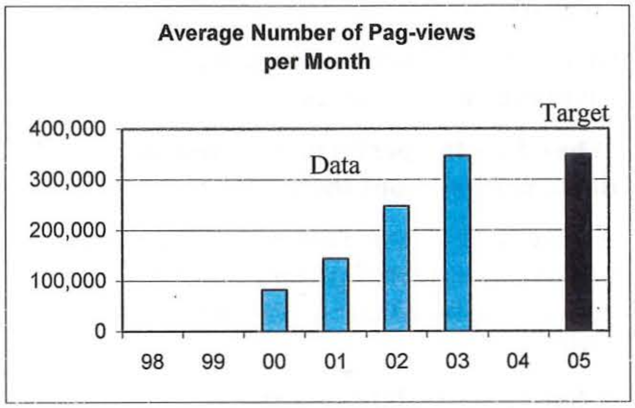
The state's Environmental Cleanup Site Information System (ECSI).

[3] Targets for 2004 and 2005 will be established once Federal funding for this work has been determined.

Performance measure with number.

34000-14: Average number of web page-views per month.

Data						Targets		
1998	**1999**	**2000**	**2001**	**2002**	**2003**	**2003**	**2004**	**2005**
		82,378	143,718	247,585	346,937			350,000



To what goal or goals is this performance measure linked?

Goal 4: Involve Oregonians in solving environmental problems.

What does the performance measure demonstrate about the goal?

An important aspect of the involvement goal is that Oregonians have access to environmental information. This measure provides an indication of the demand for DEQ's external web-site and environmental information.

What does the data reveal?

The data reveals DEQ is on track for achieving the 2005 target.

What is an example of a department activity related to the measure?

DEQ has made several improvements to its external web-site over the last couple of years. The expectation is that these improvements will result in increased web viewing and improved user satisfaction.

What needs to be done as a result of your analysis?

DEQ will continue to report and evaluate page-views; however, DEQ's internal web-team is developing additional measures that will provide more useful information on whether DEQ's web-site contains the "right" information to satisfy Oregonians interests for environmental information.

What is the data source?

Data reported comes from the Office of Communications and Outreach using Web-Trends.

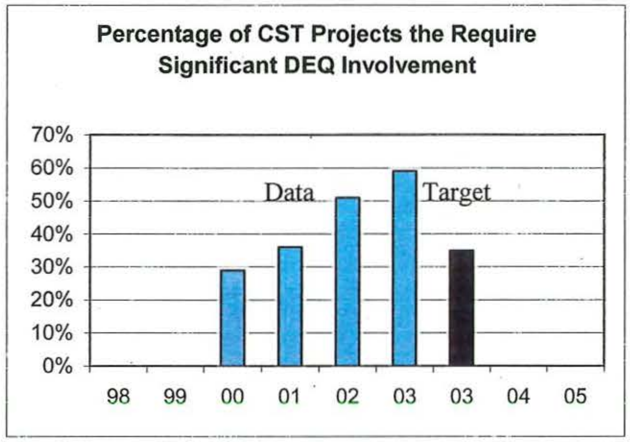
Performance measure with number.

34000-15. Percentage of Community Solutions Team (CST) projects with environmental issues that require significant DEQ involvement.

Data						Targets		
1998	**1999**	**2000**	**2001**	**2002**	**2003**	**2003**	**2004**	**2005**
		29%	36%	51%	59%	35%		

To what goal or goals is this performance measure linked?

Goal 4: Involve Oregonians in solving environmental problems.



What does the performance measure demonstrate about the goal?
DEQ has identified helping Oregonians to solve local problems as an important objective under the involvement goal. CST projects are an important vehicle that DEQ uses to work with local communities.

What does the data reveal?

The 2003 value of 59% is significantly above the target of 35%. This increase is attributed to the Legislature ultimately reinstating 4 positions to support the Governor's Economic Revitalization Teams (GERT), a succession of the CST model. The GERTs have been largely focused on industrial land development, which typically involve significant environmental issues.

What is an example of a department activity related to the measure?

This measure is directly related to the primary activity, project development and management, that DEQ uses to help communities solve local economic and environmental problems.

What needs to be done as a result of your analysis?

DEQ will evaluate this measure to determine if it needs to be modified to more accurately reflect DEQ's contribution to the GERT process and support for local problem solving.

What is the data source?

Data reported comes from Economic Revitalization Team staff.

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State and Federal Regulations: Information for Public Agencies

Background

There are many state and federal laws with which the public agency must comply. The information presented here in TAB 5 focuses on some of these regulations, and explains what the public agency must do to demonstrate compliance to DEQ.

The most important responsibility of the public agency in this regard is ensure that the bidding contractor to which the public agency wishes to award a construction contract has properly and completely executed the several forms contained in TAB 6 of this Construction Manual, the **CWSRF-Funded Construction Project Contract Insert.**

Unless the contractor has completely and properly executed the Insert forms, DEQ will be unable to reimburse the contractors pay requests. To this end, DEQ will review the contractor-executed Insert documents for completeness and substantive sufficiency as part of the "Bid Package" submitted by the public agency subsequent to bid opening. (As per TAB 4.)

The decision as to what point in the bid process the public agency requires the bidding contractors to complete the Insert forms rests with the public agency.
Some options are:

- Make submittal of the executed Insert forms a matter of bid responsiveness.
- Require that the low bidder adequately complete the forms, as determined by DEQ, within a specified period of time after bid opening.
- *Others ?????*

The public agency should formulate instructions for bidders to be included in the introductory section of TAB 6 in accordance with the option it selects. Additionally, DEQ recommends that the process and requirements be explained to prospective bidders at a pre-bid conference.

The areas of regulation discussed below are limited to: Oregon Prevailing Wage Rate, Overtime Requirements, contractor suspension/debarment, affirmative action, civil rights laws, equal employment opportunity, the Anti-Lobbying Act and NPDES storm water regulations.

A comprehensive list of federal laws and authorities are found in Attachment A. Other forms that will assist borrowers in their compliance efforts are included in other tabs as attachments. These include a bid review checklist (TAB 4), a monthly inspection report form, and a copy of Form 5700-52A (the MBE/WBE reporting form).

Regarding Debarment, Suspension, and Other Responsibility Matters" with their bids. A copy of this certification form is contained in Attachment 6 of the CWSRF Insert (see tab 6).

Prior to the award of any contract or subcontract, the public agency must confirm the eligibility of all contractors and subcontractors to be employed.

V. Fair Share Objectives and Affirmative Action Efforts

(Note: the information contained in this section is also contained in Attachment 2a of the CWSRF Insert / TAB 6)

A. Overview - Bidders on CWSRF-funded projects are required to take all necessary and reasonable steps to ensure that Disadvantaged Business Enterprises (DBEs) have the maximum opportunity to compete for and perform on contracts as partners, subcontractors or material suppliers. The EPA has established the following Fair Share Objectives for the State of Oregon:

	Construction	Services
MBE (Minority Business Enterprise) =	4.69%	1.4%
WBE (Women Business Enterprise) =	6.64%	2.1%
SBRA (Small Business in Rural Area) =	2%	

Bidders must undertake a good faith effort to attain these percentages. The public agency is required to monitor and maintain records regarding the bidders' efforts to meet the Fair Share Objectives. *Why? Isn't our job?*

B. DBE Certification - All DBEs have to be certified by Oregon's Office of Minority, Women, and Emerging Small Business. *How about in other states??* OMWESB administers the Disadvantaged Business Enterprise (DBE), Minority Business Enterprise/ Women Business Enterprise (MBE/WBE), and Emerging Small Business Programs. Its address is:

Office of Minority, Women, and Emerging Small Business
Department of Consumer & Business Services
350 Winter Street NE,
Salem, Oregon 97301-3878
Telephone (503) 947-7922

http://www.cbs.state.or.us/omwesb

A complete listing of Oregon DBEs categorized by Firm name, Certification number, Certification type, ODOT code, NIGP code, or NAIC code may be downloaded from this site. A subscription to the DBE Directory may also be obtained from this web address.

the work of the subcontract.

2. <u>Use of Small Businesses in Rural Areas</u>
<u>In addition</u> to meeting the requirements of the good faith effort for small businesses listed in Attachment 2, bidders on projects in "rural areas" are strongly encouraged to solicit SBs within the county of work. When federally funded construction takes place in "non-rural areas," the bidder shall use adjacent counties which are designated "rural area" for SB supplies and services whenever possible. The following 26 counties are considered "rural areas": Baker, Clatsop, Columbia, Coos, Crook, Curry, Douglas, Gilliam, Grant, Harney, Hood River, Jefferson, Josephine, Klamath, Lake, Lincoln, Morrow, Sherman, Tillamook, Umatilla, Union, Wallowa, Wasco, Wheeler and Yamhill.

   MBEs and WBEs have separate attainment goals, and double counting of contract work for both MBE and WBE goal attainment is not allowed. The SBRA goal, however, may be satisfied with a certified small business in a "rural area" that is also counted as either a MBE or WBE.

2. <u>Termination of DBE</u> - The contractor shall notify the public agency in writing; and obtain its written consent before terminating, substituting and/or replacing a DBE committed to in the contractor's bid proposal at the time of bid opening or at any subsequent time thereafter. Written consent will be granted only where the contractor can demonstrate that the DBE is unable or unwilling to perform. Substitution or replacement of a committed DBE will not be consented to based solely on a contractor's ability to negotiate a more advantageous contract with another subcontractor.

E. Public Agency Responsibilities - The public agency shall review bids for compliance with the Fair Share Objectives. In the event a bidder fails to meet the Fair Share Objectives, the public agency shall determine whether or not the bidder has made a good faith effort to meet these goals. *And then do what?? I suggest we delete this as a public agency responsibility. We should do this.*

[redacted] *delete*

Immediately following bid review and contract award, the public agency shall complete Form 5700-52A regarding MBE/WBE utilization (see attachment D of the submittal checklist in tab 4), and submit it to DEQ. The public agency must complete this form on a quarterly basis for the duration of the project. It must be submitted to DEQ not more than 15 days after the end of each quarter.

VI. Civil Rights Laws and Equal Employment Opportunity

Executive Order No. 11246 facilitates the federal government's efforts for the hiring, training, and promotion opportunities for minorities and women in federally financed construction programs. A public agency is required to include guidelines covering Equal Employment Opportunity and Affirmative Action in its contract with the Prime Contractor.

In addition to the fair share objectives, there are other civil rights laws and equal employment opportunity rules with which the public agency and the contractor must comply. Copies of the actual forms are included in the CWSRF Insert.

A. Sworn Statement of Compliance with Small, Women, and Minority Business Utilization Requirements.

B. Contractor's Compliance Statement (with *Executive Order No. 11246*).

NOTE: a copy of *Executive Order No. 11246* regarding equal employment opportunity must be posted at the job site for the duration of the project.

C. Certification of Non-segregated Facilities.

D. Notice to Labor Unions or Other Organizations of Workers of Non-discrimination in Employment.

VIII. NPDES Storm Water Regulations

If a construction project is expected to disturb 5 or more acres of land (1 or more acres after December 1, 2002), an NPDES stormwater permit is required. NPDES storm water regulations for construction projects are explained in more detail in tab12. The public agency is advised to review the contents of this guidance document carefully as construction may not commence until an NPDES storm water permit has been issued and an erosion control plan approved.

Though the contractor can apply for the permit, it may be more expedient for the public agency to apply for it once the construction documents for the project have been approved by DEQ, and then later transfer it to the contractor so that lack of a permit does not delay the start of construction.

Under the terms of the permit, the contractor must prepare and submit an erosion control plan. This plan must be approved prior to the start of construction. The public agency is responsible for obtaining a copy of the approved plan from the contractor and submitting it to the project officer.

IX. Attachment

A. List of Federal Laws and Authorities

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Requirements for Affirmative Action to Ensure Equal Employment Opportunity.

4. Certification of Non-segregated Facilities

5. Non-discrimination in Employment, Notice to Labor Unions or Other Organization of Workers

   NOTE: one form must be submitted for each union represented in the contractor's work force.

6. Certification Regarding Debarment, Suspension, and other Responsibility Matters

   NOTE: this form must be filled out by subcontractors as well as by the prime contractor whenever the amount of the subcontract is over $25,000. Forms from subcontractors do not have to be included with the bid, though they must be submitted to the prime contractor.

7. Certification Regarding Lobbying Activities

7A. Disclosure of Lobbying Activities (Standard form LLL-A)

   NOTE: all contractors and subcontractors with bids of more than $150,000 must sign and submit Attachment 7, certifying that they have not and will not use any Federal funds appropriated for the project for lobbying purposes. Attachment 7A only has to be filled out when non-appropriated funds are used for lobbying in connection with the project. If this is not the case, it may simply be marked "NA" and signed and dated.

8. Certification of Independent Price Determination

<u>The following items will apply after the contract is awarded.</u>

9. CWSRF project sign. This must be posted on the project throughout the course of construction to permit public viewing.

10. *Executive Order #11246.* Requirements for Affirmative Action to Ensure Equal Employment Opportunity. This must be posted at the job site for the duration of the project.

11. Oregon Overtime Rules

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Attachment 1

SMALL, WOMEN, & MINORITY BUSINESS ENTERPRISES TO BE UTILIZED

Project:

Name of Bidder:

* *

Name of Firm: ____________________
Address: ____________________
Phone: ____________________

Description of Work Element or Supplies:
____
____

Amount to be contracted $

___ MBE
___ SBE
___ WBE
___ Joint Venture
___ Other
___ Subcontractor
___ Supplier
___ Manufacturer

Name of Firm: ____________________
Address: ____________________
Phone: ____________________

Description of Work Element or Supplies:
____
____

Amount to be contracted $

___ MBE
___ SBE
___ WBE
___ Joint Venture
___ Other
___ Subcontractor
___ Supplier
___ Manufacturer

Name of Firm: ____________________
Address: ____________________
Phone: ____________________

Description of Work Element or Supplies:
____
____

Amount to be contracted $

___ MBE
___ SBE
___ WBE
___ Joint Venture
___ Other
___ Subcontractor
___ Supplier
___ Manufacturer

* *

Contractor

Signature

Use additional pages if necessary.

have always understood that it's OK, but we should have a clear stated policy in the CM.

Attachment 2A

FAIR SHARE OBJECTIVES AND AFFIRMATIVE EFFORTS

A. OVERVIEW - Bidders on CWSRF-funded projects are required to take all necessary and reasonable steps to ensure that Disadvantaged Business Enterprises (DBEs) have the maximum opportunity to compete for and perform on contracts as partners, subcontractors or material suppliers. The Department's fair share objectives are as follows:

	Construction	Services
MBE (Minority Business Enterprise) =	4.69%	1.4%
WBE (Women Business Enterprise) =	6.64%	2.1%
SBRA (Small Business in Rural Area) =	2.00%	

Failure of the bidder to provide documentation of a good faith effort to meet the fair share objectives will result in the rejection of the bid. *delete*

B. DBE CERTIFICATION - DBEs have to be certified by Oregon's Office of Minority, Women & Emerging Small Businesses (OMWESB). OMWESB administers the Disadvantaged Business Enterprise (DBE), Minority Business Enterprise/Women Business Enterprise (MBE/WBE), and Emerging Small Business Programs. Its address is

Office of Minority, Women, and Emerging Small Business
Department of Consumer & Business Services
350 Winter Street NE,
Salem, Oregon 97301
Telephone (503) 947-7976

http://www.cbs.state.or.us/omwesb

A complete listing of Oregon DBEs categorized by Firm Name, Certification Number, Certification Type, ODOT Code, NIGP Code, or NAIC Code may be developed from this site.

C. SPECIFIC REQUIREMENTS - the following specific requirements pertain to the use of DBEs.

1. DBE Labor Force - The DBE must employ a labor force separate and apart from that employed by the prime contractor, other subcontractors on the project or their affiliates. The DBE may not subcontract any portion of his contract without the prior written consent of the public agency. In any case, the subcontractor must still perform at least 50% of the work of the subcontract.

2. Use of Small Businesses in Rural Areas

In addition to meeting the requirements of the good faith effort for small businesses listed in Attachment 2, bidders on projects in "rural areas" are strongly encouraged to

ADDITIONAL SOURCES OF DBE INFORMATION

(1) SBA and the MBDA

The local offices of the Small Business Administration and the Minority Business Development Agency will also supply bidders with listings of MBE/WBE firms:

United States Small Business Administration
Portland Office
Mary Jo Witty
1515 SW Fifth Ave.
Suite 1050
Portland, Oregon 97201-5494
(503) 326-5105
www.sba.gov/or/

United States Small Business Administration
Seattle Office
John Bagaason
1200 Sixth Ave.,
Seattle WA 98101
(206) 553-8546
www.sba.gov/wa

SBA also has a complete listing of DBEs in Oregon at its PRO-Net website. Businesses profiled on the PRO-Net system can be searched by SIC codes, key words, location, business type, ownership race and gender, EDI capability, etc. PRO-Net is located at:
http://pro-net.sba.gov

Minority Business Development Agency (MBDA)
221 Main Street, Room 1280
San Francisco, CA 94105
(415) 744-3001
www.mbda.gov

(2) Oregon Association of Minority Entrepreneurs, (a non-profit organization) maintains a directory of Oregon minority businesses.
Oregon Association of Minority Entrepreneurs
May Saephan
4134 N. Vancouver Avenue
Portland, OR 97217
(503) 249-7744

Daily Journal of Commerce
2840 NW 35th Ave.
Portland, OR 97210
503-226-1311
www.djc-or.com

Approved___
Approved with Corrections___

Minutes are not final until approved by the Commission.

Oregon Environmental Quality Commission
Minutes of the Three Hundredth and Fifteenth Meeting

December 4-5, 2003
Regular Meeting[1]

The following Environmental Quality Commission (EQC, Commission) members were present for the regular meeting, held at the Ecotrust Conference Center, 2nd floor of the Jean Vollum Natural Capital Center, located at 721 N.W. Ninth Avenue, in Portland, Oregon.

Mark Reeve, Chair
Tony Van Vliet, Vice Chair
Deirdre Malarkey, Member
Lynn Hampton, Member

Thursday, December 4, 2003

Chair Reeve called the regular meeting to order at approximately 11:00 a.m., and introduced Commission members, Department of Environmental Quality (DEQ) Director Stephanie Hallock, Assistant Attorney General Larry Knudsen, and Commission Assistant Mikell O'Mealy. Agenda items were taken in the following order.

A. Contested Case No. LQ/HW-ER-01-275 regarding Luhr Jensen & Sons, Inc.
The Commission considered a contested case between DEQ and Luhr Jensen & Sons, Inc., in which the company appealed a proposed order and $34,801 civil penalty for hazardous waste management violations and water quality permit violations. Larry Knudsen, Assistant Attorney General, summarized the findings of fact made by the Administrative Law Judge and asked Commissioners to declare any ex parte contacts or conflicts of interest regarding the case. All Commissioners declared that they had no ex parte contacts or conflicts of interest. Phil Jensen presented arguments on behalf of Luhr Jenson & Sons, Inc., and Jeff Bachman, DEQ Environmental Law Specialist, presented arguments on behalf of the Department.

Commissioners discussed the case with Mr. Jensen, Mr. Bachman and Mr. Knudsen, and deliberated on whether the violation was "intentional" or "negligent." After discussion, the Department agreed to change the violation from intentional to negligent, as provided by the amended civil penalty calculation in Attachment J.P3. of the staff report, and thus reduce the penalty from $34,801 to $34,401. Commissioner Malarkey moved that the EQC uphold the proposed order as amended. Commissioner Van Vliet seconded the motion and it passed with four "yes" votes. Chair Reeve asked Mr. Knudsen to prepare the order for the Director's signature on the Commission's behalf.

B. Contested Case No. AQ/A-WR-98-186 regarding American Exchange Services
The Commission considered a contested case between DEQ and American Exchange Services, Inc., in which the corporation appealed a proposed order and $7,200 civil penalty for the open accumulation of friable asbestos-containing material or waste, and for failing to properly package, store and dispose of the

[1] Staff reports and written material submitted at the meeting are made part of the record and available from DEQ, Office of the Director, 811 SW Sixth Avenue, Portland, Oregon 97204; phone: (503) 229-5990.

asbestos-containing material. Larry Knudsen, Assistant Attorney General, summarized the findings of fact made by the Hearings Officer and asked Commissioners to declare any ex parte contacts or conflicts of interest regarding the case. Commissioner Malarkey declared a potential conflict of interest, and all other Commissioners declared no ex parte contacts or conflicts of interest. Richard Stark presented arguments on behalf of American Exchange Services, and Shelley McIntyre, Assistant Attorney General, and Jeff Bachman, DEQ Environmental Law Specialist, presented arguments on behalf of the Department.

Commissioners discussed the case with Mr. Stark, Ms. McIntyre, Mr. Bachman and Mr. Knudsen. After consideration, Commissioner Van Vliet moved that the EQC uphold the proposed order and civil penalty. Commissioner Hampton seconded the motion and it passed with three "yes" votes. Commissioner Malarkey abstained. Chair Reeve asked Mr. Knudsen to prepare the order for the Director's signature on the Commission's behalf.

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

D. Rule Adoption: Water Quality Standards, Including Temperature Criteria
Mike Llewelyn, DEQ Water Quality Division Administrator, and Mark Charles, DEQ Water Quality Policy and Program Manager, proposed new water quality rules to set standards for the protection of aquatic life, including temperature criteria, intergravel dissolved oxygen standards and antidegradation provisions. Mr. Llewelyn explained that this rulemaking resulted from a March 2003 Oregon District Court decision that overturned the federal Environmental Protection Agency's (EPA) 1999 approval of Oregon's existing temperature criteria and ruled that the intergravel dissolved oxygen criteria were not protective of salmonid spawning activities. Mr. Charles stated that proposed rules incorporated recent guidance that the EPA provided to States and Tribes for developing temperature criteria. Minor changes to the rule were presented at the meeting.

After consideration of the new standards, Commissioner Van Vliet moved that the Commission adopt the rules as proposed and amended by the changes presented. Commissioner Malarkey seconded the motion and it passed with four "yes" votes. Mr. Llewelyn recognized the significant contributions of DEQ staff, including Emily Smith, Tracy Harrison, Audrey Hatch, Jennifer Weaver and Loretta Pickerell, who helped in revising and finalizing the rule.

Friday, December 5, 2003

At 8:00 a.m., prior to the regular meeting, the Commission held an executive session to consult with counsel concerning legal rights and duties with regard to litigation against the Department. The executive session was held pursuant to Oregon Revised Statutes 192.660(1)(h).

Chair Reeve called the regular meeting to order at approximately 9:10 a.m. Agenda items were taken in the following order.

E. Approval of Minutes
Commissioner Malarkey moved that the Commission approve draft minutes of the October 9-10, 2003 EQC meeting. Commissioner Van Vliet seconded the motion and it passed with four "yes" votes.

F. Action Item: Annual Approval of Director's Financial Transactions
Helen Lottridge, DEQ Management Services Division Administrator, presented a summary of DEQ Director Stephanie Hallock's 2003 financial transactions, as required by state accounting and DEQ policy. Ms. Lottridge explained that in 2001, the Oregon Department of Administrative Services adopted a policy requiring Commission-level review and approval of agency Directors' financial transactions, including monthly time reports, vacation pay, travel expenses, and state credit card use. In September 2001, the EQC delegated review and approval of these transactions to the DEQ Management Services Division Administrator, with annual Commission review of the approved transactions. After discussion,

Commissioner Van Vliet moved that the Commission approve the Director's Financial Transactions for 2003. Commissioner Malarkey seconded the motion and it passed with four "yes" votes.

G. Action Item: Consideration of Pollution Control Facilities Tax Credit Requests
Helen Lottridge, DEQ Management Division Services Administrator, gave an overview of Pollution Control Facility Tax Credit requests and explained three changes to the Department's recommendations in the staff report: (1) the Department withdrew applications 6432 and 6433, recommended for approval, for additional analysis, (2) the Department withdrew application 6400, recommended for denial, to collect additional information, and (3) the applicant withdrew application 6260, recommended for denial, from this meeting agenda. Ms. Lottridge noted a correction to application 6615: the name of the applicant was Rosauers Supermarkets, Inc., rather than Rosavers Supermarkets, Inc. Larry Knudsen, Assistant Attorney General, asked Commissioners to declare any potential or actual conflicts of interest with regard to the tax credit requests. Commissioner Van Vliet declared a conflict of interest with application 6574. All other Commissioners declared no conflicts of interest.

After discussion, Commissioner Van Vliet moved that the Commission approve tax credit requests as recommended for approval by the Department, with the exception of applications 6432, 6433 and 6574. Commissioner Malarkey seconded the motion and it passed with four "yes" votes.

Commissioner Hampton moved that the Commission approve application 6574 as recommended. Commissioner Malarkey seconded the motion and it passed with three "yes" votes. Commissioner Van Vliet abstained.

Commissioner Van Vliet moved that the Commission deny applications 6266 and 6326 as recommended. Commissioner Hampton seconded the motion and it passed with four "yes" votes.

Commissioner Van Vliet moved that the Commission transfer applications 3599 and 4498 as recommended. Commissioner Malarkey seconded the motion and it passed with four "yes" votes.

H. Action Item: Consider Authorization of Clean Water State Revolving Fund Bond Sale
Jim Roys, DEQ Budget Manager, asked the Commission to authorize DEQ and the State Treasurer to issue and sell up to $10 million in state bonds to fund the DEQ's Clean Water State Revolving Fund loan program, as approved by the 2003 Legislature. Mr. Roys explained that the program provides loans to public agencies for water pollution control projects, such as upgrades for sewage treatment systems and nonpoint source pollution reduction. The program relies on the sale of state Pollution Control Bonds to match federal funds that support the loans. After consideration, Commissioner Van Vliet moved that the Commission adopt a resolution authorizing the bond issue and sale as proposed. Commissioner Malarkey seconded the motion and it passed with four "yes" votes.

I. Informational Item: Status Update on the Umatilla Chemical Agent Disposal Facility
Dennis Murphey, DEQ Chemical Demilitarization Program Administrator, briefed the Commission on the status of trial burns, public outreach efforts, and various other issues related to the Umatilla Chemical Agent Disposal Facility.

J. Rule Adoption: Oregon Regional Haze Section 309 Implementation Plan
Andy Ginsburg, DEQ Air Quality Division Administrator, and Brian Finneran, DEQ Air Quality Specialist, proposed a state Regional Haze Section 309 Implementation Plan for Commission adoption. Mr. Ginsburg explained that in 1999, the federal EPA adopted a new Regional Haze Rule directing states to adopt regional plans to control widespread air pollution that forms "haze" and affects visibility in national parks and other scenic areas. The rule gave states two options for reducing air pollution under Section 308 or 309 of the rule. Mr. Finneran summarized the Department's evaluation of the two options, presented public input on measures for controlling regional haze, and summarized stakeholder support for the proposed plan. After discussion, Commissioner Van Vliet moved that the Commission adopt the Oregon Regional Haze Section 309 Implementation Plan as proposed. Commissioner Malarkey seconded the motion and it passed with four "yes" votes.

Public Forum
At approximately 11:30 a.m., Chair Reeve invited members of the audience to provide general comments to the Commission.

Llewelyn Matthews, Director of the Northwest Pulp and Paper Association, expressed concerns about the cumulative effect of recent DEQ actions that appeared to be more stringent than federal EPA guidelines or the approaches of other states. Commissioners heard her testimony and thanked her for her comments.

Liz Callison, Director At-Large of the West Multnomah Soil and Water Conservation District, expressed concerns about public access to information, specifically, water quality data collected by the Oregon Division of State Lands, the Army Corps of Engineers, and the City of Portland. Commissioners asked the Department to follow up on her concerns, and thanked her for her comments.

Laura Weiss, Program Director for the Oregon Environmental Council, expressed concerns about the lack of permit limits or monitoring requirements to control the industrial release of toxic chemicals. Commissioners heard her testimony and thanked her for her comments.

Richard Webb, a resident of Southwest Portland, expressed concerns about pollution from the Grabhorn landfill, located in Beaverton near the Tualatin River. Commissioners asked the Department to follow up on his concerns, and thanked him for his comments.

Jerry Hanson, a resident of Southeast Portland, expressed concerns about treated wood being used as feedstock for compost at the McFarlane Bark composting facility in Clackamas County near Milwaukee. Commissioners asked the Department to follow up on his concerns, and thanked him for his comments.

K. Rule Adoption: Revisions to Contested Case Hearing Rules
Anne Price, DEQ Office of Compliance and Enforcement Administrator, Susan Greco, DEQ Environmental Law Specialist, and Les Carlough, DEQ Compliance and Enforcement Policy Advisor, proposed revisions to the Commission's rules for contested case hearings to maintain consistency with the Attorney General's Hearing Panel Rules. Ms. Greco explained that the Attorney General's office made changes to the procedural rules in July 2003.

After discussion, Commissioner Hampton suggested an amendment to the proposed Oregon Administrative Rule 340-011-0575(6) as follows: "Additional Evidence: A request to present additional evidence must be submitted by motion and must be accompanied by a statement showing good ~~that the~~ cause for the failure to present the evidence to the administrative law judge. ~~Was beyond the participant's reasonable control.~~" Commissioner Hampton moved that the Commission adopt the rules as amended. Commissioner Malarkey seconded the motion and it passed with four "yes" votes.

L. Informational Item: Update on DEQ's Mercury Reduction Strategy and a New Framework for Reducing Toxics
Dick Pedersen, DEQ Land Quality Division Administrator, and Keith Johnson, DEQ Cross-Program Coordinator, presented a summary of DEQ's work to reduce mercury in the environment and a framework for reducing toxic chemicals in addition to mercury. Mr. Johnson explained that one of DEQ's Strategic Directions is to protect human health and the environment from toxics, which tend to be long-lived chemicals that may accumulate in sediments and fish tissue at concentrations that represent a threat to human health and the environment. In December 2002, the Department presented to the Commission a strategy for reducing mercury in Oregon's environment, and committed to report back on the development of performance measures for assessing the effectiveness of mercury reduction activities. Commissioners discussed performance measures and current and future efforts with Mr. Pedersen and Mr. Johnson, and thanked them for their presentation.

M. Informational Item: Developing DEQ's Sustainability Plan
Andy Ginsburg, DEQ Air Quality Division Administrator and Sustainability Coordinator, presented elements of DEQ's draft Sustainability Plan, which was required by Governor Kulongoski's Executive Order for a

Sustainable Oregon for the 21st Century. Mr. Ginsburg explained that the Order represents a state commitment to lasting solutions that simultaneously address economic, environmental and community well being. Commissioners discussed their vision for a healthy sustainable environment and what DEQ can do to work cooperatively with all Oregonians to achieve sustainability. David Van't Hof, one of the Governor's Natural Resource Policy Advisors, joined the Commission's discussion. Mr. Ginsburg stated that DEQ plans to submit the agency plan to the Governor's Office and Sustainability Board in early 2004.

N. Commissioners' Reports

Commissioner Malarkey reported on her attendance at recent DEQ public hearings, and complimented DEQ staff on their leadership in the meetings.

Commissioner Hampton reported on her attendance at recent public hearings for the proposed Umatilla Chemical Agent Disposal Facility permit modification, and complimented DEQ staff on how they handled the hearings.

Chair Reeve adjourned the meeting at approximately 4:20 p.m.

State of Oregon
Department of Environmental Quality — Memorandum

To: Environmental Quality Commission **Date:** January 15, 2004

From: Mikell O'Mealy, Assistant to the Commission and Director

Subject: Agenda Item F, Informational Item: Role of the Oregon Institute for Natural Resources

On Friday morning, Gail Achterman, Director of the Oregon Institute for Natural Resources, will speak with you about the role of the Institute and partnership opportunities with DEQ and other state agencies. As you know, the Oregon Institute for Natural Resources was created by the 2001 State Legislature to provide one place for Oregonians to get information, ask questions, propose studies, provide opinions and advice, and learn about the natural resources and environmental conditions throughout Oregon. Attached is some background information about the Institute from their web site, www.inr.oregonstate.edu., for your review before the meeting.

The Institute for Natural Resources

ONE
ONE PLACE

The Institute for Natural Resources at Oregon State University provides ONE PLACE—a single independent "storefront" where customers can get information, ask questions, propose studies, provide opinions and advice, and learn about the natural resources and environmental conditions throughout Oregon. READ MORE

Three virtual offices comprise the Institute for Natural Resources:

Policy Office
The Institute's Policy Office offers independent analyses of environmental and natural resource issues to describe plausible policy options and their likely strengths and weaknesses.

Research Office
The Institute's Research Office facilitates interdisciplinary research on the environment and natural resources of Oregon and their interactions with Oregon's economies and communities.

Contact Info:
Gail Achterman,
Director
210 Strand Hall
Oregon State University
Corvallis, Oregon 97331
541-737-9918

Information Office
The Institute's Information Office houses, makes available, and links a host of data, analytical and modeling tools, and decision support for identifying alternative courses of action and analyzing their outcomes. The Office also houses the Oregon Natural Heritage Information Center in support of the Oregon Natural Heritage Program.

New to this site:
OSU taps Achterman to head Institute for Natural Resources
A new pivot for policy making, *Oregonian*, 11/09/03

Last Update: Wednesday, 31-Dec-2003 10:54:10 PST

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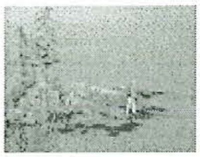


The Institute for Natural Resources

Policy Office

One place for public-land managers and citizens to get unbiased, independent expert advice on hard policy choices.

The Policy Office offers independent analyses of environmental and natural resource issues to describe plausible policy options and their likely strengths and weaknesses. Studies conducted by the Policy Office will respond to requests from citizens, businesses, and agencies at local, state, tribal, and federal levels. Citizen participation will be included in all Institute projects on public policies. Policy analyses will be grounded in rigorous criteria for defining the context for specific policy choices and will take advantage of expertise from throughout Oregon. As much as possible, analyses will be based on field data pertinent to the policies being considered.

The Policy Office is patterned to some degree after the highly respected National Research Council which is the working arm of the National Academy of Science in Washington D.C. Studies by the Policy Office will typically be conducted on a project-by-project basis on topics selected by users. Studies will include planned interactions with users, consistently refining issues and justifying analyses in an open public setting. This process will be similar to that used in the 2000 State of the Environment Report led by President Paul Risser.

Final Draft Workshop Report The final report from the workshop called Measuring Success, Biodiversity and Habitat Indicators. It took place at Oregon State University on October 30, 2002.

The Oregon Plan for Salmon and Watersheds: A Perspective Institute for Natural Resources, INR Policy Paper 2003-03, January 2003.

The Oregon Scenic Waterways System: A Review and Assessment Institute for Natural Resources, INR Policy Paper 2003-02 Report, January 2003.

Recreational Placer Mining in the Oregon Scenic Waterways System Institute for Natural Resources, INR Policy Paper 2003-01 Report, January 2003.

Last Update: Friday, 12-Dec-2003 13:11:48 PST

The Institute for Natural Resources

Research Office

One place for scientists to find, and take part in, a broad range of interdisciplinary research on the environment and natural resources of Oregon.

The Research Office facilitates interdisciplinary research on the environment and natural resources of Oregon. The Institute's research program aims to complement research conducted through universities, public agencies, and private business. Research will typically be of two types: (1) studies that describe and quantify status and trends of Oregon's environment and natural resources, and (2) studies on key environmental and management questions that county, state, federal or private organizations request.

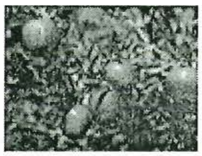
The Research Office can conduct a range of research activities. Areas where the Institute can add value through its network of scientists include: environmental monitoring, research evaluation and prioritization, environmental indicator development, and biodiversity assessments. The Research Office will not impinge on the responsibilities of individual agencies, but it can collect and evaluate needed data that are not being gathered or that will serve many agencies. All non-proprietary data and project information that are used by the Institute's Research Office will be available through the Information Office.

Last Update: Friday, 12-Dec-2003 13:13:48 PST

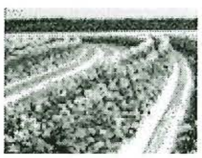
The Institute for Natural Resources

Information Office

One place for researchers and citizens to access dozens of databases of environmental and natural resources information through a unique network.



The Information Office of the Institute of Natural Resources is being developed to make comprehensive natural science information available to scientists, policy makers, and citizens throughout the state. The need for the office was highlighted in the State of the Environment Report, and was a major reason for the establishment of the Institute for Natural Resources.



The Information Office of INR includes the Oregon Natural Heritage Information Center, the OSU Libraries Natural Resources Digital Library (under development), and a new spatial data integration effort called Virtual Oregon. Virtual Oregon is coordinated by the OSU Department of Geosciences, College of Forestry, Valley Library and the Northwest Alliance for Computational Science and Engineering, or NACSE. NACSE is an interdisciplinary research center located at Oregon State University that is assisting INR and ORNHIC in making web based resources more easily accessible to researchers and the public.

In the 2001 legislation that created the Institute for Natural Resources, the Oregon Legislature also authorized the Oregon Watershed Enhancement Board (OWEB) to coordinate natural resource data gathering and distribution in Oregon, and the Department of Administrative Services' GeoSpatial Data Clearinghouse (OGDC) to coordinate and distribute spatial (GIS) data. The Institute for Natural Resources, the Oregon Watershed Enhancement Board, and the Oregon GeoSpatial Data Center are working together to assure that the public has access to high quality data for applying science to key natural resource questions.

Last Update: Friday, 12-Dec-2003 13:42:45 PST

The Institute for Natural Resources

Gail L. Achterman
Director, Institute for Natural Resources

Institute for Natural Resources
Room 210 Strand Hall
Corvallis, Oregon 97331
541-737-9918

A.B. Economics, 1971, Stanford University
J.D., 1974, University of Michigan
M.S., Natural Resource Policy and Management, 1975, University of Michigan

Gail Achterman became the first full-time Director of the Institute for Natural Resources on July 31, 2003. She is a fourth generation Oregonian with broad experience working on natural resource and environmental law and policy.

She began her career as an attorney in the Solicitor's Office of the U.S. Department of the Interior in Washington, D.C. where she advised the Bureau of Land Management and the Bureau of Reclamation from 1975-1978. She returned home to Oregon in 1978 to join what later became the Stoel Rives law firm in Portland. There she worked to help build the Northwest's first specialty natural resource and environmental law practice. She also started her civic work by serving on the Oregon Water Policy Review Board from 1981-1985.

In 1987, Governor Neil Goldschmidt asked her to be his Assistant for Natural Resources, a position she held from 1987-1991. She was responsible for natural resource, energy and environmental policy development and implementation, working closely with all state resource agencies. She also served as the main liaison with federal resource agencies, including extensive work on plans for Oregon's national forests. In 1991, she returned to private law practice at Stoel Rives until 2000 when she left to become Executive Director of the Deschutes Resources Conservancy in Bend, Oregon, working on developing voluntary, market-based watershed restoration methods.

Gail continues her extensive civic work by serving on the Oregon Transportation Commission. She also is a member of the board of Northwest Environment Watch.

Last Update: Wednesday, 31-Dec-2003 10:54:55 PST

The Institute for Natural Resources

Projects

The Institute contracts with agencies and firms to bring the best available science together to help them accomplish integrative work in the natural resources sector. Except for one project initiated by OSU Libraries and one major foundation grant, all current projects at the Institute have been initiated at the request of state agencies since passage of the Oregon Sustainability Act of 2001 and all are still in progress.

A search will be underway soon for a permanent Director of the Institute and the various governing boards will be formed under a charter granted by the Provost. While this is underway Hal Salwasser, Dean College of forestry, is acting director, overseeing (1) work contracted by agencies, and (2) development of grant proposals. Funding the work of the Institute comes entirely from grants and contracts and from existing resources at OSU at this time. Thus, our program of work and priorities directly reflect what our clients want done.

Projects currently underway from the INR Research Office:

Willamette River Fish Deformities research: RFP through Sea Grant Office– OWEB award of the ~$500,000 contract to Dr. Larry Curtis in Environmental and Molecular Toxicology

Oregon Forest Biodiversity Assessment for Oregon Department of Forestry will include aquatic elements as well as terrestrial -- planning meeting on Feb. 14, 2002; Salwasser reported to Board of Forestry on June 5, 2002

Projects currently underway from the INR Policy Office:

Refinement of Environmental Benchmarks for State of Environment Report and Progress Board– Salwasser reported to the Oregon Progress Board on May 21, 2002 and November 19, 2002

Scenic Waterways Policy Review for the Oregon Parks and Recreation Department-- to examine the compatibility of various uses in scenic waterways and the values that led to their designation – contract to Dr. David Bernall in Political Science Dept.

Lower Deschutes River Access Study OPRD/BLM/CTWSR contract to Dr. Rebecca Johnson in Forest Resources

Projects currently underway from the INR Information Office:

Oregon Natural Heritage Information Center -- OSU has completed agreements with Oregon Department of State Lands and The Nature Conservancy to assume managerial responsibility for the Oregon Natural Heritage Program

Natural Resources Digital Library at OSU Libraries will be a major repository and access point for maps, data bases, literature for watershed councils and agencies -- this is a project initiated by OSU Libraries and has recently forged a link to the OWEB's new information coordination role

Willamette Basin Conservation Project --$600,000 Grant from Meyer Memorial Trust to implement Willamette Basin Conservation Strategy, the Oregon Plan for the Willamette Basin -- INR Directorate (Hal Salwasser, PI), Research, Policy and Information Offices involved in collaboration with OSU Libraries (Karyle Butcher), College of Agricultural Sciences (Stan Gregory), OWEB (Janine Salwasser), UO (David Hulse), Willamette Stewardship Council (Rick Bastasch), and Defenders of Wildlife Portland Office (Sara Vickerman) Fact Sheet

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Last Update: Friday, 12-Dec-2003 13:47:13 PST

State of Oregon
Department of Environmental Quality — Memorandum

To: Environmental Quality Commission **Date:** February 4, 2004

From: Stephanie Hallock, Director

Subject: Director's Dialogue

New DEQ-Public Health Laboratory Facility Selected

In January, the Department of Administrative Services (DAS) secured a building for the new DEQ-Oregon Public Health Laboratory (PHL) facility. As you know, we have worked with DAS and PHL over the past two years to relocate the labs. Currently, both labs are located at Portland State Univerversity (PSU) in a converted parking garage with 51,000 square feet of useable space, far too small to safely and effectively house laboratory staff and equipment. In addition, PSU has terminated its lease to DEQ and PHL because it needs the space, and we have until 2007 to move.

After evaluating eleven properties in the Portland metro area, DAS selected a new, vacant building in Hillsboro with about 83,000 square feet of flexible space. The space will house the DEQ's 75 lab staff, which monitor air and water quality and hazardous waste statewide, and 75 PHL staff, which test for communicable diseases, disease agents, and community disease outbreaks. The new joint lab will help strengthen the connection between public and environmental health, and be a regional resource and key component in emergency response, uniquely positioned to provide both chemical and biological analytical support for potential terrorist threats in the Pacific Northwest. Working with DAS, we hope to finalize the building purchase in April, design the lab facility over the next year, and move in sometime in mid-2006. Attachment A provides more information in a fact sheet prepared by DAS.

This past fall, Mary Abrams, DEQ Laboratory Division Administrator, convened a stakeholder workgroup to review the DEQ lab functions and provide valuable input regarding the structure and function of the lab in its new location. The workgroup included representatives from groups who routinely work with or use DEQ Laboratory services: Gail Achterman, Oregon Institute for Natural Resources; Chris Jarmer, Oregon Forest Industry Council; Brian Jennison, Lane Regional Air Pollution Authority; Stacy Renfro, Student Watershed Research Project; Phil Larsen, US Environmental Protection Agency Research Lab in Corvallis; Stephen Lawn, representing the Northwest Environmental Business Council; Dennis Lynch, US Geological Service; Kelly Moore, Oregon Watershed Enhancement Board; John Neilson, representing the Oregon Environmental Laboratory Association; Jeff Pritchard, Federal Bureau of Investigation; Jan Wilson, representing the Association of Clean Water Agencies; and Kathryn Van Natta, Northwest Pulp & Paper Association. The workgroup finished their review in December with recommendations on the work that is currently done or could be done by the DEQ lab, as well as potential outsourcing of some analytical and monitoring work and regionalization of some DEQ monitoring staff.

Controversy and Challenges with the Medford Air Quality Particulate Proposal
In December, we provided you with background information on the strong opposition DEQ is encountering in the Medford-Ashland area for our proposed air quality particulate matter attainment and maintenance plan (see Attachment B). On January 21, we held our second public hearing on the proposed Medford plan and the public comment period closed on January 30 (the original comment period was scheduled to close on December 31, but we extended it one month because of high public interest). DEQ has received hundreds of comments on the proposal via mail, email and telephone, including organized petitions and mail in cards. Although we are still tallying and organizing comments, it is clear that over 95 percent of those who responded are opposed to any increase in particulate matter levels that would be allowed under the proposed industrial growth allowance option. We will be diligently reviewing the record considering alternatives for next steps.

As an aside: The January 21 hearing did not go as planned. The audience was not satisfied with DEQ's efforts to receive testimony at two tables, one in the auditorium and one in the hallway, in order to ensure that everyone had a chance to speak. During the December 16 hearing, many people who signed up to testify did not do so. After the hearing, we received feedback that many people left early because they felt intimidated or the hearing went on too long. The "two hearing" format used at the second hearing was intended to address these concerns. There were several vocal audience members who wanted to speak to the entire audience at once, however, and again about half the people who signed up to testify did not do so when their name was called.

This issue has generated tremendous interest from the community and it has been a challenge for us to communicate with the public about the facts of the proposed plan and the choices involved. In the long run, our experience will be very helpful. It is likely that we will encounter similar levels of opposition again, especially in areas where policy choices could result in increased air pollution under the law (in apparent conflict with our agency's mission). We are exploring better ways to approach situations like this, including reviewing the Department's processes for obtaining public input in rule proposals as well as how to approach public hearings. EQC consideration of whether to adopt the proposed plan in rule, is presently scheduled for the May 20-21 meeting, but could be delayed.

OSU Study Determines Cause of Fish Deformities in Newberg Pool
In January, researchers at Oregon State University (OSU) released the initial results of a study on fish taken from the Willamette River above Oregon City in an area called Newberg Pool (see Attachment C for the report). Scientists have known for decades that fish from this area show unusually high rates of skeletal deformities, and pollution has been the suspected cause. OSU's research indicates that a parasitic worm, the trematode parasite, is responsible for 70 percent of the fish deformities. Final study results, which are due this June, will raise additional questions about the reason for the high incidence of parasitic infection in Newberg Pool fish, and the cause of the other 30 percent of deformities not associated with parasites. Whether OSU or another entity begins research to answer these questions will depend on funding availability.

It is unclear what role DEQ will ultimately play in addressing this problem. If the cause of deformities is found to relate to water temperatures or other pollution, our efforts to develop TMDLs and control "point source" pollution could help address the problem. The need for more information about the situation is something we will consider in development of a Willamette River strategy for the Governor's office this year.

Partnership Between Local Governments and DEQ Brings Household Hazardous Waste Collection Facilities to Serve Wasco, Sherman and Hood River Counties

In November, a landmark agreement was signed by nine Wasco, Sherman and Hood River County jurisdictions that will result in two new permanent household hazardous waste collection facilities in The Dalles and Hood River to serve that area. This agreement is the result of nearly three years of cooperation and hard work on the part of the counties, six area cities and some grant assistance from DEQ to fund the project planning and help with facility construction. The local jurisdictions will fund facility construction and operation primarily through garbage collection rate increases. Businesses and farmers won't have to pay extra fees to use the facilities.

Propelling this project was a consensus that a convenient, local and environmentally sound disposal option for household, small business and farm/ranch hazardous wastes was needed to protect groundwater aquifers, streams and water systems in the Mid-Columbia region from potential contamination. The construction of these facilities marks an exciting change in how the state manages household hazardous waste. Historically, local governments have relied on DEQ to provide collection events, but our resources have been inadequate to provide regular, frequent collections in all areas of the state. Partnering with local governments in this way allows us to significantly increase the level of collection services in Oregon. Other permanent collection facilities have been sited or are under consideration in Metro and Lane County, Columbia County, Marion County and Deschutes County.

Governor Seeks Funding to Remove Savage Rapids Dam

In December, Governor Kulongoski sent a letter to the Office of Management and Budget requesting $13.5 million in federal funding to assist the removal of the Savage Rapids dam on the Rogue River. A 2001 Consent Decree ordered the Grants Pass Irrigation District (GPID) to stop using the dam for irrigation diversion by 2005, and although Congress already authorized the dam's removal, it has not yet appropriated funding. The Oregon Watershed Enhancement Board (OWEB) has earmarked $3 million to assist the project because Oregon was one of the parties involved in the Consent Decree. Meeting the 2005 date is contingent on the appropriation of federal funding.

While the main reason for removing the dam is to improve fish passage in the Rogue, DEQ will be involved in the project to ensure that water quality issues are adequately addressed. Sediment built up behind the dam will be released during dam removal and could potentially carry toxic contaminants down river. Dam removal will require a US Army Corps of Engineers 404 permit and certification from DEQ that water quality standards will not be violated (i.e., "401 certification" under the Clean Water Act). If funding comes through, the Corps will probably be the lead on the project, working with Oregon's Division of State Lands, Water Resources Department, Fish and Wildlife Department, OWEB and DEQ.

Agreement Reached to Develop Klamath Basin TMDLs

In November, DEQ joined with the California North Coast Water Quality Control Board and the U.S. Environmental Protection Agency (EPA) Regions IX and X in a unique agreement to develop water pollutant loads, or Total Maximum Daily Loads (TMDLs), for the Klamath River Basin. TMDLs are designed to address water quality pollution problems for streams on the Clean Water Act "303(d) list." The Klamath is listed for a number of water quality problems, including dissolved oxygen, temperature, ammonia-toxicity, nuisance algae and nutrients. Because the Basin straddles the Oregon-California border, both states must participate in the TMDLs. With each state in a different EPA region, the task becomes more complex because EPA will ultimately have to approve the TMDLs.

The agreement puts Oregon and the California North Coast Board in the lead for developing loading capacities and distributing loads among the sources in the river system. In addition, DEQ will be in the lead on public involvement, and we plan to hold a number of stakeholder meetings and maintain a web page with information on key elements of the TMDLs. EPA is funding a consultant to develop water quality models. We hope to finalize and submit the TMDLs for EPA approval in 2006. Under state rules, DEQ issues the TMDLs as orders, and the EQC would only be involved in the process if the orders were challenged.

You may have heard that the federal government recently announced that more money would be directed to the Klamath to resolve water quantity and endangered species issues. None of that money, unfortunately, will go toward water quality or TMDL development because it's being directed by the Department of Interior, and specifically, the Bureau of Reclamation and U.S. Fish and Wildlife Service, and Clean Water Act requirements fall outside of their scope of concern. DEQ's efforts to broaden the scope of this federal effort to include water quality have been unsuccessful.

To date, DEQ has completed 422 TMDLs since January 2000; the beginning date set by the federal District Court's Consent Order to complete TMDLs. Thus, Oregon is on track to be ahead of the Order's requirement to have 310 TMDLs completed by 2004. See Attachment D for a map of scheduled TMDLs.

Meeting with BLM on clean-up of abandoned mine sites

Dick Pedersen, DEQ Land Quality Division Administrator, has been meeting with senior managers from the Bureau of Land Management (BLM) and the US Forest Service to discuss the importance of cleaning up toxic pollution from abandoned and inactive mine sites on federal land. One of DEQ's highest priorities is cleanup of the Formosa Abandoned Mine site near Riddle, Oregon. Toxic metals from this site have contaminated about 18 miles of Middle Creek and South Fork Middle Creek, and the pollution has severely harmed stream ecosystems that support protected coho and steelhead salmon populations. In 2000, DEQ declared the Formosa site a State Orphan site, which enables use of Oregon's Orphan Account to fund short-term cleanup and additional environmental investigation work. To date, approximately $1 million in Orphan Site funds have been invested at this site. The BLM manages part of the land on which the Formosa mine lies, and we are continuing to work with the federal agency on options for funding the ultimate cleanup of the mine.

West Coast Climate Change Initiative Identifies Initial Projects

In October, I reported that the West Coast Governors and British Columbia had agreed to a West Coast Climate Change Initiative that included coordinated, regional actions, policies and measures. The goal of the initiative is to set meaningful targets for reducing carbon dioxide

(CO_2) emissions and other climate change-causing substances though a combination of short and long-term actions.

The Oregon, Washington and California Governors initially identified five areas for coordinated regional action: state fleet procurement, port emissions and emission-free truck corridors, renewable energy development, energy efficiency standards, climate change inventories, reporting protocols and scientific research (see Attachment E for more information). California recently requested that an initiative around hydrogen be added to the list. DEQ is spearheading the Oregon project related to port emissions and emission-free truck corridors through the Air Quality Program's Clean Diesel Initiave. By September 2004, the three Governors expect joint policy recommendations for activities that require regional cooperation and a status report on these five projects. On February 2, I attended an Oregon Kick-off meeting for the initiative.

DEQ's Grant Agreement with EPA

As you know, many environmental laws in Oregon are required by federal laws passed by Congress, including the Clean Air Act, Clean Water Act, and Resource Conservation and Recovery Act. DEQ implements several programs authorized under these laws through delegated authority from the federal EPA. The EPA oversees DEQ's implementation of these laws and maintains separate enforcement authority. While EPA provides some funding to help carry out these laws, federal funds do not fully pay for all of DEQ's work. Fees from permittees and state funding approved by the legislature also help pay for DEQ's delegated programs.

Every two years, DEQ and EPA enter into an agreement under which EPA provides base grant funding for specific work carried out by DEQ. In January, we began negotiations with EPA to develop the 2005-2007 Performance Partnership Grant, which will be based on DEQ's Strategic Directions as well as individual program priorities. This spring, we will brief you on the draft agreement before we move forward with finalizing it this June.

Disposal of Mad Cow Disease Creates Challenges for Solid Waste Disposal

Recent findings of Bovine Spongiform Encephalopathy (BSE), otherwise known as "mad cow disease," in Washington have raised a number of disposal issues related to BSE-infected animals and animal waste products. DEQ's Land Quality Program has been monitoring the situation with state partners in Washington and Idaho, federal agencies (the Food and Drug Administration and the US Department of Agriculture), and local governments. Oregon Departments of Agriculture and Health are also involved. Guidelines have been developed for any landfills in Oregon that want to dispose of potential BSE containing products. To our knowledge, no landfills have disposed of any BSE-infected material yet, and only the Wasco County landfill in The Dalles and the Finley Buttes landfill in Boardman have requested special waste management plans to handle this material.

As you may know, the Washington cow that had BSE was traced back to a Canadian herd of 83 animals, one of which was found at Three Mile Canyon Farms in Boardman, Oregon. This cow and nineteen others at Three Mile Canyon Farms that lacked the proper identification to show their origin tested negative for BSE. All twenty cows were killed and disposed of at Finley Buttes landfill late last month.

Attachment A

Relocation of Department of Environmental Quality (DEQ) and Department of Human Services' (DHS) Laboratories

- The 2003 Legislature approved six million dollars for property and associated acquisition costs to purchase a building that would be converted to new laboratory space to relocate the DEQ and DHS/Public Health laboratories into a single building. The two labs, employing approximately 150 people in total, are currently located in a building on the grounds of Portland State University (PSU).

- The approval was based on the following:
    - Unsuitability of current space in terms of size, condition, and needed upgrades to respond to chemical and biological terrorism standards. (The DHS Public Health Laboratory requires significant upgrades to achieve Biosafety Level 3 for handling hazardous infectious agents.)
    - Costs to maintain the existing sites will significantly increase.
    - Current sites will be unavailable in 2007, due to PSU's need for space.

- Funding:
    - The purchase and renovation will be financed through certificates of participation sold by Department of Administrative Services (DAS). DEQ and DHS will pay for the certificates of participation through their rent payments to DAS.
    - Funding for interior planning, design and construction will require additional E-Board approval in 2004.
    - Authorizing DAS purchase and the start of renovation during 2003-2005 will allow the state to take advantage of low interest rates and good deals on existing buildings.
    - Depending upon final requirements, the total cost of the project ranges from $21 million to $32 million.

- Rent:
    - Depending on the actual total cost of the project and the debt service percent, the agencies' annual rent increases would range from $1.4 million to $2.6 million for DEQ; and from $1.2 million to $2 million for DHS.
    - DHS funding to pay for this rent increase will come from its Department-wide cost allocation pool, which draws from all fund types. Federal and Other Funds will be used to the extent possible.
    - DEQ has requested EPA to increase Oregon's base grant from EPA by $1 million to help cover the increased lab expenses. Discussions with EPA regarding Oregon's base grant began in January 2004.
    - The agencies would begin paying the increased rent to DAS (paying debt service on the Certificates of Participation) upon taking occupancy of the building. In the worst case scenario, the agencies would occupy the building near the end of the 05-07 biennium (current PSU lease expires with no option to renew in June, 2007). Best case, they would occupy by mid-2006.

- Process:
  - DAS circulated a "Hot Sheet" to search for a site in the Portland Metro area in September, 2003. Eleven properties were submitted for review, four of which best met the requirements of the departments.
  - Selection of the final property was based on the following factors: cost, site and building flexibility, development constraints, compatibility with surrounding uses, proximity to key functions, functional parking and access, state siting/sustainability policies criteria, obstacles to closing, and overall property condition.

- Selected Property: SunTech Corporate Park, Building III in Hillsboro
  - The SunTech building is on 8 acres in the Tanasbourne area of Hillsboro's Sunset hi-tech corridor
  - ICIG Hillsboro Investors, II, LLC is the building owner
  - The state will purchase the property for $5.7 million ($300 thousand below the $6 million asking price)
  - Property is zoned for laboratory use
  - The building was built in 2001 and has never been occupied
  - Concrete, tilt-up, shell structure: 83,244 sq.ft. on one level
  - Landscaping, parking, and exterior façade are all finished
  - Primary modification will be to finish the interior into modern laboratories and support office.

- Preliminary Timing:
  - April, 2004: Sale is anticipated to close
  - April, 2005: Planning and design is anticipated to take approximately 12 months
  - Spring-Summer, 2005: Construction begins
  - Mid-2006: Take occupancy and rent payments begin

Attachment B

-----Original Message-----
From: OMEALY Mikell
Sent: Monday, December 29, 2003 4:59 PM
To: 'Deirdre Malarkey'; 'Lynn Hampton (LynnHampton@ctuir.com)'; 'Mark Reeve'; 'Tony Van Vliet'
Cc: HALLOCK Stephanie; GINSBURG Andy
Subject: Information on air quality concerns in Medford

Commissioners,

Over the past couple of weeks, you may have received calls, letters or emails on a proposed change to air quality standards in the Medford area. If so, below is some background on the proposal, the local response, and our timeline for next steps. If you have any questions or would like more information, please let me know. Thanks.

Summary
Air quality in Medford has improved to the point where DEQ can apply to U.S. EPA to have the area reclassified from "nonattainment" to "attainment" with federal air quality standards. To do this, we must prepare a long-term plan to ensure the area will continue to meet federal standards. We have developed that plan, and it is currently out for public comment. Any calls or emails you may have received are most likely from an organized citizen group that is opposed to the plan. Details on the issues are provided in the "Background" section below.

Overall, we believe we have developed a reasonable approach that will allow for economic development while protecting air quality. The reaction we are getting so far is that some Medford citizens do not want any relaxation of air quality requirements. Generally speaking, however, we tend to hear from supporters of our proposals in written comments near the end of the comment period. Our goal is to have as open a public process as possible.

When the public comment period closes on January 30th, we will prepare a response to all comments and make our recommendation to you for consideration at your May 20-21, 2004 meeting. If you have received copies of emails already sent to DEQ, know that they have been included in the public record and will be addressed in our response to comments. Thus, you don't need to do anything with these comments, but if you would like to respond, you can simply acknowledge receipt and send a copy to me to make sure we've received them.

Background
Over the past six years, DEQ has worked with a local advisory committee to develop an air quality plan for the Rogue Valley that looks at particulate pollution known as "PM10." PM10 is particulate matter ten microns and smaller, and when inhaled, PM10 particles can accumulate and aggravate respiratory conditions, particularly asthma. Historically, the Rogue Valley has had some of the worst air quality in Oregon. Over the past twenty years, DEQ, local citizens, and major industry have been very successful in bringing the area into compliance with air quality standards. Today, our analysis shows that the valley is and will continue to be in compliance with federal PM10 standards for at least the next ten years. DEQ must submit an air quality plan to EPA in order for EPA to repeal the federal nonattainment designation for the Rogue Valley, which would give DEQ the option to ease some restrictions on business and industry development.

DEQ's proposed PM10 plan, now out for public review and comment, proposes to continue all but one of the air quality strategies that have successfully reduced PM10 pollution in the valley. The programs to be continued include current emission limit rules for existing major industry, woodstove and open burning requirements, street sweeping programs, and the requirement that all new and expanding major industry install the most effective pollution control equipment.

We are proposing one change to air quality permitting requirements for new and expanding major industry. Currently, a new major facility wishing to locate in the valley must obtain emission reductions from another emission source in order to offset its proposed emission increase. If a proposed facility can not find these emission reductions (known as emission offset credits), DEQ cannot permit it and the facility cannot be built. At this time, no offset credits are available in the valley, which makes the current offset requirement a significant barrier to attracting certain kinds of new industry to the valley. DEQ's proposal would replace the current offset requirement with an industrial emissions growth allowance. The proposal would provide more economic flexibility in the valley while ensuring continued compliance with air quality standards.

Several local citizens are spearheading a campaign against the proposal, and public sentiment expressed so far (through several hundred letters, emails, testimony, etc.) reflects a variety of concerns about this proposal specifically, and about the future of air quality in the valley more generally. Here are three examples of the concerns that will need to be carefully considered in the our response.

- The public is concerned about the health effects of increased air pollution. Recent medical research indicates that the current federal particulate standards may not be protective enough. EPA is currently reviewing the adequacy of federal particulate standards and has not yet reached any conclusion. In light of possible future changes to federal standards and recent health research, the public comment expressed so far would like DEQ to be proactive and not relax any air quality strategies. If anything, the public sentiment expressed so far asks for additional efforts to protect and improve air quality in the valley.
- General public sentiment expressed so far contends that the valley's economy has changed drastically over the past ten years and continues to change in favor of retirement and tourism. The valley economy can prosper by recruiting non-polluting businesses. Therefore, keeping the offset requirement would not be a hardship on economic opportunity in the valley.
- The public is concerned that removing the current offset requirement will facilitate the rezoning of new industrial lands in new areas of the Rogue Valley.

<u>Next Steps</u>
DEQ held a public information workshop in Medford on December 9th (about 80 attended), and a public hearing December 16 (about 250 attended). We have extended our public comment deadline to January 30th and will hold an additional hearing on January 21st. We expect a large turn out, and substantial public comment against the proposal to eliminate the current offset requirement. DEQ will review the public comment record and evaluate options for proceeding. Currently, our final proposed plan is scheduled to come before the you at your May 20-21, 2004 meeting.

Again, if you have questions or would like more information, please let me know. Thanks.

- Mikell O'Mealy
  Assistant to the Commission

Attachment C

ENVIRONMENTAL STRESSES AND FISH DEFORMITIES IN THE WILLAMETTE RIVER

PROJECT STATUS REPORT
DECEMBER, 2003

Prepared For:
Oregon Watershed Enhancement Board

By:
Lawrence Curtis[1]
Kim Anderson[1]
Jeffrey Jenkins[1]
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Departments of Environmental and Molecular Toxicology[1]
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Oregon State University
Corvallis, Oregon

December 22, 2003

Executive Summary

X-Ray analysis of approximately 15,000 juvenile, Willamette River fish collected in 2002 confirmed previous reports of higher prevalence of skeletal deformities in Newberg Pool than at upstream sites including near Corvallis. Analyses of water from Newberg Pool and near Corvallis for 2002 detected no concentration differences in metals or persistent organic pollutants (POPs) (e.g., polychlorinated biphenyl or chlorinated pesticides) that explained these differences in skeletal deformity prevalence. Surficial sediments collected near Corvallis and in Newberg Pool during 2002 were completed in early 2003. There were no statistically significant differences in concentrations of POPs between these sites. Ovaries collected from northern pikeminnow near spawning time in 2002 were analyzed for POPs. This assessed the possibility that maternal transfer of contaminants contribute to skeletal deformities. There were no statistically significant differences in concentrations of POPs in ovaries from fish collected near Corvallis and Newberg Pool. Histopathology revealed parasites were frequently associated with skeletal deformity lesions in fish collected in from the Willamette River in 2002. Both myxozoan and digenean trematode parasites were identified in close proximity to lesions. Work in 2003 employed new methods to quantitate association of parasites with skeletal deformities. Juvenile fish from Newberg Pool and Corvallis were cleared and stained. This allowed three dimensional assessment of parasite association with skeletal deformity lesions. About 70% of skeletal deformities were directly associated with cysts of metacercarie of a digenean trematode. Aquatic snails are the intermediate host for these parasites. The stage of the digenean trematode that infects fish is the cercarie. Laboratory exposures of larval and juvenile fathead minnows to cercarie from Newberg Pool snails produced skeletal deformities. Analysis of every conceivable developmental toxicant was beyond the scope of this, or perhaps any, study. Extracts of water from the Willamette River at Newberg Pool and near Corvallis were prepared. Early life-stage fathead minnows were exposed to these extracts under laboratory conditions. Survival and skeletal deformity rates were similar in fathead minnows reared in dechlorinated tap water with or without extracts from both sites on the Willamette River. The weight of evidence indicates parasites are major

contributors to high prevalence of skeletal deformities in fish from Newberg Pool of the Willamette River.

Objective 1

Work for 2003 focused on evaluation of the association of parasites with skeletal deformities in Willamette River cyprinid fish. Histopathology completed in 2002 identified the myxozoan parasite *Myxobolus cerebralis* and cysts of a digenean trematode were associated with skeletal deformity lesions. Subsequent work revealed the worm cysts occurred more frequently and at earlier development stages of fish with lesions than the myxozoan (Fig. 1).

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Figure 1. Association of cysts of a digenean trematode with skeletal deformities in Willamette River fish.

Juvenile fish collected in July and August 2002 and 2003 were cleared and stained. Our preliminary data were for Newberg Pool, Wheatland Ferry, and Corvallis and two species (175 northern pikeminnow and 117 chiselmouth) with a size range from 12-40mm standard length. We examined the total number of parasites in the body and fins (excluding head and gill parasites in this analysis) and found 95.5% of 111 deformed chiselmouth and 67.4% of 132 deformed northern pikeminnow had parasites. For all deformities, 68.3% were directly associated with parasites. Caudal deformities were least frequently associated with parasites (47.4%) while precaudal (69.7%) and fin (94.4%) deformities were most often associated with parasites. Of the deformed fish, deformities were directly associated with parasites in 83.8% (N=106) of the chiselmouth and 53.7% (N=89) of the northern pikeminnow. We define 'directly associated' as any deformity in which a parasite was attached to or within a myotome of a deformity. The number of deformities in a fish was directly related to the number of parasites in a fish and the size of the fish (from 12-17 mm, small sample sizes precluded analysis of larger sizes). The relationship was:

$$Def= -1.87+ 0.66*Para+0.15*SL$$

where Def= number of deformities per fish, Para=number of parasites per fish; $P<0.0001$, adjusted r^2=80.6%.

Excluding fish size actually improves the model slightly increasing adjusted r^2 to 80.7% (Fig. 2). The relationship is less clear for northern pikeminnow (adjusted r^2=48.8%) than for chiselmouth (adjusted r^2=80.6%), but both are highly significant. Thus, parasites accounted for 54-84% of the deformities in these samples and the number of parasites alone explains about 49-81% of the variation in the number of deformities per fish.

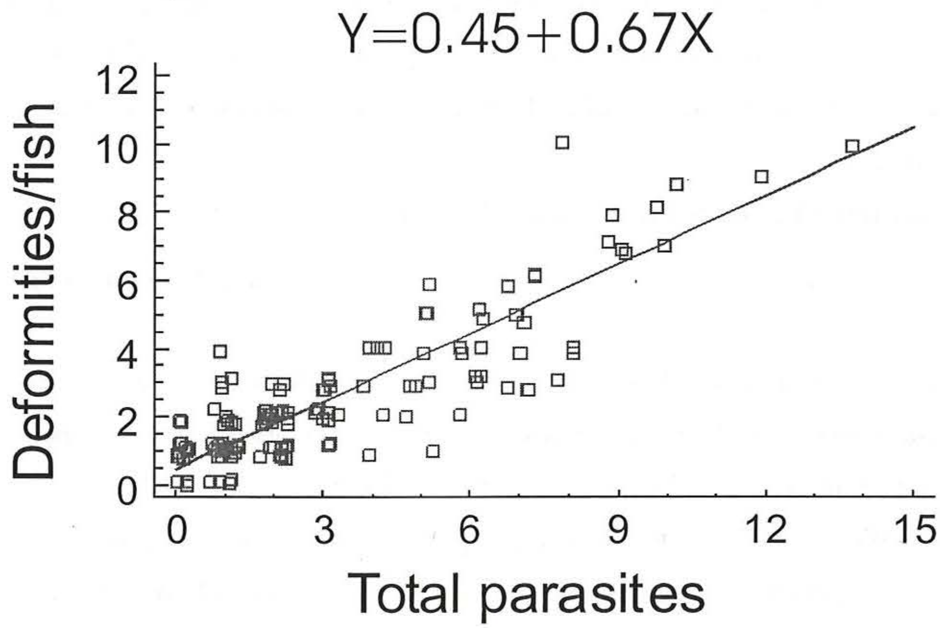


Figure 2. Linear regression of number of deformities per fish and total number of body and fin parasites per fish (12-17mm), P<0.0001, adjusted r^2=80.2%.

The parasite cysts associated with lesions visualized in cleared and stained fish were identified as *Apophallus donicus*. Cysts from deformed Willamette River fish were dissected free and opened. The morphology of metacercarie matched *Apophallus donicus*.

Aquatic snails (*Flumenicola virens*) were previously identified as an intermediate host for *Apophallus donicus*. Cercarie (the infective stage) of *Apophallus donicus* were harvested from Newberg Pool snails. Lab-reared flathead minnows ranging in age from 3-24 days after hatching were exposed to these cercarie. Greater than 50% infection occurred after all exposures. The parasite was often lethal in very young fish. Surviving infected fish exhibited skeletal deformities consistent with those observed in Willamette River fish (Fig. 3).

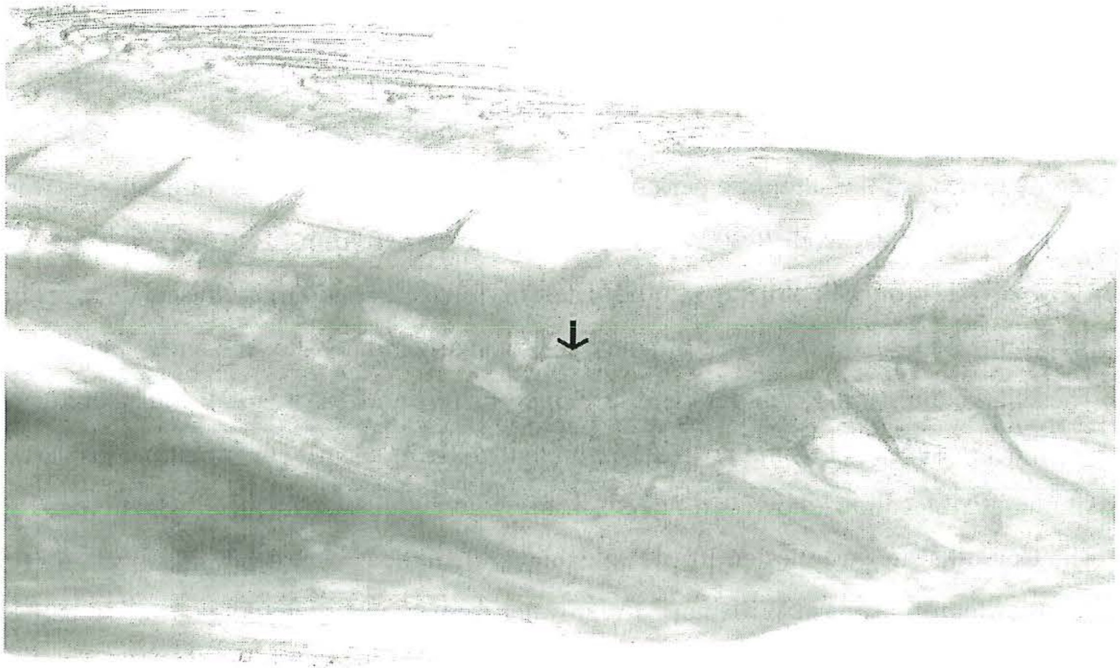


Figure 3. Fathead minnow with severely bent vertebral column one week after exposure to *Apophallus donicus* cercarae. Note that a cyst of metacercaria is directly associated with the lesion (arrow).

Objective 2

Sampling for two field seasons is complete (spring and summer of 2002 and 2003). Final results comparing concentrations of chlorinated and organophosphate pesticides, and polychlorinated biphenyls (PCBs) in water and sediments from the Willamette River at Newberg Pool and near Corvallis will be presented in our June 30, 2004 final report. Polyaromatic hydrocarbon concentrations are measured in water. Preliminary results for chlorinated pesticides and PCBs are available in the 2002 Project Status Report.

Ammonium, nitrate, pH, temperature, dissolved oxygen, oxidation reduction potential, and specific conductance data were collected during deployment for all sampling campaigns. The nutrient and chemical data were collected near the river bottom, ca. 1 foot from the bottom (same depth as the passive sampling cages). At each individual station some analytes showed strong temporal and spatial variation while others did not. The water temperature varied during a single 24 cycle as would be expected. The diurnal temperature variation was larger at the Corvallis sites (1-2 C), whereas the Newberg sites varied 1C or less over a 24 hour cycle. The temperature increased throughout a given season, generally the temperatures were 12 ± 1C in May and by the end of the sampling period were ca. 22C ± 2C. The temperature patterns were the same for both seasons (2002 and 2003). The pH varied from 7.2 to 7.8 at the Newberg sites for both 2002 and 2003. The Corvallis sites had larger diurnal changes in pH from 7.2 to 8.8 during some 24 hour cycles, usually in late May and early June. These large diurnal pH changes were seen in both 2002 and 2003. At all sites there were small decreases in pH from the 2002 season to the 2003 season. The nighttime pHs are similar at all locations; however, there is a strong geographic difference in daytime pH. The Corvallis sites were often 1+ pH units higher than the Newberg sites.

Metal analysis at Willamette River water from Newberg Pool and near Corvallis for 2003 were completed. The concentrations of metals collected with diffusion gel thin films (DGT) (Table 1) and as grab samples (Table 2) were below detection for both sites for May and June.

Table 1: Bioavailable Metals from DGT Analyzed by ASV -Sampling Year 2003

Site	Deployment Date	Zinc (ppb) MDL = 1.0	Cadmium (ppb) MDL = 0.6	Lead (ppb) MDL = 1.0	Copper (ppb) MDL = 0.6
Corvallis 1	5/6/03	BDL	BDL	BDL	BDL
Corvallis 1	5/28/03	BDL	BDL	BDL	BDL
Corvallis 1	5/28/03	BDL	BDL	BDL	BDL
Corvallis 2	5//6/03	BDL	BDL	BDL	BDL
Corvallis 2	5/28/03	BDL	BDL	BDL	BDL
Corvallis 2	6/17/03	BDL	BDL	BDL	BDL
Newberg 1	5/6/03	BDL	BDL	BDL	BDL
Newberg 1	5/28/03	BDL	BDL	BDL	BDL
Newberg 1	6/17/03	BDL	BDL	BDL	BDL
Newberg 2	5/6/03	BDL	BDL	BDL	BDL
Newberg 2	5/28/03	BDL	BDL	BDL	BDL
Newberg 2	6/17/03	BDL	BDL	BDL	BDL

Table 2: Dissolved Metals from Grab Samples Analyzed by ASV -Sampling Year 2003 Deployment dates same as for DGT samples

Site	Arsenic (III) MDL 5 μg/L	Zinc (ppb) MDL 10 μg/L	Cadmium (ppb) MDL 5 μg/L	Lead (ppb) MDL 10 μg/L	Copper (ppb) MDL 5 μg/L
Corvallis 1	BDL	BDL	BDL	BDL	BDL
Corvallis 1	BDL	BDL	BDL	BDL	BDL
Corvallis 1	BDL	BDL	BDL	BDL	BDL
Corvallis 2	BDL	BDL	BDL	BDL	BDL
Corvallis 2	BDL	BDL	BDL	BDL	BDL
Corvallis 2	BDL	BDL	BDL	BDL	BDL
Newberg 1	BDL	BDL	BDL	BDL	BDL
Newberg 1	BDL	BDL	BDL	BDL	BDL
Newberg 1	BDL	BDL	BDL	BDL	BDL
Newberg 2	BDL	BDL	BDL	BDL	BDL
Newberg 2	BDL	BDL	BDL	BDL	BDL
Newberg 2	BDL	BDL	BDL	BDL	BDL

Analyses of ovaries in sexually mature northern pike minnow collected in 2002 for chlorinated pesticides, PCBs, polychlorinated dibenzo-p-dioxins (PCCDs), and polychlorinated dibenzoforans (PCDFs) were completed in 2003. This work assessed the hypothesis that maternal transfer of these persistent organic pollutants (POPs) contributed to higher prevalence of skeletal deformities at Newberg Pool than near Corvallis.

Only four of the 21 different chlorinated pesticide residues analyzed in Willamette River northern pikeminnow ovary/oocyte tissue were detected. These included two breakdown products of DDT (4,4'-DDE and 4,4'-DDD), alpha chlordane, and endrin. Alpha chlordane (28 ng/g wet wt) was detected in the oocyte/ovary tissue from a single fish collected from Newberg Pool (Fig. 4). Alpha chlordane concentrations in all other Newberg Pool fish and Corvallis fish were less than the detection limit. With a detectable concentration in only one fish, there was no significant difference in maternally transferred alpha chlordane concentrations among sites (p=0.141). Endrin was detected in oocyte/ovary tissue from two Newberg Pool fish (Fig. 5). Endrin concentrations in the oocyte/ovary tissue of these fish were 5.7 and 9.5 ng/g wet wt. Maternally transferred endrin concentrations for all remaining Newberg Pool and Corvallis fish were less than the detection limit. There was no significant difference in mean endrin concentrations among sites (p=0.191). Similar to endrin, 4,4'-DDD was detected in samples from two Newberg Pool fish (Fig. 6). The difference in 4,4'-DDD concentrations, among sites, was not significant (p=0.171). Of all the chlorinated pesticide residues analyzed, 4,4'-DDE was detected with the greatest frequency and highest concentrations in northern pike minnow ovary/oocyte tissue (Fig. 7). 4,4'-DDE concentrations were greater than the detection limit for all samples examined. The mean 4,4'-DDE concentrations were 32.6 ± 7.3 ng/g wet wt and 34.2 ± 9.8 ng/g wet wt for the Newberg Pool and Corvallis samples, respectively. The difference was not statistically significant (p=0.903).

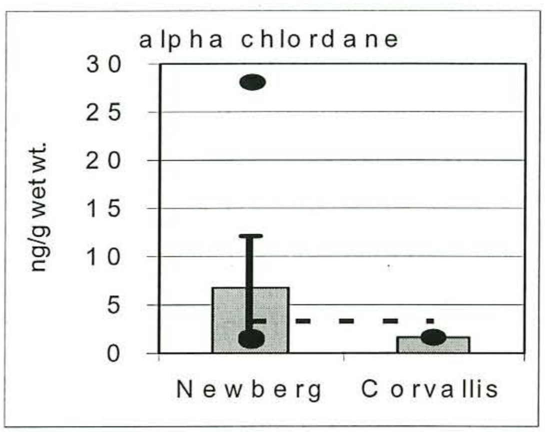


Figure 4. Concentrations of alpha chlordane detected in oocyte/ovary tissue from northern pike minnow collected from either the Newberg Pool or Corvallis region of the Willamette River. Bar = mean. ● = individual sample. Error bars show ± 1 SE. Dashed line = method reporting limit. Concentrations < MRL assumed to be ½ MRL.

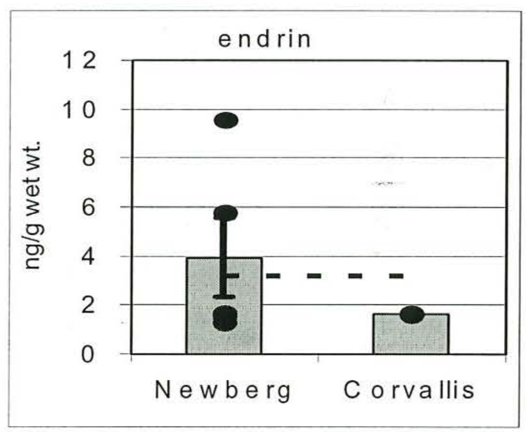


Figure 5. Concentrations of endrin detected in oocyte/ovary tissue from northern pike minnow collected from either the Newberg Pool or Corvallis region of the Willamette River. Bar = mean. ● = individual sample. Error bars show ± 1 SE. Dashed line = method reporting limit. Concentrations < MRL assumed to be ½ MRL.

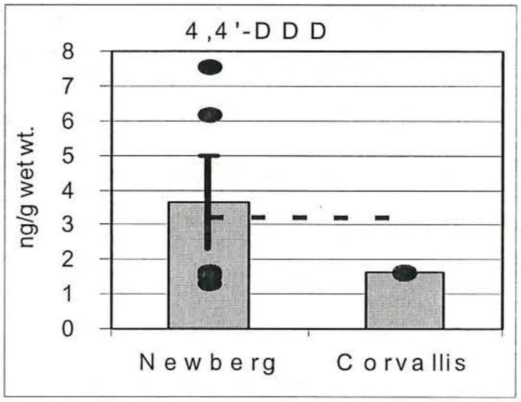


Figure 6. Concentrations of 4,4'-DDD detected in oocyte/ovary tissue from northern pike minnow collected from either the Newberg Pool or Corvallis region of the Willamette River. Bar = mean. ● = individual sample. Error bars show ± 1 SE. Dashed line = method reporting limit. Concentrations < MRL assumed to be ½ MRL.

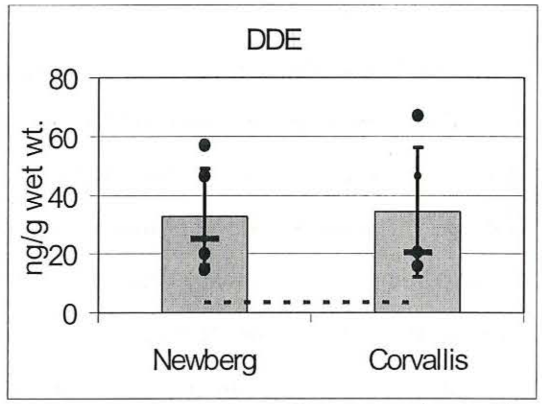


Figure 7. Concentrations of 4,4'-DDE detected in oocyte/ovary tissue from northern pike minnow collected from either the Newberg Pool or Corvallis region of the Willamette River. Bar = mean. ● = individual sample. Error bars show ± 1 SE. Dashed line = method reporting limit. Concentrations < MRL assumed to be ½ MRL. ▬ = median.

Seven different PCB congeners were detectable in ovary/oocyte tissue from Willamette River northern pike minnow. Mean concentrations for two of these, PCB 8 and PCB 18, were greater for samples from Corvallis fish than Newberg Pool fish (Table 3). Only one Newberg Pool sample had detectable concentrations of PCB 8, compared to four Corvallis samples. However, despite the nearly 3-fold difference in means, there was not a significant difference in PCB 8 concentrations among sites (p=0.144). PCB 18 was detected, at a fairly high level (76.9 ng/g wet wt), in a single fish from the Corvallis site. Overall, there was no difference in PCB 18 concentrations, among sites, for PCB 18 (p=0.999; Table 2). PCBs 110, 118, and 138 were each detected in a single ovary/oocyte sample from a Newberg Pool fish. The concentrations detected were 3.81, 6.32, and 7.89 ng/g wet wt. These same congeners were not detected in any Corvallis samples, and overall, there were no significant differences among sites for these congeners (p=0.674; Table 3). PCB 101 was detected in 3/5 Newberg Pool samples and 1/5 Corvallis samples. Detectable PCB 101 concentrations ranged from 4.16 – 6.03 ng/g wet wt and the estimated means for the two sites differed by less than 40% (Table 3). The difference was not significant (p=0.402). PCB 153 was the most frequently detected PCB congener in Willamette River northern pike minnow ovary/oocyte tissue. It was detected in 4/5 Newberg Pool samples and 2/5 Corvallis samples. However, as for other PCB congeners, there was no significant site-related difference in PCB 153 concentrations (p=0.163; Table 3).

Table 3. PCB congeners detected in ovary/oocyte tissue from Willamette River northern pike minnow collected from the Newberg Pool and Corvallis study sites.

Compound	Mean ± SE (ng/g)[a]		Median (ng/g)[a]		P[a]
	NBP	COR	NBP	COR	
PCB-8 [2,4']	3.26±1.74	10.8±4.68	*1.65*	7.70	0.144
PCB-18 [2,2',5]	*1.55±0.07*	16.7±15.1	*1.65*	*1.65*	0.999
PCB-101 [2,2',4,5,5']	3.52±0.90	*2.21±0.06*	4.16	*1.65*	0.402
PCB-110 [2,3,3',4',6]	*1.98±0.46*	*1.62±0.01*	*1.65*	*1.62*	0.674
PCB-118 [2,3',4,4',5]	*2.48±0.96*	*1.62±0.01*	*1.65*	*1.62*	0.674
PCB-138 [2,2',3,4,4',5']	*2.80±1.27*	*1.62±0.01*	*1.65*	*1.62*	0.674
PCB-153 [2,2',4,4',5,5']	4.20±0.92	*2.65±0.65*	4.20	*1.65*	0.163

Italics indicate that mean or median estimate was less than the MRL.
[a] For the purposes of calculating means, medians, and statistics, non-detects were assumed to be equal to ½ MRL.

PCDDs and PCDFs were detectable in all the ovary/oocyte samples analyzed. The specific congeners detected varied considerably among samples. Therefore a toxic equivalents approach was used to facilitate analysis of the results and comparison among sites.

The PCDDs and PCDFs analyzed in this study are thought to cause toxicity through a common mechanism of action. As a result, a toxic equivalents approach, based on an additive model, has been widely used as a means to characterize the combined potency or toxicity of complex mixtures of PCDDs and PCDFs. Toxic equivalencey factors (TEFs) are based on consensus from multiple studies on representative organisms and international standard TEF values have been established by the World Health Organization. Each TEF is expressed as a ratio, relative to the potency of 2,3,7,8-TCDD which has been shown to be the most potent of the PCDD/DFs. The total 2,3,7,8-TCDD equivalents (TEQs) present in a sample can be calculated as the sum of each individual congener concentration multiplied by its respective TEF value (Equation 1). Concentrations of TEQs can then be compared to the potency of 2,3,7,8-TCDD in order to estimate and characterize likely toxic effects.

Equation 1: $TEQ = \Sigma\,(\text{congener concentration x congener TEF})_i$,

where i =the total number of congeners detected.

Total 2,3,7,8-TCDD equivalents in the oocyte/ovary tissue of Willamette River northern pike minnow ranged from 0.18 to 2.06 pg/g wet wt (Fig. 8). The greatest TEQ concentration was detected in a Corvallis sample (Fig. 8). Overall, however, the distributions of TEQ concentrations were similar for both sites. The average (±SE) TEQ concentration in ovary/ooctye tissue from Newberg Pool fish was 0.84 ± 0.20 pg/g wet wt. The average (±SE) TEQ concentration in ovary/oocyte tissue from Corvallis fish was almost identical, 0.85 ± 0.31 pg/g wet wt. There was no significant difference in ovary/oocyte tissue TEQs among the two sites (p=0.959).

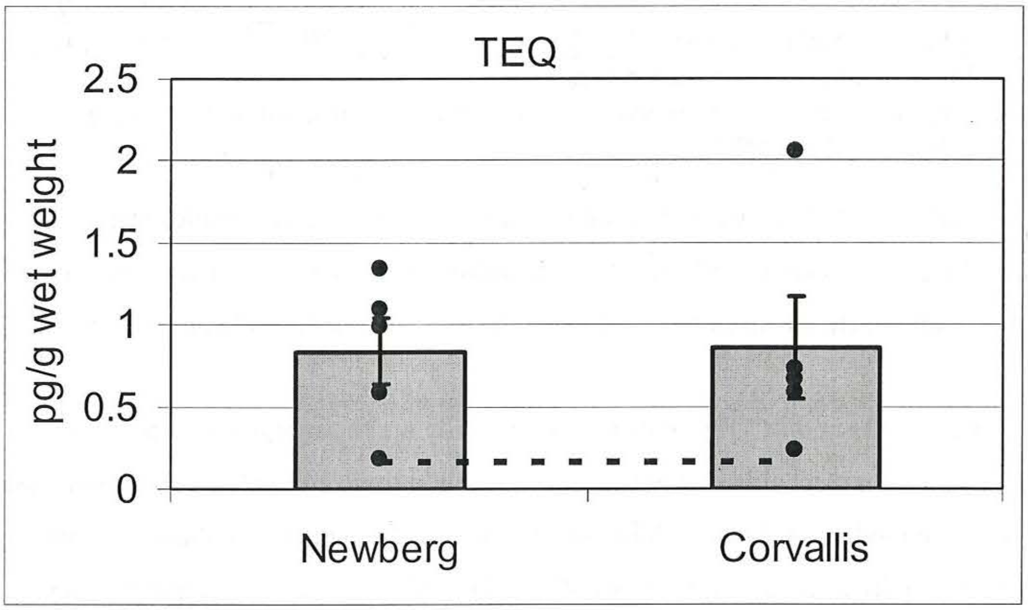


Figure 8. Concentrations of total 2,3,7,8-tetrachlorodibenzo-*p*-dioxin equivalents (TEQs) detected in ovary/ooctye tissue from Willamette River northern pike minnow collected from Newberg Pool and Corvallis study sites. Bar = mean. ● = individual sample. Error bars show ± 1 SE. Dashed line = method detection limit (TEQ value corresponding to all congeners at concentrations equal to the detection limit). Concentrations < MDL assumed to be ½ MDL for the purposed of TEQ calculation.

Objective 3

Analytical work on water, sediment, and fish tissues focuses on metals, POPs, and organophosphate insecticides likely to occur in each medium previously associated with skeletal deformities in fish. However, analysis of every conceivable developmental toxicant was beyond the scope of this, or perhaps any, study. Willamette River water collected at Newberg Pool and near Corvallis during spring 2003 was extracted with solid phase non-polar polymers ("capped" and "uncapped" divinyl benezene). These extracts permitted concentration of complex mixtures for early-life stage toxicity testing in fathead minnows under laboratory conditions. Fish were exposed to dechlorinated tap water with or without different concentrations of these extracts for 96 hours.

Newberg Pool at Champoeg State Park (NP)/Corvallis (C): Mean survival to day 6 post-hatch ranged from 25-29 fish (83-96%) across all treatment groups. There were no significant differences in survival at day 6 post-hatch (p=0.202). Some additional mortality occurred during grow out to day 28-30 post-hatch (Fig. 9). Mean survival was at least 50% in all treatments except the solvent control (SC; Fig.9). The 8XNP and 4XC treatment group had the greatest survival (64%; Fig. 9). Overall, there was no significant difference in survival among treatments (p=0.493).

On average, 12-25% of the fathead minnows examined were characterized as "deformed" (Fig. 10). The incidence of deformities was not significantly different among treatments (p=0.929; Fig. 10). The majority of the abnormalities observed were dorsal/ventral bends or curvatures. Of the 397 fish examined, only 8 (2.0%) exhibited deformities that were qualitatively similar to those commonly observed in Willamette River fish. Of these, 5 were fish exposed to Newberg Pool extract, representing 3% of the total number of NP-exposed fish examined. The remaining three were fish exposed to Corvallis extract, representing 2% of the total number of C-exposed fish examined. These low rates of deformity would generally not be regarded as elevated above background levels.

Following 96 h exposure to NP- and C-extracts and grow-out to 28-30 d. p.h., most (>75%) of the fathead minnows examined had developmental scores of 3 or greater (Fig. 11). Treatment did not significantly impact developmental score distribution (p=0.47; Fig. 11).

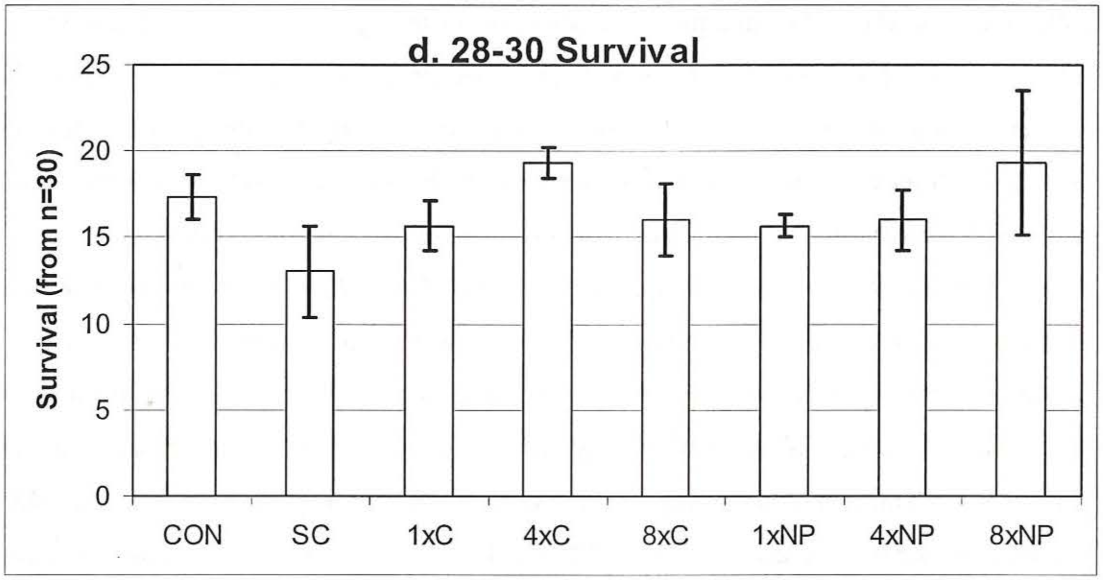


Figure 9. Fathead minnow survival to d. 28-30 p.h. after 96 h exposure to dechlorinated tap water (CON), 0.05% methanol (SC), Corvallis extract (C), or Newberg Pool at Champoeg State Park extract (NP) and grow-out to 28-30 d p.h. Bars = mean of three replicates. Error bars = ± 1 SE.

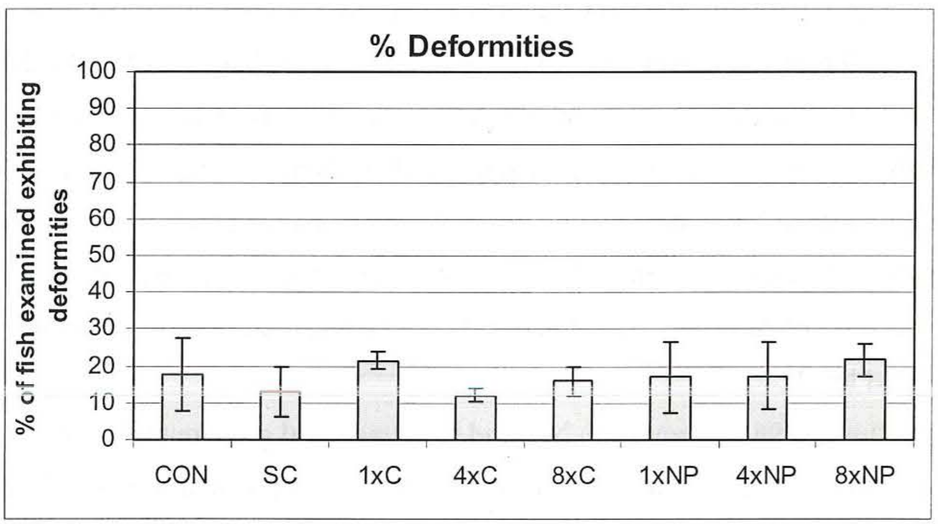


Figure 10. Percent of fathead minnows examined that exhibited deformities after 96 h. exposure to dechlorinated tap water (CON), 0.05% methanol (SC), Corvallis extract (C), or Newberg Pool at Champoeg State Park extract (NP) and grow-out to 28-30 d. p.h.. Bars = mean of three replicates. Error bars = ± 1 SE.

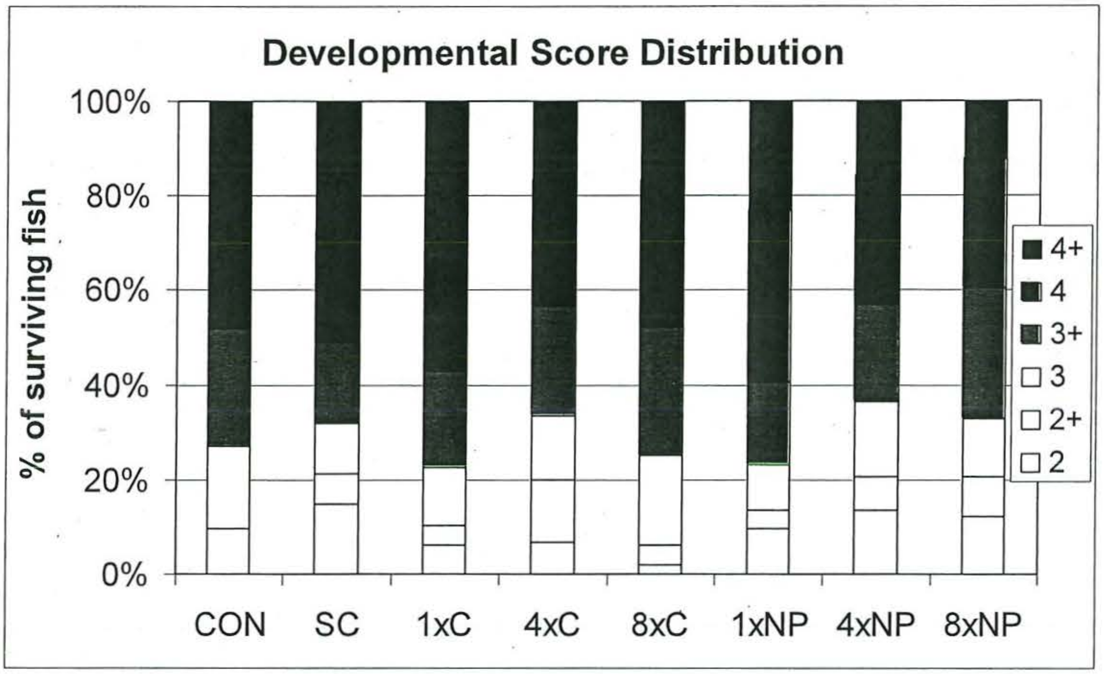


Figure 11. Developmental score distributions for fathead minnows exposed to dechlorinated tap water (CON), 0.05% methanol (SC), Corvallis extract (C), or Newberg Pool at Champoeg State Park extract (NP) for 96 h and grown-out to 28-30 d. p.h.. Bars = mean of three replicates. Error bars = ± 1 SE.

Future Directions

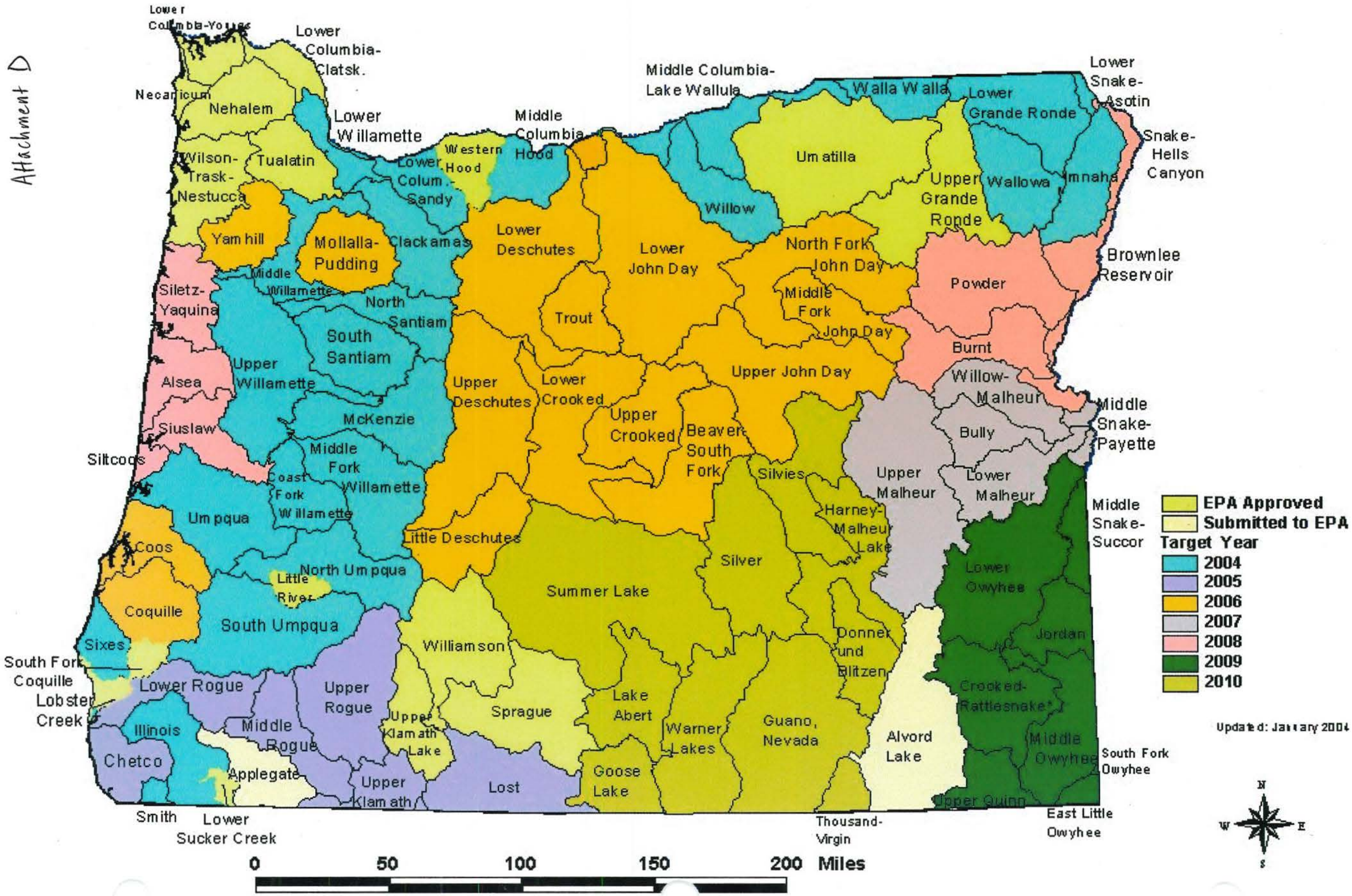
Results available as of December 12, 2003 suggested parasites, especially cysts of *Apophallus donicus,* a trematode worm, were highly associated with precaudal skeletal deformities in cyprinid fish from the Willamette River. About 70% of these lesions were directly associated with this parasite. Two questions remain: What explains the lesions not associated with a parasite? Why are lesions more prevalent in Newberg Pool than upstream sites? There are several alternative explanations for lesions without direct association with a trematode worm cyst. (1) The infective stage of the parasite damaged the tissue and then moved or died without leaving clear evidence of a cyst. (2) The parasite cyst embedded deeply enough in the bone that it was not visualized with our methods. (3) Another parasite (e.g. *Myxobolus cerebralis*) that produced no cyst caused tissue damage that lead to a lesion. (4) Something other than a parasite (e.g., a chemical or a genetic defect) caused the lesion. There were at least two potential explanations for increased prevalence of precaudal skeletal lesions in Newberg Pool compared to upstream sites: (1) A higher prevalence of the infective stage of the parasite in Newberg

Pool produced a higher infection rate and more lesions. If Newberg Pool provided better habitat for the definitive host (a bird) and/or an intermediate host (snail) of *Apophallus donicus* this was expected. (2) Fish in Newberg Pool were more susceptible to infection. Decreased immune competence due to other environmental stresses was possible. Future research should address both possibilities.

Attachment D

Oregon Department of Environmental Quality

Target Dates for Completion of TMDLs for 303(d) Listed Waters



Attachment E

West Coast Governors' Global Warming Initiative
Directions to the Five Working Groups

January 9, 2004

In September 2003, the three West Coast Governors announced a regional initiative to reduce greenhouse gas emissions through strategies that provide economic and environmental benefits. In their announcement, the Governors identified five specific action items that would be the focus of immediate attention and they committed to convening again in September 2004 to receive reports on the progress on these five tasks and the state and regional greenhouse gas reduction strategies.

Five staff working groups have established to make progress on the action items, and initial directions to the working groups follow. A sixth working group will be established to address longer-term actions.

WORKING GROUP 1 – *Use the states' combined purchasing power to obtain fuel-efficient vehicles and low-rolling resistance tires for motor pool fleets. For example, the states are already working on a uniform specification for the purchase of hybrid vehicles.*

This working group could assess such options as the establishment of a three-state Green Fleet Policy with numerical or percentage emission reduction targets, multi-year vehicle purchase contracts, the phase-out of SUV purchases except in limited circumstances, modifications in procurement specifications to give bonus points to high fuel-efficiency vehicles, and modifications of state contracts with rental car companies to ensure that hybrid vehicles are available. Another option for consideration is amendment of the federal Energy Policy Act of 1992 concerning alternative fuels, which excludes hybrid vehicles as an allowable mechanism. With respect to low-rolling resistance tires, OR and WA groups need to consider how they might take advantage of CA's new statute.

WORKING GROUP 2 – *Reduce emissions from diesel fuel in transportation through reductions in the use of diesel generators in ships at west coast ports and in the use of diesel engines in trucks by creating a system of emission-free truck stops along the I-5 corridor that stretches from Canada to Mexico.*

This working group will assess the prospects for having ships use shore-side power in place of diesel generators. With respect to truck emissions, the group will assess anti-idling policies and truck stops with the capacity for plug-ins.

WORKING GROUP 3 – *Remove barriers to and encourage the development of renewable electricity generation resources and technologies.*

This working group will address each renewable resource and focus on critical path issues for multiple renewable resources such as transmission access and interconnection. It will also consider how to provide for reporting of renewable energy production data to the states. It will address federal issues, such as Federal Energy Regulatory Commission policies and production tax credit legislation, and specific regional institutional issues, such as the Bonneville Power Administration policies, which are relevant to Oregon and Washington. It will consider the economic development benefit of renewable technologies and how to attract renewable resource companies to the west coast. In addition to power generation, it will consider bio-fuels.

WORKING GROUP 4 – *Improve efficiency standards with the potential to reduce greenhouse gas emissions. Specifically, the states could work together to upgrade appliance efficiency standards and seek waivers of federal limitations where necessary.*

This working group will look at potential new standards for appliances that are not pre-empted by federal standards, based on the groundwork that California has already laid. It will also support California efforts to achieve federal waivers for new standards where necessary and to support Oregon and Washington efforts to receive the same waivers. It will combine efforts to prevent the adoption of federal "no-standard" standards. It will identify which standards are best implemented through appliances that are sold in stores and which are best implemented through code changes. California already has an enforcement infrastructure for state standards for residential appliances that are sold through stores; Washington and Oregon will coordinate with California in developing a proposal for their states for enforcement infrastructure for any new residential appliance standards. Finally, the states will cooperate to actively defend any new standards that they propose.

WORKING GROUP 5 - *Develop consistent and coordinated greenhouse gas emission inventories, protocols for standard reporting, and accounting methods for greenhouse gas emissions; and collaborate on improved scientific tools to more precisely measure the impact of climate change.*

The working group will address specific inventory and accounting issues, such as how to characterize the carbon content of the electricity mix; how to account for materials use and recycling; how to account for transportation fuels, including alternative fuels, ethanol blends, bunker fuels, aviation fuels, and nitrous oxide emissions from vehicles; what inventory and forecasting tools the states will use; how to account for sequestration of carbon in biomass; and, special industry accounting issues, such as cement, aluminum manufacturing, and petroleum refineries. The working group will also identify scientific research needs that can help address state and regional policy development.

State of Oregon

Department of Environmental Quality — Memorandum

Date: January 15, 2004

To: Environmental Quality Commission

From: Stephanie Hallock, Director S. Hallock

Subject: Agenda Item H, Action Item: Three Basin Rule Findings for Fishermen's Bend Recreation Site Water Pollution Control Facilities Wastewater Treatment Permit. February 5 - 6, 2004 EQC meeting

Purpose of Item

The Department requests that the Environmental Quality Commission (Commission) find that the Bureau of Land Management's (BLM's) proposed wastewater treatment systems (facilities) for Fishermen's Bend recreation site in the North Santiam River subbasin satisfy the requirements of the three basin rule in OAR 340-041-0350(8)(c)(B), as described below. The three basin rule requires these findings before the Department can permit the new facilities.

Three Basin Rule Background

The Commission originally adopted of the three basin rule in 1977 (Attachment A) to protect the pristine watersheds of the North Santiam, Clackamas, and McKenzie River subbasins, which provide drinking water for over seventeen percent of Oregon's citizens. The rule as amended in 1995 prohibits new or expanded wastewater discharges to these subbasins except as specifically allowed.

In January 2003, the Department in consultation with the Department of Justice developed a three basin policy (Attachment B) to clarify application of the three basin rule to permits. Before this policy, the Department permitted new domestic sewage treatment facilities in the subbasins if they met groundwater protection requirements of the three basin rule. The new policy interprets the rule to also require for permit issuance a Commission finding that the proposed new treatment facilities will provide a preferable means of sewage collection, treatment, and disposal, as described below. The proposed Water Pollution Control Facilities (WPCF) permit for Fishermen's Bend is the first permit proposed under the new three basin policy requiring Commission action.

BLM - Fishermen's Bend Recreation Site Background

Fishermen's Bend recreation site is located on the North Santiam River 29 miles east of Salem off Highway 22. The site includes 60 individual camp sites including nine host sites, three group camp sites for up to 60 people each, three group picnic areas with camping allowed for up to 100 people each, two cabins, a boat ramp, an amphitheater, a nature center, and trails. Approximately 30,000 day use and overnight visitors use the site each year during May through October, when it is open.

The BLM is proposing to upgrade wastewater treatment facilities for the site beginning in late summer 2004 in conjunction with other site improvements. Most of these facilities were installed in 1963 when the site was constructed. Six individual septic systems will be replaced by new and larger septic systems. The new systems will collect sewage from recreation sites in large septic tanks that will flow to dosing tanks operated on timers to regularly discharge effluent to shallow pressure-distribution drainfields. BLM will also replace 60 gray water sumps at RV hookups with 60 new units that will discharge all RV wastes, both gray water and toilet, to the new septic systems and drainfields.

Connecting the RV hookups to the new septic system may slightly increase wastewater flows to the drainfields. Otherwise, site improvements will not increase flows, and the new facilities will improve wastewater treatment at Fishermen's Bend and reduce pollution to groundwater.

Public Process

Before public notice of proposed permit action, the Department submitted a draft WPCF permit and other related documents to the City of Salem, the largest drinking water provider from the North Santiam River, and the BLM. Salem Public Works supported BLM's proposed plans and permit as substantial improvements over the existing systems. The City's comments are included as Attachment C. The BLM responded with no comments.

The Department published the proposed permit for public notice from October 24, 2003 through November 24, 2003. No public comments were received. The Permit Evaluation Report and final WPCF permit are included as Attachments D and E, respectively.

Major Issues

The Department has not identified any major issues with the requested action.

Findings Requested

The Department cannot issue the proposed WPCF permit for the Fishermen's Bend new wastewater treatment facilities without a Commission finding that the proposed facilities will provide a means of sewage collection, treatment, and disposal preferable to individual onsite wastewater disposal systems in accordance with the criteria in OAR 340-071-0350(8)(c)(B). Specifically, the Department is requesting the Commission find that:

- The proposed wastewater treatment facilities will have less cumulative impact to groundwater than either the facilities they replace or individual onsite systems; and

- The social and economic benefits of the new wastewater treatment facilities will outweigh any possible negative environmental impacts.

The Department has determined that BLM's application has satisfied all other applicable requirements of the three basin rule, described in OAR 340-041-0350(8)(c)(A) and (C), which do not require Commission findings. Specifically, all groundwater quality protection requirements of OAR 340-040-0030 have been met (see the Groundwater/Surface Water Impact Study, Attachment F); the application is for an individual permit; the proposed permit allows only residential-strength discharges, which will not incapacitate the treatment systems; and the permit requires annual certification of operations and maintenance by a properly qualified person. The requirements in subparagraph (8)(c)(C)(iii) of the rule do not apply.

1. *Proposed facilities will have less cumulative impact to groundwater than either the facilities they replace or individual onsite systems.*

The proposed facilities will reduce cumulative impacts on groundwater by improving wastewater treatment. Connecting RV sewer hook ups to the new septic systems and drainfields will commingle lower strength wastewater from gray water sources (showers, sinks) with more concentrated RV toilet, or "black waste"(i.e. toilet waste) to improve treatment. Dilution helps treat black wastes, and the bacteria in black wastes helps treat detergents found in gray water. Increasing septic tank volumes will also improve treatment by increasing wastewater detention times. Finally, the shallow pressurized-distribution drainfields will evenly distribute effluent throughout the drainfields and make nutrients more available for plant uptake and less likely to flow directly to groundwater.

2. *Social and economic benefits of the new facilities outweigh any environmental impacts.*

Improving the Fishermen's Bend recreation site will help maintain the local economic and social benefits derived from the federal recreation site. Fishermen's Bend attracts 30,000 visitors per year to experience the North Santiam River area, adds tourist dollars to the local communities, and employs eight recreational staff at the BLM. The proposed improvements to the site will bring construction jobs to the area for the duration of the project.

Analysis of Requested Findings

The Department has not identified any negative environmental impacts from the proposed wastewater treatment facilities. As noted above, the proposed facilities will improve wastewater treatment and reduce potential groundwater impacts.

Department Recommend -ation	The Department has determined that BLM has satisfied applicable requirements for the proposed permit in the three basin rule at OAR 340-041-0350(8)(c). The Department recommends that the Commission make the findings requested for permit issuance.
Attachments	Attachment A: Three Basin Rule, OAR 340-041-0350 Attachment B: DEQ Policy, 3-Basin Rule Implementation Attachment C: Written response in support of draft permit from Salem Public Works Attachment D: Permit Evaluation Report Attachment E: Final WPCF Permit Attachment F: Groundwater/Surface Water Impact Study

Approved:

Section: ______________________

Division: ______________________

Report Prepared By: Randy Trox, RS
Phone: (541)686-7838 ext. 230

Attachment A
Agenda Item H, Action Item: BLM Fisherman's Bend septic system permit approval
February 6, 2004 EQC Meeting

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

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Three Basin Rule

OAR 340-041-470
1/28/03

Summary

DEQ has not always implemented the Three Basin Rule (3-B Rule) with respect to permitting of large onsite systems in the Three Basin areas. The rule, as interpreted and consistent with the plain language reading and the informal input from the Assistant Attorney General, requires EQC review of all "new" or expanded or improved WPCF-OS treatment facilities proposals. DEQ has not wanted to take all new or increased on-site systems to the Environmental Quality Commission (EQC) in cases of potential public health hazards and because of the perception that the EQC review process would be time consuming for permits that should have limited or no environmental impact.

History and Background

The 3-B Rule originally addressed only surface water discharges in the three sub-basins: Clackamas, McKenzie and North Santiam. The rule was substantially rewritten during 1994 and was adopted by the EQC on February 16, 1995. The reworked version included regulations for WPCF as well as NPDES permits.

During the same time period, Division 71 on-site rules were also being extensively rewritten, with a new provision that put large septic systems >2500 gallon per day or combination of systems on the same property with a total flow of >2500, as well as repaired or expanded large septic systems under DEQ operational WPCF permits and it moved WPCF regulations into Division 71. These reworked Division 71 rules took effect on April 1, 1995, two months after the EQC adopted the 3-B Rule. Prior to April 1, 1995, the owners of existing large facilities with multiple systems of <5000 each but with total flows > 5000 gallon per day not under WPCF permit could repair their failing septic systems through a county-issued, construction installation permit. These sewage treatment facilities would not have been subject to the 3-B Rule.

Discussion

Renewed or transferred NPDES or WPCF Permits
The 3-B Rule already allows DEQ to renew or transfer NPDES or WPCF permits without going through EQC review.

New Expanded or Improved NPDES or WPCF Permits
The 3-B Rule requires EQC review of all applications for new or expanded or improved domestic sewage treatment facilities large enough (5000 gpd) to be subject to the 3-B rule. The Assistant Attorney General's informal view was that there is a substantial risk that DEQ would lose in court if the Department were to approve a WPCF system on behalf of the Commission without the benefit of a formal

written delegation. However, there may be some latitude available in making a determination of which applicants are subject to the part of the rule requiring EQC review.

The 3-B rule requires EQC review, not necessarily for new WPCF permits, but for new sewage treatment facilities over 5000 gpd. The Assistant Attorney General suggested that existing treatment plants could be placed under WPCF permit without EQC review. He also said that repairs of system components could also be authorized without EQC review. However, a plant upgrade, expansion, or rebuild in another area would require EQC review. Since failed septic systems are normally "repaired" by building new drainfield and/or a treatment plant, most "repair" WPCF applications would in fact require EQC review. Likewise, any improvements to treatment at a WPCF-permitted existing plant would need prior EQC review.

3 BASIN RULE SUMMARY OAR 340-041-0470

Specifically prohibited permits: New NPDES permits for Industrial, CAFO or Domestic STPs (7)(a)	Exceptions: • Short-term lowering of WQ to respond to emergency situations, • Individual NPDES permits for existing log ponds and fish hatcheries at time of renewal of general permits 300 & 400 • Industrial, CAFO or domestic waste land application at agronomic rates • New General Permits 1200C, 1200CA, 1500, 100, 200, 500, 700 (outside designated scenic waterways) • CWA Section 401 Certifications • General and individual stormwater permits
Specifically prohibited permits: NPDES permits that allow increased mass load limitations for existing sources (2)(d), (7)(a)	Existing means construction was started before 1/28/1994
Specifically allowed permit actions by DEQ: Renewal or transfer of existing NPDES or WPCF permits, New WPCF permits for STPs less than 5000 gpd, Individual onsite systems (2)(a)	
Permits DEQ may issue without approval by EQC: New industrial or CAFO WPCF permits	Conditions: • No discharge to surface water and • Meet all GW requirements

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(7)(b)	
Permits DEQ may issue after approval by EQC: New domestic STP/WPCF (7)(c)	Conditions: • No discharge to surface water, • EQC finding that STP is a preferable to individual onsite systems, and • Individual permit • Certified operator • Annual reporting
Permits not specifically addressed: Repair of individual onsite system (>5000 gpd) under WPCF, Improved treatment at STP	EQC should review and approve these permits per AG

In order for DEQ to issue some permits, the EQC must make specific findings. In order to get a decision from the EQC, the draft permit and recommendations for findings should be treated within DEQ as if it were a standard agenda item for the EQC. This means that it will likely take about 6 months after the permit is finalized before it can be issued. Attached is a flow chart of the internal process.

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3 Basin Permit Approval Process

Develop Permit Proposal — **Planning Timeframes**

- Gather data and resolve issues
- Consult
- Draft permit
- Schedule public comment (hearings optional)
- Prepare Notice package

1 - 12 months

Provide Notice of Proposed Permit

- Prepare and review draft Notice pckg
- Publish notice of proposed permit
  - Mail to lists & interested parties
- Conduct comment process (hearings optional)
- Revise permit in response to comment

2 - 7 months

Approve Permit

- Prepare and review draft EQC staff report
- Director approves EQC staff report
- Submit EQC Staff Report & attachments to EQC
- EQC approves permit

2 - 6 months

Total Time — **5 - 25 months**

1/03

Attachment C

OMEALY Mikell

From: bobv on behalf of Libby Barg [Lbarg@mail.open.org]
Sent: Wednesday, October 22, 2003 7:47 AM
To: Bob Vaught
Cc: Sophia Hobet
Subject: Fishermen's Bend Recreation Site WPCF-Otak Project No. 11388A

Dear Bob:

Thank you for sharing with the City of Salem Public Works Operations information on Fishermen's Bend Recreation Site WPCF-Otak Project No. 11388A. The application for the permit and the Draft WPCF Permit from the DEQ has been reviewed by City staff and we concur with the BLM and DEQ that the replacement wastewater system will be a substantial improvement over the current systems at the site. The following technical comments are presented for your review:

1. On sheets 7 and 10, it is not clear if there are drainage ditches near the effluent disposal fields. If there are drainage ditches nearby, the design engineer should show on the drawings that the effluent disposal fields meet the minimum setback requirements from all ditches.
2. Consider using a "Vent-o-mat" type ARV to reduce possible failures.

Please let me know if you have any questions,

Libby Barg
Water Quality and Treatment Supervisor
City of Salem Public Works
phone: 503-361-2224
fax: 503-588-6480
lbarg@open.org

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DEQ
State of Oregon
Department of Environmental Quality

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER POLLUTION CONTROL FACILITIES (WPCF) PERMIT EVALUATION
January 13, 2004January 13, 2004

Permittee:	USDOI - Bureau of Land Management 1717 Fabry Road, SE Salem, OR 97306 File Number: 112546		
Source Contact:	Jay Grant	Telephone Number: (503) 897-2406	
Source Location:	27300 North Santiam Highway, Mill City		
County:	**Marion**		
Permit Writer:	Randy Trox, RS	Eugene Office	
Proposed Action:	New	Application No.: 984205	Date Received: 8/05/03

Introduction

Under Oregon Administrative Rule Chapter 340 Division 71 Section 130 (15) [OAR 340-71-130(15)], any system or combination or systems located on the same property or serving the same facility with a total sewage flow design capacity greater than 2,500 gallons a day shall be constructed and operated under a renewable WPCF permit issued pursuant to OAR 340-71-162 from the Department of Environmental Quality (DEQ). It further states that WPCF permits are required for sandfilter and aerobic systems that serve a commercial facility, all Holding Tanks, Recirculating Gravel Filter (RGF) systems, and aerobic systems that do not meet the requirements of OAR 340-71-220 and 340-71-345. Other systems that are not described in OAR 340-71 and 73 may also be considered.

OAR 340-71-130(16) states that owners of existing systems, except holding tanks, are not required to apply for a WPCF permit until such time as a system repair, correction, alteration, or expansion is necessary.

Fishermen's Bend Recreation Site is a day use park and campground that opened in 1963. The BLM has received funding to improve the wastewater systems, much of it original to the facility. The proposed replacement wastewater systems will meet current Oregon standards and be a substantial improvement to what is currently in use. Improvements to the recreation site include replacing some of the gray water sumps with new units that are connected to the new septic system, and adding RV dump stations to each camp site.

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Facility Description

Total Peak Design Flow of Facility	18,730 Gallons per day
Number of Systems	5
Water Supply	PWS # 90633

System #001

Date Constructed	Proposed spring 2004
System Type	Pressurized Distribution
Peak Design Flow	10,520 GPD
Septic Tank Size	2 X 1,000 gallon septic tanks, 1 X 1,500 gallon septic tank, 1 X 4,000 gallon septic tank, 2 X 5,000 gallon septic tank, 1 X 15,000 gallon drainfield dosing tank
Type of DF	Pressurized Distribution
Drainfield (DF) sizing criteria	50'/150 GPD. Refer to the site suitability report conducted on June 19, 2003 by Zan Ewing of Marion County.
Lineal Feet of DF	3,507
Facilities Served	Overnight camping area, River Loop Area

System #002

Date Constructed	Proposed spring 2004
System Type	Pressurized Distribution
Peak Design Flow	6,750 GPD
Septic Tank Size	1 X 5,000 gallon septic tank, 1 X 5,000 gallon septic dosing tank, 1 X 10,000 gallon drainfield dosing tank
Type of DF	Pressurized Distribution
Drainfield (DF) sizing criteria	50'/150 GPD. Refer to the site suitability report conducted on June 19, 2003 by Zan Ewing of Marion County.
Lineal Feet of DF	2,250
Facilities Served	Steelhead Group Camp, Trout Group Camp, Firs Picnic Area, Cedars Picnic Area

System #003

Date Constructed	Proposed spring 2004
System Type	Pressurized Distribution
Peak Design Flow	1,000 GPD
Septic Tank Size	2,000 GPD minimum (unknown at this time)
Type of DF	Pressurized Distribution
Drainfield (DF) sizing criteria	50'/150 GPD. Refer to the site suitability report conducted on June 19, 2003 by Zan Ewing of Marion County.
Lineal Feet of DF	333
Facilities Served	Laundry facility with 2 washing machines (not for public use)

System #004

Date Constructed	Proposed spring 2004
System Type	Pressurized Distribution
Peak Design Flow	260 GPD

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Septic Tank Size	1,000 gallons minimum (unknown at this time)
Type of DF	Pressurized Distribution
Drainfield (DF) sizing criteria	50'/150 GPD. Refer to the site suitability report conducted on June 19, 2003 by Zan Ewing of Marion County.
Lineal Feet of DF	87
Facilities Served	Shop building with 8 employees and 1 RV host site with full hook ups

System #005

Date Constructed	Proposed spring 2004
System Type	Pressurized Distribution
Peak Design Flow	200 GPD
Septic Tank Size	1,000 gallons minimum (unknown at this time)
Type of DF	Pressurized Distribution
Drainfield (DF) sizing criteria	50'/150 GPD. Refer to the site suitability report conducted on June 19, 2003 by Zan Ewing of Marion County.
Lineal Feet of DF	67
Facilities Served	2 RV host sites with full hook ups

Unique Operating Conditions

- None

Groundwater

- A Groundwater / Surface Water review was completed by a Department hydrogeologist and it was concluded that there is a low potential to adversely impact groundwater and surface water. The permittee is not required to sample and monitor the groundwater for potential impacts.

Compliance History

- This is an existing source that requires a WPCF permit in order to upgrade and expand. There are no documented compliance issues.

PERMIT DISCUSSION

Schedule A – Waste Disposal Limitations For Each System
- The Maximum Daily Peak flow and Influent and Effluent maximum concentration limits are listed for each system.
- All wastewater shall be distributed into a soil absorption facility.
- No substances that would be detrimental to the system or groundwater are to enter the system.
- No activities shall be conducted that could cause an adverse impact to potential beneficial uses of groundwater.

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Schedule B – Minimum Monitoring and Reporting Requirements for each System

- Monitoring parameters and frequencies are based on the Department monitoring matrix for Systems # 001 & 002. Systems 003 - 005 are below the minimum size threshold for monitoring standard systems.
- An annual monitoring and maintenance report is required to be submitted January 15, of each year.

Schedule C – Compliance Conditions and Schedules

- None

Schedule D – Special Conditions

- An approved Operation and Maintenance (O&M) Plan is required to be followed.
- Reporting and resampling requirements within 14 days when there is a concentration limit violation.
- The system must not cause any adverse impact to groundwater.
- All septage/sludge must be managed by a licensed pumper.
- The drainfield and replacement areas must be planted with grass, maintained and protected.
- Annual written certification of proper treatment and disposal system operation shall be obtained from a qualified Registered Sanitarian, Professional Engineer, or certified wastewater treatment system operator.

Schedule F – General Conditions
This Schedule contains General Conditions and Definitions that are applicable to all WPCF permits in Oregon.

Public Participation

- A 30 day public notice **is not** required for systems with a design flow of greater than 20,000 gallons per day pursuant to Oregon Administrative Rule 340-045-0027 (2)(C). However, the facility is located in the North Santiam sub basin which has an additional requirement prescribed by OAR 340-041-0470 (3 Basin Rule) for final approval by the Environmental Quality Commission (EQC). DEQ policy for WPCF applications in the 3 Basin Rule area requires a public comment period.

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Expiration Date:
Permit Number:
File Number: 112546

WATER POLLUTION CONTROL FACILITIES PERMIT

Department of Environmental Quality
Western Region - Eugene Office
1102 Lincoln Street, Suite 210, Eugene, OR 97401
Telephone: (541) 686-7838

Issued pursuant to ORS 468B.050

ISSUED TO:

USDOI - Bureau of Land Management
1717 Fabry Road, SE
Salem, OR 97306

SOURCES COVERED BY THIS PERMIT:

Type of Waste	System	Method of Treatment/Disposal
Domestic Sewage	001-005	Pressurized Distribution Drainfield(s)

SYSTEM TYPE AND LOCATION:
On-Site Sewage Treatment and Disposal

Fishermen's Bend Recreation Site
27300 North Santiam Highway
Mill City

Located on: Twp.09S, R.02E, Sect.25,Tax Lot # 400 @ Lat: 44^0 45' 27"N, Long: 122^0 30' 33"W

RIVER BASIN INFORMATION:
Basin: Willamette
Sub-Basin: North Santiam
LLID:
River Mile:
County: Marion

Nearest surface stream which would receive waste if it were to discharge: North Santiam River

Issued in response to Application No. 984205 received August 5, 2003. This permit is issued based on the Land Use Compatibility Statement issued by Marion County dated July 15, 2003.

Greg Farrell, On-site Manager
Western Region

Date

PERMITTED ACTIVITIES

Until this permit expires or is modified or revoked, the permittee is authorized to construct, install, modify, or operate a wastewater collection, treatment, control and disposal system in conformance with all the requirements, limitations, and conditions set forth in the attached schedules as follows:

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Discharge of untreated or partially treated sewage or septic tank effluent directly or indirectly onto the ground surface or into surface waters constitutes a public health hazard and is prohibited. This permit does not relieve the permittee from responsibility for compliance with any other applicable federal, state, or local law, rule or standard.

SCHEDULE A

Waste Disposal Limitations

1. The permittee is authorized to operate and maintain a domestic sewage treatment and disposal facility consisting Standard soil absorption drainfield(s) which has(have) been constructed **in accordance with plans and specifications approved by the Department and** the following conditions:

   a) The average daily sewage flow to the drainfield(s) should be approximately fifty percent (50%) of the maximum daily or peak flow to the treatment system. The maximum daily flow shall not exceed the following unless otherwise approved by the Department:

System	Maximum Daily Flow
001	10,520 GPD
002	6,750 GPD
003	1,000 GPD
004	260 GPD
005	200 GPD

   b) The **effluent** from the septic tank(s) to the drainfield(s) shall not exceed the following maximum concentrations:

Parameter	Limitation
BOD5	300 mg/l
Greases and Oil	25 mg/l
TSS	150 mg/l
TKN	150 mg/l

c) No discharge to surface waters is permitted. All wastewater shall be distributed into a soil absorption facility so as to prevent:

1) Surfacing of wastewater on the ground surface, surface runoff or subsurface drainage through drainage tile.

2) The creation of odors, fly and mosquito breeding and other nuisance conditions.

3) The overloading of land with nutrients or organics.

2. No cooling water, air conditioner water, water softener brine, groundwater, oil, hazardous materials, roof drainage, storm water runoff, or other aqueous or non-aqueous substances which are, in the judgment of the Department, detrimental to the performance of the system or to groundwater, shall be discharged into the sewage treatment system, unless specifically approved in writing by the Department.

3. No activities shall be conducted that could cause an adverse impact on existing or potential beneficial uses of groundwater.

SCHEDULE B

Minimum Monitoring and Reporting Requirements

1. System Monitoring Requirements

The permittee shall monitor the operation and efficiency of all treatment and disposal facilities. Sampling and measurements taken as required herein shall be representative of the nature of the wastewater, and shall be taken at peak usage during operation of the system. Unless otherwise agreed to in writing by the Department of Environmental Quality, data collected, and submitted shall include but not necessarily be limited to the following parameters and minimum frequencies:

a.

Systems 001& 002: Effluent from the septic tank(s) to the drainfield(s)

Item or Parameter	Minimum Frequency	Type of Sample
Flow, GPD	Monthly Average	Measurement or calculation based on meter readings
Flow Meter Calibration	Annually	Verification
BOD_5	Semi-annually	Grab
TSS	Semi-annually	Grab
Grease and oils	Semi-annually	Grab
TKN	Semi-annually	Grab

b. Operations and Maintenance Activities

The permittee shall record in writing all observations of operation and maintenance activities, as required by the Department approved Operation and Maintenance manual, on a monthly basis.

c. Solids Management

The permittee shall maintain a record of the pumping dates and quantity (in gallons), of solids/wastewater pumped, and what licensed sewage disposal service company pumped the solids/wastewater, as well as the final disposal location and transfer locale (if applicable).

2. Reporting Procedures

Monitoring, maintenance practices, solids handling, and results shall be reported on Department approved forms. The reporting period is the calendar year. Reports must be submitted to the DEQ office listed on the face page of this permit by **January 15 following the reporting period.**

SCHEDULE D

Special Conditions

1. The permittee shall maintain on file a complete Operation and Maintenance (O&M) Plan approved by the Department. The permittee shall operate, manage and implement preventative maintenance practices or corrections at the frequencies required in the Department approved O&M Plan. Any changes to the plan must be approved by the Department.

2. In the event that the a concentration limit, as specified in Schedule A, to the drainfield is exceeded, the permittee shall within fourteen (14) working days of receipt of the analytical results:

   a) Report the results to the Department;

   b) Resample to verify the results; and

   c) In the event that the resampling confirms a concentration limit violation, within thirty (30) days of confirmation, the permittee shall submit to the Department a corrective action plan to reduce the waste strength so that the concentration limits are not violated. Upon Department approval, the plan shall be implemented by the permittee.

3. All septage/sludge shall be managed by a licensed sewage disposal service as defined in Oregon Administrative Rule 340-71-100.

4. A deep-rooted, permanent grass cover shall be maintained on the drainfield area(s) at all times and periodically cut to ensure maximum infiltration and evapotranspiration rate.

5. The drainfield area(s) including replacement area(s) shall not be subject to activities that would, in the opinion of the Department, adversely affect the soil or the functioning of the system. This includes, but is not limited to, vehicular or animal traffic, filling or cutting, covering the area with asphalt or concrete, or subjecting the area to excessive saturation.

6. Annual written certification of proper treatment and disposal system operation shall be obtained from a qualified Registered Sanitarian, Professional Engineer, or certified wastewater treatment system operator.

7. The permittee shall not be required to perform a formal hydrogeologic characterization or preliminary groundwater monitoring during the term of this permit provided that the facilities are operated in accordance with the permit conditions, and there are no apparent adverse groundwater quality impacts (complaints or other indirect evidence) resulting from the facility's operation. If warranted, the Department may evaluate the need for or require a full assessment of the facility's impact on groundwater quality and if necessary may reopen this permit to include groundwater monitoring parameters.

8. An adequate contingency plan for prevention and handling of spills and unplanned discharges shall be in force at all times. The permittee shall immediately notify the DEQ office listed on the face page of this permit and the local County Health Department of any occurrence of surfacing sewage. If a spill does occur that reaches or threatens to reach public waters, the permittee shall immediately notify Oregon Emergency Response (OERS) at 1-800-452-0311.

SCHEDULE F

General Conditions

<u>SECTION A. - STANDARD CONDITIONS</u>

1. <u>Property Rights</u>

   The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State, or local laws, or regulations.

2. <u>Liability</u>

The Department of Environmental Quality, its officers, agents, or employees shall not sustain any liability on account of the issuance of this permit or on account of the construction or maintenance of facilities because of this permit.

3. Permit Actions

After notice by the Department, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including but not limited to the following:

a. Violation of any term or condition of this permit, any applicable rule or statute, or any order of the Commission;

b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts.

4. Transfer of Permit

This permit shall not be transferred to a third party without prior written approval from the Department. Such approval may be granted by the Department where the transferee acquires a property interest in the permitted activity and agrees in writing to fully comply with all the terms and conditions of this permit and the rules of the Commission. A transfer application and filing fee must be submitted to the Department.

5. Permit Fees

The permittee shall pay the fees required to be filed with this permit application and to be paid annually for permit compliance determination as outlined in the Oregon Administrative Rules.

SECTION B. - OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. Proper Operation and Maintenance

The permittee shall at all times maintain in good working order and properly operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit.

2. Standard Operation and Maintenance

All waste collection, control, treatment, and disposal facilities shall be operated in a manner consistent with the following:

a. At all times, all facilities shall be operated as efficiently as possible and in a manner which will prevent discharges, health hazards, and nuisance conditions.

b. All screenings, grit, and sludge shall be disposed of in a manner approved by the Department such as to prevent any pollutant from such materials from reaching any waters of the state, creating a public health hazard, or causing a nuisance condition.

c. Bypassing of untreated waste is generally prohibited. No bypassing shall occur without prior written permission from the Department except where unavoidable to prevent loss of life, personal injury, or severe property damage.

3. Noncompliance and Notification Procedures

In the event the permittee is unable to comply with all the conditions of this permit because of surfacing sewage, a breakdown of equipment or facilities, an accident caused by human error or negligence, or any other cause such as an act of nature, the permittee shall:

a. Immediately take action to stop, contain, and clean up the unauthorized discharges and correct the problem.

b. Immediately notify the Department's Regional office, so that an investigation can be made to evaluate the impact and the corrective actions taken and determine additional action that must be taken.

c. Within 5 days of the time the permittee becomes aware of the circumstances, the permittee shall submit to the Department a detailed written report describing the breakdown, the actual quantity and quality of resulting waste discharges, corrective action taken, steps taken to prevent a recurrence, and any other pertinent information.

Compliance with these requirements does not relieve the permittee from responsibility to maintain continuous compliance with the conditions of this permit or the resulting liability for failure to comply.

4. Wastewater System Personnel

The permittee shall provide an adequate operating staff which is duly qualified to carry out the operation, maintenance, and monitoring requirements to assure continuous compliance with the conditions of this permit.

SECTION C. - MONITORING AND RECORDS

1. Inspection and Entry

The permittee shall, at all reasonable times, allow authorized representatives of the Department of Environmental Quality to:

a. Enter upon the permittee's premises where a waste source or disposal system is located or where any records are required to be kept under the terms and conditions of this permit;

b. Have access to and copy any records required to be kept under the terms and conditions of this permit;

c. Inspect any treatment or disposal system, practices, operations, monitoring equipment, or monitoring method regulated or required by this permit; or

d. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by state law, any substances or parameters at any location.

2. Averaging of Measurements

Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean, except for bacteria which shall be averaged as specified in the permit.

3. Monitoring Procedures

Monitoring must be conducted according to test procedures specified in the most recent edition of **Standard Methods for the Examination of Water and Wastewater**, unless other test procedures have been approved in writing by the Department and specified in this permit.

4. Retention of Records

The permittee shall retain records of all monitoring and maintenance information, including all calibrations, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. The Director may extend this period at any time.

SECTION D. - REPORTING REQUIREMENTS

1. Plan Submittal

Pursuant to Oregon Revised Statute 468B.055, unless specifically exempted by rule, no construction, installation or modification of disposal systems, treatment works, or sewerage systems shall be commenced until plans and specifications are submitted to and approved in writing by the Department. All construction, installation or modification shall be in strict conformance with the Department's written approval of the plans.

2. Change in Discharge

Whenever a facility expansion, production increase, or process modification is anticipated which will result in a change in the character of pollutants to be discharged or which will result in a new or increased discharge that will exceed the conditions of this permit, a new application must be submitted together with the necessary reports, plans, and specifications for the proposed changes. No change shall be made until plans have been approved and a new permit or permit modification has been issued.

3. Signatory Requirements

All applications, reports or information submitted to the Department shall be signed and certified by the official applicant of record (owner) or authorized designee.

SECTION E. - DEFINITIONS

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1. BOD_5 means five-day biochemical oxygen demand.
2. TSS means total suspended solids.
3. FC means fecal coliform bacteria.
4. NH_3-N means Ammonia Nitrogen.
5. NO_3-N means Nitrate Nitrogen.
6. NO_2-N means Nitrite Nitrogen.
7. TKN means Total Kjeldahl Nitrogen.
8. Cl means Chloride.
9. TN means Total Nitrogen.
10. mg/L means milligrams per liter.
11. ug/L means micrograms per liter.
12. kg means kilograms.
13. GPD means gallons per day.
14. MGD means million gallons per day.
15. The term "bacteria" includes but is not limited to fecal coliform bacteria, total coliform bacteria, and E. coli bacteria.
16. Total residual chlorine means combined chlorine forms plus free residual chlorine.
17. Grab sample means an individual discrete sample collected over a period of time not to exceed 15 minutes.
18. Composite sample means a combination of samples collected, generally at equal intervals over a 24-hour period, and apportioned according to the volume of flow at the time of sampling.
19. Week means a calendar week of Sunday through Saturday.
20. Month means a calendar month.
21. Quarter means January through March, April through June, July through September, or October through December.

State of Oregon

Department of Environmental Quality — Memorandum

Date: December 24, 2003

To: Randy Trox, R.S.

From: Bill Mason, R.G., Senior Hydrogeologist

Subject: **Attachment F**: Agenda Item H Groundwater/Surface Water Impact Evaluation, Bureau of Land Management (BLM) - Fishermen's Bend Recreation Site Water Pollution Control Facilities (WPCF) Permit

For the Department to proceed with the proposed Fishermen's Bend WPCF permit, the Commission must find that the new facilities: 1) meet all groundwater quality protection requirements outlined in OAR 340-040-0030, 2) the new facilities provide a preferable means of sewage collection, treatment and disposal, and 3) that the applicant meets specific WPCF permit requirements.

The purpose of this memorandum is to evaluate the potential effect of the proposed wastewater treatment system improvements at the BLM Fishermen's Bend Recreation site on groundwater and on surface water. The evaluation includes: 1) how treatment system improvements will reduce the volume of contaminants migrating to groundwater, 2) a review of existing groundwater and surface water analytical data under the current system configuration, 3) a comparison of the system flows to estimated groundwater underflow volumes, and 4) a comparison of the relative volume of groundwater discharging to surface water.

Proposed Treatment System Improvements: The BLM is proposing improvements to their facilities in late summer 2004, but is not proposing to add any spaces or further develop the site. The recreation site was originally established in 1963 and most of the existing facilities were established then.

The biggest improvements that will serve to further enhance the protection of groundwater and surface water will be:

1) Combining sewage effluent from different uses (gray waste and black waste, e.g.) for better treatment efficacy;
2) Increasing septic tank sizes which will also improve treatment by increased septic-tank detention time; and
3) Using shallow (~12 inches cover) pressurized distribution drainfields which by evenly distributing throughout the drainfields will make nutrients more easily available for plant uptake.

The net effects of these improvements will be to reduce the amount of contaminants such as nitrate reaching groundwater.

Existing Data: The well log for the BLM water supply well indicates that the subsurface soils consist primarily of silty sand and gravel, and that the well yield was 325 gallons per minute with a drawdown of 43 over 5 hours. The well is located near at least three existing drainfields. Data collected over the past 6 years for the Oregon Health Division has indicated that nitrate concentrations have not exceeded 1 mg/l. Based on the area topography, groundwater flow is expected to be toward the North Santiam River.

Surface water data assembled by the City of Salem for the years 2000 through fall 2003 indicate that average nitrate concentrations in the North Santiam decreased from 0.12 mg/l to 0.08 mg/l in the stream reach from Mill City to Mehama (i.e., past the Fishermen's Bend site). This demonstrates that even with an existing system that was not designed to minimize discharge to groundwater (and then to surface water via groundwater flow to the river), there has not been an impact to the river.

Nitrate is what groundwater hydrologists term a "conservative tracer", meaning that it tends to move through the subsurface at the same rate as groundwater. Because coliform bacteria are not expected to move as far or as fast in groundwater as nitrate, the surface water nitrate data indicate that it is unlikely that there would be bacterial contamination from this site reaching the river in measurable concentrations.

Groundwater discharge to surface water: Based on an overly conservative comparison of the relative volumes of treatment system discharge to the lowest North Santiam River flow (i.e., if the peak effluent discharge were to enter the river directly at the lowest river stage), there is no impact expected on the river based on groundwater discharge to surface water (see attached spreadsheet).

Likelihood of groundwater impacts above protective levels: Using a conservative mass balance approach to estimating nitrate concentrations in groundwater (see attached spreadsheet), the new system will be unlikely to pose an impact to groundwater above the levels established in 340-040-0030. However, because there is a great deal of uncertainty in the estimated effluent volumes, we recommend that we periodically review the effluent volume data that will be collected as a part of the new permit. If the data indicate that the flow are considerably higher than predicted, we should assess the need for groundwater monitoring to confirm that the system is not posing a threat to groundwater.

Conclusion: DEQ staff conclude that the treatment system improvements will reduce the volume of contaminants migrating to groundwater; existing data demonstrate that the existing system is not posing a threat to the North Santiam River; and that the new system will be unlikely to pose a an impact to groundwater above the levels established in 340-040-0030.

Fishermen's Bend Screening Evaluation for WPCF Permit
Attachment F

Maximum Potential Nitrate Concentrations in Groundwater (annual basis)					Data Source
I = Average volume of effluent =	9100	gpd	=	1217 ft^3/d	Permit application
I for 5 month season =	182487	ft^3			
n_w = nitrogen concentration in effluent =	40	mg/l			Typical "residential" strength value
d = denitrification fraction in soil =	0.25	unitless			Hantzsche and Finnemore, 1992
A = drainfield area =	28200	ft^2			Estimated from plans; 540 ft X 52 ft, approx.
Ravg = Average rainfall over drainfield =	66	in/yr		155100 ft^3	Mehama station, 1948 - 1966; Oregon Climate Service data.
R = Average rainfall recharge in area over drainfield =	30	in/yr	=	70500 ft^3	USGS, 2002
n_b = background nitrate data value in rainfall or groundwater =	1	mg/l			Hantzsche and Finnemore, 1992
E_T = average evapotranspiration over drainfield =	99538	ft^3			Rainfall minus average recharge, based on USGS, 2002 data
Ve = Volume of effluent migrating to groundwater =	I minus E_T		=	82948 ft^3	
K = hydraulic conductivity (calc below) =	418.5	gpd/ft^2	=	56 ft/d	Calculated from water well report pump test

Hydraulic Conductivity Calculation (Jacob method)

Q_p = Pump discharge =	325	gpm			From water well report
dd = water level drawdown =	43	ft			From water well report
b = mixing thickness of aquifer =	20	ft			Conservative value chosen as approx. 20% of aquifer thickness
t = time pumped =	5	hr	=	0.21 d	From water well report
r = well radius =	8	in	=	0.7 ft	From water well report
S = storativity =	7.50E-02	unitless			Typical unconfined value

Given that T = transmissivity = Kb

$$dd=(264Q/(Kb))\log((0.3Ks_it)/(r^2S))$$

Solving for dd iteratively using above equation, dd = 43 ft

ne = effective porosity =	0.2	unitless	Typical value
i = gradient =	0.001	unitless	Typical value
A_a = cross-sectional area in aquifer =	10800	ft^2	Width of drainfield times aquifer mixing thickness (540 ft X 20 ft)
Distance nitrate travels per year = Ki/n_e =	102.2	ft	
Vg = Volume of groundwater downgradient of drainfield =	220703	ft^3	540 ft X 102.2 ft X 20 ft X 0.2
Rd = downgradient recharge from rainfall =	137939	ft^3	
n_v = Transport & mixing in vadose zone = $(V_e n_w(1\text{-}d)+R_{avg}n_b)/(V_e+R_{avg})$ =	11.1	mg/l	Volumetric basis using Hantzsche and Finnemore, 1992
n_a = Transport and mixing in aquifer = $((V_e+R_{avg})n_v+V_g n_b)/(V_e+R_{avg}+V_g)$ =	6.2	mg/l	
n_f = add downgradient rainfall recharge = $((V_e+R+V_g)n_a+R_d n_b)/(V_e+R+Ve+R_{avg}+R_d)$ =	**5.0**	**mg/l**	Final groundwater concentration

The final number represents a conservative value for a groundwater concentration at a compliance point located 100 ft downgradient of the drainfield. It is conservative because it does not include horizontal dispersion, mixing in the area below the drainfield, and nitrogen uptake by plants over the drainfield. These would all act to additionally decrease the groundwater concentration.

Maximum Potential Concentration in Surface Water

Lowest flow in the North Santiam during the period 9/90 to 9/01	682 cfs			Oregon Water Resources Dept.
Maximum effluent volume	18730 gpd	=	0.02898 cfs	Permit Value
Maximum background nitrate concentration in surface water	0.12 mg/l			City of Salem data
Downstream concentration after groundwater mixes with surface water	0.1217 mg/l			

References

Hantzsche, N.N. and Finnemore, J.E., 1992. "Predicting Ground-Water Nitrate-Nitrogen Impacts", Ground Water Vol. 30, No. 4, pp. 490-499.

Lee, K.K., and Risley, J.C., 2002. "Estimates of Ground-Water Recharge, Base Flow, and Stream Reach Gains and Losses in the Willamette River Basin, Oregon", USGS Water-Resources Investigations Report WRIR 01-4215.

State of Oregon
Department of Environmental Quality — Memorandum

Date: January 15, 2004

To: Environmental Quality Commission

From: Stephanie Hallock, Director S. Hallock

Subject: Agenda Item I, Action Item: Request from U.S. Fish and Wildlife Service for a Waiver to the Total Dissolved Gas Water Quality Standard on the Columbia River, February 6, 2004 EQC Meeting

Proposed Action

The U.S. Fish and Wildlife Service has petitioned the Environmental Quality Commission (EQC) for a waiver to the State's total dissolved gas water quality standard. This waiver will enable water to be spilled at Bonneville Dam to assist outmigrating fall chinook from the Spring Creek National Fish Hatchery, located on the mainstem Columbia River four miles west of the Hood River/White Salmon toll bridge. The petition requests a waiver from the standard of 110 percent of saturation relative to atmospheric pressure for a ten-day period in March 2004. For this period, the Service is seeking a total dissolved gas standard of 120 percent saturation as measured in the tailrace of Bonneville Dam, and 115 percent as measured at the fixed monitoring station at Camas/Washougal. The Fish and Wildlife Service is proposing to release 7.5 million juvenile fall Chinook salmon smolts from the hatchery in March 2004. Spilling water over the Bonneville Dam spillway is designed to maximize survival past the dam.

Background on the waiver request and an evaluation of this petition is presented in Attachment A.

Key Issues

Summary of 2003 Spill

Spill over Bonneville Dam was heavily constrained in 2003 due to low water conditions and hydropower system demands. A total of 36 hours of spill for the hatchery release was undertaken from the evening on March 10, 2003 until the morning of March 12, 2003. The average spill rate was 52 cubic feet per second (kcfs) with an average total dissolved gas saturation of 104.4 percent. The maximum reading at the Warrendale gauge was 106.6 percent.

Monitoring in 2004

Physical monitoring of total dissolved gas saturation will be conducted by the U.S. Geological Survey as in previous years. Data will be collected hourly and will be available for public review on the Internet at http://www.nwd-wc.usace.army.mil/TMT/wqwebpage/mainpage.htm.

The U.S. Fish and Wildlife Service is not proposing to conduct biological monitoring, relying instead on the considerable body of data that supports its contention that there is no harm to migrating or resident fish for exposures at the proposed levels. The Administrative Rules that enable the EQC to grant a waiver require that biological monitoring occurs in order to demonstrate that no harm is occurring as a result of the increased total dissolved gas saturation. DEQ is recommending that if the EQC wishes to consider granting this waiver, that it require biological monitoring as has occurred in the past.

Duration of Waiver

In 2003, the EQC granted a five-year waiver to the U.S. Army Corps of Engineers for its systemwide operations. In issuing its Public Notice, DEQ solicited comment from the public on extending this requested waiver to the U.S. Fish and Wildlife Service for a similar duration. No comments were received on this issue. DEQ is recommending that the EQC extend this waiver to coincide with the duration of the Corps of Engineers' waiver granted last year. The Corps' multi-year waiver was granted on the basis of the very low incidence of gas bubble trauma detected from extensive biological monitoring since 1995, and in recognition of DEQ's resources and priorities. Granting this multiyear waiver request will meet the USFWS's projected needs each year.

Public Input

The Department issued a notice to the public of receipt of this application on October 31, 2003. Public comment was solicited until December 3, 2003, and a public hearing was held on December 1, 2003. Two written comments were received, and these are summarized at Appendix B.

EQC Action Alternatives

The EQC has two alternatives for action:

1. Approve the request with or without conditions. In order to take this action, the EQC must make the four affirmative findings detailed in Attachment C;

2. Decline to approve the petition. In this case, the EQC could decide that alternative methods of fish migration are available, such as barge transportation, or releasing additional fish from the hatchery. See Attachment A, for a description and analysis of these alternatives.

Department Recommendation

The Department recommends that the EQC grant this petition by adopting the findings, and imposing the conditions contained in the Draft Order at Attachment D.

Attachments

A. Summary of Application and Supporting Documentation
B. Summary of Public Input
C. Oregon Administrative Rule Relating to the Total Dissolved Gas Water Quality Standard
D. Draft Order Approving the U.S. Fish and Wildlife Service's Request for a Waiver

Available Upon Request

U.S. Fish and Wildlife Service's Request

Approved:

Section: Gregory K. Aldrich

Division:

Report Prepared By: Russell Harding
Phone: (503) 229-5284

Summary of Application and Supporting Information

Background

Petitions for waivers to the State's total dissolved gas standard have been considered by the EQC since 1994. Petitions originate from two sources. The major petition (not this one) is for a lower Columbia River systemwide operation between April 1 and August 31 each year. This is submitted by the U.S. Army Corps of Engineers and is designed to meet the requirements of NOAA Fisheries' *Biological Opinion* Reasonable and Prudent Alternative actions to protect threatened and endangered salmonid species transiting the river. In 2003, the EQC granted a five-year waiver to the Army Corps for its systemwide spill operations and required an annual report to the Department. This report covers the previous spill season and describes compliance with the waiver, the incidence of gas bubble trauma, and the efforts made by the Corps to ensure fish passage while meeting the water quality standard.

The second petition (the current one) is received from the U.S. Fish and Wildlife Service and covers the operation of the Spring Creek National Fish hatchery located on the Columbia River mainstem four miles west of the Hood River/White Salmon toll bridge. The Service conducts three releases from the hatchery – in March, April and May each year. The April and May releases are covered by the waiver granted to the U.S. Army Corps of Engineers. Hence the separate petition for the month of March.

Total dissolved gas (air) is introduced into water as a result of small air bubbles being entrained as water plummets across the spillway of a dam. These small bubbles are carried to depth in the spilling basin immediately below the spillway. The greater hydostatic pressure in the spilling basin collapses these bubbles until they are eventually forced into solution. The difficulty with this arises when fish take this water up as a normal part of respiration. If, in so doing, a fish continues to swim at the depth at which the water is taken in, no problems occur. However, if a fish swims higher in the water column (at a lower pressure gradient), the air comes out of solution in the fish's tissue causing the piscine equivalent of the bends in humans. At high levels this can be lethal.

Under state law, the EQC approves water quality standards to protect beneficial uses of state waterways, including standards that protect aquatic life. Administrative rules provide a mechanism for the EQC to grant a waiver under specified circumstances. See Attachment C for the wording of the administrative rule. The EQC's granting of a waiver to the total dissolved gas standard on the Columbia River requires the balancing of biological harm to fish through elevated total dissolved gas levels against the benefits to fish passage from higher spill levels.

U.S. Fish and Wildlife Service's Request

Although the Spring Creek National Hatchery fish are not endangered species, they play an important role in helping protect Endangered Species Act listed fish. The 7.5 million juveniles due to be released make up a large proportion of the fish to be caught under the United States/Canada treaty allocations. Additionally, these fish are important for the near-shore fisheries off the coasts of Oregon and Washington, and in the Columbia River, most notably the Buoy Ten fishery.

In the absence of these hatchery fish, a disproportionate number of endangered species can be expected to be taken. The Canadian ocean fisheries are managed under harvest quota, time and area regulations. Because both Spring Creek Hatchery fish and endangered Snake River fish intermingle off the west coast of Vancouver Island, greater numbers of hatchery fish in the United States/Canada Treaty area will result in fewer endangered Snake River fish being caught. Similarly, endangered Snake River fish are at greater risk if there is any reduction in Spring Creek Hatchery production. Historically, Spring Creek National Hatchery fish contributed nine percent of the catch off the west coast of Vancouver Island, and 27 percent of the catch off the Washington and northern Oregon coasts annually. Spring Creek Hatchery fish have contributed as much as 65,600 fish to tribal fisheries and 41,500 fish annually to non-tribal fisheries in the Columbia River in the past. In 1999, fall chinook produced at the hatchery contributed about 26,500 fish to commercial and sport fisheries in the Columbia River. The treaty Indian harvest was about 21,900 fish, and the in-river sport catch was about 4,400 fish. A further 200 fish were taken incidentally in prosecution of the non-Indian commercial sturgeon fishery.

In recent years both federal and state governments have reduced hatchery production for the Columbia River due to Congressional reductions in Mitchell Act funding. These reductions have forced the closure of some hatcheries, with the result that the Spring Creek National Hatchery is the sole producer of tule fall chinook remaining open above Bonneville Dam. These closures make the Spring Creek contribution even more important.

Spill for the Spring Creek National Hatchery release was first requested in 1995 because of the low fish guidance efficiency (the number of fish guided away from turbine intakes) at the Bonneville Dam second powerhouse.

Justification for the Waiver

A fish passage efficiency of 80 percent is targeted for the Spring Creek National Hatchery release. According to NOAA Fisheries calculations, for a river flow of 200 thousand cubic feet per second, spills of 45, 80 and 150 thousand cubic feet per second would result in fish passage efficiencies of 54, 63 and 72 percent respectively. According to the U.S. Army Corps of Engineers, spills of 45, 80 and 150 thousand cubic feet per second would result in total dissolved gas levels of 110, 115, and 120 percent saturation respectively. These calculations are presented in Table 1.

Table 1: Estimated Bonneville Spillway Flows, Total Dissolved Gas Levels, Fish Passage Efficiency, and Increase in Fish Survival.

Total River Flow (kcfs)	200	200	200	200	200	200
Spill (kcfs)	0	45	80	100	120	150
Tailrace Gas Level (percent)	100	110	115	116	117	120
Fish Passage Efficiency (percent)	33	54	63	63	66	72
Increase in fish survival Compared to no-spill	0	133,500	229,500	258,750	288,750	333,000

During previous spill events, both physical and biological monitoring have occurred. Physical monitoring has been required to ensure compliance with the water quality standard waivers. Biological monitoring has been required to demonstrate that the higher total dissolved gas levels have not adversely impacted fish. Biological monitoring occurring since 1995 has shown extremely low levels (one to two percent at most) of fish showing any signs of gas bubble disease. Incidences of gas bubble disease can be expected to be low due to the limited exposure time for these fish. They are exposed to elevated total dissolved gas levels for a short duration, and only one episode.

Sub-lethal effects, such as difficulty with the fresh-water/salt-water transition or increased susceptibility to predation from northern pike-minnow have not been documented. But, again, due to the short duration and single episode, significant sub-lethal effects are not expected.

Alternatives and Evaluation

The U.S. Fish and Wildlife Service has considered alternatives to spill at Bonneville Dam. These include transporting smolts below Bonneville Dam, and releasing more fish.

Transporting Juvenile Fish

The alternative of transporting juvenile fish from the hatchery and releasing them downstream from Bonneville Dam has been considered. Potentially loading fish in barges and releasing them below Bonneville Dam could result in increased survival. Certainly, it would alleviate the effects of turbines, elevated total dissolved gas and predation. However, this has been evaluated, and a very high percentage of adult fish strayed to other hatcheries. Also, adult return rates to the Spring Creek National Hatchery were significantly lower from the barged group. The goal for returns to the Spring Creek National Hatchery is 7,000 fish. This number is required to provide enough fish for spawning. Straying of fish to other streams or facilities may lead to the Spring Creek National Hatchery falling short of this target.

The Spring Creek National Hatchery has been in operation sufficiently long (over 100 years) for its fish to have developed into a unique group. The U.S. Fish and Wildlife

Service, along with state and tribal fisheries managers are trying to maintain the genetic integrity of this group. Supplementing the Spring Creek National Hatchery with fish from other hatcheries (either of Spring Creek origin, or not) runs the risk of diluting the unique characteristics of these fish.

Releasing More Fish

Based on the notion that there are going to be mortalities at Bonneville Dam if this waiver is not approved, the argument has been advanced that the U.S. Fish and Wildlife Service should simply release more fish. In this way, despite increased mortality, the required number of fish could be assured.

Due to the capacity of the hatchery, and hatchery operation, this is not a possibility. The Spring Creek National Hatchery makes three releases per year, in March, April and May. Under this schedule, not all fish are released in March. Those that remain behind grow to take over the space vacated by the March release. Similarly, only a portion of the fish is released in April, and the remaining fish grow to occupy the vacated space. This latter group is released in May. This schedule fully utilizes the physical capacity of the hatchery, as well as its water supply and waste treatment facilities. This schedule has been followed to reduce the risk from low returns from any one release. Fish released in April and May are able to pass Bonneville Dam under the auspices of the Corps of Engineers total dissolved gas waiver that has been considered separately by the EQC.

Competition Between Spring Creek National Hatchery Fish and Endangered Snake River Salmon

Interactions between wild fish and hatchery fish have been blamed for thinning the genetic diversity of wild fish, and for increased competition for food and habitat. Spring Creek National Hatchery fish are expected to pose little competitive risk to wild Snake River salmon. The main reason for this is the difference in migration timing. Because passage to the sea for Spring Creek National Hatchery fish is short, the timing of the release assures that hatchery fish either completely miss or only slightly overlap with Snake River salmon. Spring Creek Hatchery fish are physiologically ready to migrate and move out of rearing areas in the Columbia River quickly. It is possible that hatchery and wild fish compete with one another for food in the ocean, although the size of the marine environment, coupled with the fact that there are billions of juveniles migrating in the ocean minimize the impact of this interaction.

Structural Changes at Bonneville Dam

The U.S. Army Corps of Engineers is completing construction of a fish collection facility at Bonneville Dam utilizing what was previously the ice and trash sluiceway. It is hoped that this facility will enable the passage of greater numbers of fish, obviating the need for as great a quantity of spill as in the past. The U.S. Fish and Wildlife Service is proposing specific research studies in 2004 to evaluate the efficacy of this facility for Spring Creek National Hatchery smolt survival. However, in the future it is hoped that this facility, in conjunction with hatchery management that may be able to delay the first release will preclude the need for these waivers.

Monitoring

As noted in the Staff Report, U.S. Fish and Wildlife Service is not proposing biological monitoring in conjunction with this request. The Department is satisfied that no harm will occur in conjunction with this spill, particularly in light of the very long data series that exists since 1994, and also the fact that it is a single exposure. However, the administrative rule that enables the EQC to grant such a waiver requires that biological monitoring will take place to demonstrate no harm. Further, each water year is different and biological monitoring from year to year helps build up a picture of biological impacts across a range of water conditions. The Department recommends that the U.S. Fish and Wildlife Service implement a biological monitoring program as it has in the past. This requires seining on two non-successive days, and examining fins and lateral lines for signs of gas bubble trauma.

Duration of the Waiver

In 2003, the EQC granted a multi-year waiver to the U.S. Army Corps of Engineers for the systemwide spill program. While the U.S. Fish and Wildlife Service requested only a one-year waiver for 2004, the Department solicited input from the public on a similar duration waiver for the U.S. Fish and Wildlife Service to recognize the very low incidence of gas bubble trauma detected in migrating smolts and resident species since 1994, and to reflect DEQ's resources and priorities. No comment was received on this matter.

ATTACHMENT B

Summary of Public Comment

A public hearing was held on December 1, 2003 at 10:00 a.m. at the State Office Building, 800 NE Oregon Street, Portland, OR 97232. Two people attended, but neither offered testimony. Subsequently, two written comments were received, and these are summarized below.

James D. Ruff, NOAA Fisheries

NOAA Fisheries supports the request from the U.S. Fish and Wildlife Service. This will be the first year of operation for the Second Powerhouse Corner Collector. This facility will skim six kcfs of flow from the second powerhouse forebay. NOAA Fisheries anticipates a high juvenile passage efficiency through this facility. The U.S. Fish and Wildlife Service is proposing studies in 2004 to evaluate the efficacy of the corner collector for passing Spring Creek Hatchery smolts.

NOAA Fisheries is satisfied that the proposed biological and physical monitoring that will accompany this waiver will be protective of incubating Endangered Species Act-listed chum salmon redds below Bonneville Dam.

Olney Patt, Jr., Columbia River InterTribal Fish Commission

The value of hatchery versus wild salmon is difficult to determine. The State has an obligation to the Tribes, under which there is no differentiation as between wild and hatchery produced salmon. A failure to approve the waiver for the Spring Creek National Fish Hatchery release will result in a significant loss of juvenile salmonids. Denial of the waiver in 2000 would have resulted in the loss of 1,654 tule adults to the treaty and non-treaty harvests. A similar loss will occur this year if this waiver is not granted. An agreement has been reached to begin outplanting Spring Creek National Fish Hatchery tule juveniles into under-seeded tributaries in the Bonneville pool, and lower Columbia River. Tule production has been reduced in recent years due to low adult returns to the Columbia River.

Every additional salmon adult available for Tribal harvest is critical from a cultural viewpoint. Tribal members are dependent on these fish for ceremonial and subsistence purposes. Tule fall Chinook are a very important source of winter protein for Tribal members. Much of the salmon has been removed from the Tribes and distributed to others in the form of flood control, navigation, irrigation and municipal development. As a result Tribal people have experienced elevated poverty and death rates relative to the general population.

Both the Independent Scientific Advisory Board and the NOAA Fisheries' 2000 biological opinion found that 120 percent saturation of total dissolved gas was conservative and not harmful to salmon in the river. Additional research shows that gas bubble disease incidence was very low at in-river saturations of 125 percent. In terms of delayed mortality from exposure to elevated total dissolved gas levels, estimates at Bonneville Dam for fish that proceeded concurrently via turbines, bypass systems, and spill were 18, 20, and 4 percent respectively. Further, survival improves with increased spill even at levels up to 125 percent saturation. Spawner-to-spawner analyses show that survival improved in years with greater spill quantities.

Oregon Administrative Rule, OAR 340-41- 525 (2)(n)

(A) The concentration of total dissolved gas relative to atmospheric pressure at the point of sample collection shall not exceed 110 percent of saturation, except when stream flow exceeds the ten-year, seven-day average flood. However, for hatchery receiving waters and waters of less than two feet in depth, the concentration of total dissolved gas relative to atmospheric pressure at the point of sample collection shall not exceed 105 percent of saturation;

(B) 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:

(i) Failure to act would result in greater harm to salmonid stock survival through in-river migration than would occur by increased spill;

(ii) 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;

(iii) Adequate data will exist to determine compliance with the standards; and

(iv) Biological monitoring is occurring to document that the migratory salmonid and resident biological communities are being protected.

(C) 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;

(D) The Commission may, at its discretion, consider alternative modes of migration.

Draft Order Approving U.S. Fish and Wildlife Service's Request

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION

In the matter of the U.S. Fish and Wildlife Service's request to spill water to assist out-migrating Spring Creek Hatchery salmon smolts	((((	ORDER

WHEREAS the Department of Environmental Quality received a request from the U.S. Fish and Wildlife Service dated October 2, 2003, to adjust the Total Dissolved Gas Standard as necessary to spill water over Bonneville Dam on the Columbia River to assist out-migrating Spring Creek Hatchery tule fall Chinook smolts, for a ten-day period in March 2004;

WHEREAS the public was notified of the request on October 31, 2003, and given the opportunity to provide testimony at 10:00 p.m. on December 1, 2003, and the opportunity to provide written comments until 5:00 p.m. on December 3, 2003; and

WHEREAS the Environmental Quality Commission met on February 6, 2004 and considered the request, justification and public comment.

THEREFORE the Environmental Quality Commission orders as follows:

1. Acting under OAR 340-41-205(2)(n)(B), the Commission finds:

   (i) failure to act will result in more salmonid passage via hydroelectric dam turbines. Estimated mortalities from fish passing through turbines is between 11 and 15 percent. Fish passing over spillways as a result of spill experience two to three percent mortality;

   (ii) the balance of risk of impairment to migrating salmonids, resident fish, and other aquatic life due to elevated dissolved gas levels needs to be balanced against migrating juvenile salmonid mortality from turbine passage. Resident fish and aquatic invertebrates in the Columbia River downstream of Bonneville Dam have been monitored for signs of gas bubble disease since 1993. A total of 225 fish were examined in 2002. Of these 0.3 percent (one fish) showed signs of gas bubble disease. This fish exhibited signs of the lowest rank. No signs were observed in aquatic macroinvertebrates. Low incidences, as reported above, were detected in migrating juveniles and returning adults when total dissolved gas levels were within waiver limits. Higher levels of total dissolved gas saturation resulting from involuntary spill have resulted in increased incidence of gas bubble disease detected. Given data from past monitoring, at the levels requested, there appears to be a reasonable balance between increased survival due to avoidance of turbine and bypass system mortalities;

(iii) the U.S. Fish and Wildlife Service has submitted a physical monitoring plan. The U.S. Geological Survey will conduct physical monitoring at the Bonneville Dam forebay, and at Camas/Washougal. Hourly data will be posted electronically on the U.S. Army Corps of Engineers' Internet World Wide Web pages. Implementation of the physical monitoring plan will ensure that data will exist to determine compliance with the standards for the voluntary spill program; and

(iv) the U.S. Fish and Wildlife Service has not submitted a biological monitoring plan. In order to satisfy this finding, the U.S. Fish and Wildlife service should collect Juvenile salmonids and resident fish with a beach seine downstream from Bonneville Dam and examine them for signs of gas bubble disease on non-paired fins and lateral lines. Based on evidence from previous years, few signs of gas bubble disease are expected. The sampling will, therefore be confined to two non-successive days during the ten-day spill period. No examinations of gill lamellae will occur this year due to the variability of results and increased risk to fish to due handling for this examination.

2. The Environmental Quality Commission approves a modification to the Total Dissolved Gas standard for spill over Bonneville Dam subject to the following conditions:

(i) a revised total dissolved gas standard for Bonneville Dam on the Columbia River for a continuous ten-day period in March 2004, 2005, 2006 and 2007;

(ii) a total dissolved gas standard for Bonneville Dam of a daily (12 highest hours) average of 115 percent as measured at the Camas/Washougal monitoring station;

(iii) a further modification of the total dissolved gas standard at Bonneville Dam to allow for a daily (12 highest hours) average of 120 percent as measured at tailrace monitors below the dam;

(iv) a cap on total dissolved gas for Bonneville Dam during the spill program of 125 percent, based on the highest two hours during the 12 highest hourly measurements per calendar day;

(v) if *either* 15 percent of the fish examined show signs of gas bubble disease in their non-paired fins, *or* five percent of the fish examined show signs of gas bubble trauma in their non-paired fins where more than 25 percent of the surface area of the fin is occluded by gas bubbles, whichever is less, the Director will halt the spill program; and

(vi) the U.S. Fish and Wildlife Service is to incorporate the following conditions into its program:

a) incorporation of a biological monitoring program to be performed on not less than two non-successive days during the spill program. Resident and migrating fish shall be collected by beach seining, and be examined in their fins and lateral; lines for signs of gas bubble trauma;

b) written notice must be furnished to the Department within 24 hours of a violation of the conditions of this waiver as it relates to voluntary spill. Such notice will include an explanation of the reasons for the violation, actions taken to resolve the situation, or if no action is taken, the reasons for no action;

c) provision of a written report of the each year's spill program for the Spring Creek National Fish Hatchery release. Such report is to be received by the Department no later than December 31 of each year; and

d) application for any waiver beyond 2007 should be coordinated with the U.S. Army Corps of Engineers and should be submitted as a single application on behalf of the federal government.

Dated: ________________ ON BEHALF OF THE COMMISSION

____
Director

State of Oregon

Department of Environmental Quality — Memorandum

Date: January 15, 2004

To: Environmental Quality Commission

From: Stephanie Hallock, Director S. Hallock

Subject: Agenda Item J, Informational Item: Forest Practices Act Sufficiency Analysis and Forest Practices Act Rules being developed by Oregon Department of Forestry, February 6, 2004 EQC Meeting.

Purpose of Item

The purpose of this informational item is to present a status report on the rulemaking and other activities of the Oregon Department of Forestry (ODF) under the Forest Practices Act in conjunction with the *Forest Practices Act Sufficiency Analysis* completed in October 2002. The Sufficiency Analysis was a collaborative, three year joint effort by the Department of Environmental Quality (DEQ) and ODF to determine the effectiveness of the Oregon Forest Practices Act in achieving and maintaining water quality criteria for temperature, sediment, turbidity, aquatic habitat and biocriteria (i.e., aquatic diversity).

Background

Begun pursuant to a 1998 Memorandum of Agreement between ODF and DEQ, the Sufficiency Analysis identified a series of recommendations to improve the Forest Practice Act's effectiveness in achieving and maintaining water quality standards on Oregon State and private forest lands. The Oregon Board of Forestry unanimously accepted the report, and encouraged ODF to incorporate its recommendations through appropriate means including rulemaking.

The Sufficiency Analysis identified 12 recommendations that included improvements to the implementing rules or guidance of the Forest Practices Act and other recommendations under the Oregon Plan for Salmon and Watersheds (e.g.; active placement of large wood). ODF has completed rulemaking for some of the recommendations and initiated rule development for many of the other recommendations and has held as series of stakeholder meetings across the State on draft rule language. DEQ has actively participated in this rule development process, including attending many of the stakeholder and Board of Forestry meetings.

In addition to the Sufficiency Analysis, ODF has drawn from two stakeholder evaluations of the Forest Practices Act (i.e., the Forest Practices Advisory Committee and the Eastside Riparian Functions Advisory Committee). Finally, the Independent Multidisciplinary Science Team (IMST), formed under the Oregon Plan, conducted an independent evaluation of the riparian protections of the Forest Practices Act and came to many of the same conclusions as those reached by the Sufficiency Analysis and the Forest Practices Act Advisory Committee.

The Board of Forestry is presently considering all of the recommendations from the sufficiency analysis, the advisory committees and the IMST, as well as additional recent recommendations. ODF has proposed that the Board of Forestry implement some of these recommendations as "voluntary measures" rather than incorporating them into their rules as requirements. The basis for addressing some of the recommendations through voluntary means rather than by rule is the statutory requirement in the Forest Practices Act (ORS 527.714) that the Board of Forestry make certain findings before adopting its implementing rules. One of these findings is that water quality degradation has or will occur if the proposed changes are not made. ODF is advocating the use of voluntary measures where it cannot document that such degradation has or will occur. In fact, one of the purposes of the volunteer measures is to generate the more definitive information in the future.

Voluntary measures under the Oregon Plan have been very successful in achieving improved road maintenance and fish passage provisions on forestland.

Next Steps

ODF will seek approval from the Oregon Board of Forestry to go to formal rulemaking later this spring. Proposed "voluntary measures" will be developed through a collaborative process under the Oregon Plan.

ODF and the Board will be addressing broader scale concerns and issues that have higher degrees of scientific uncertainty, such as watershed scale impacts and how to better apply forest practices in the context of dynamic ecosystems, through the work underway under the Watershed Research Cooperative and its Hinkle Creek Paired Watershed Study and a staff white paper titled "Forest Practices 'Protection' on Forestlands in the Context of Dynamic Ecosystems."

EQC Involvement

The Board of Forestry is required by statute to consult with the Environmental Quality Commission in adoption of practices and other rules to address nonpoint source discharges of pollutants resulting from forest operations on forestlands. DEQ's active and ongoing participation with the Department of Forestry is considered to fulfill this requirement. Continued direct involvement by DEQ staff is essential to ensure that necessary findings related to the requirements of ORS 527.714 can be made. DEQ staff will keep the Commission informed on the progress of the ODF deliberations and if necessary will bring any unresolved issues back to the Commission. The Commission may initiate proceedures to petition the Board of Forestry to review the Forest Practices Act rules and best management practices under ORS 527.765.

Attachments

The executive summary from the Sufficiency Analysis, and a table of rule concepts are attached for your information. More information will be provided during the briefing.

Available Upon Request

Copies of the full Sufficiency Analysis are available by contacting Ray Gress of ODF at (503) 945-7470 or at the following website: http://www.odf.state.or.us/DIVISIONS/protection/forest_practices/CurrentEvents/SufficiencyAnalysis.pdf.

Approved:

PPPA Section: Mark D. Charles

WQ Division: Michael T. Llewelyn

Report Prepared By: Mark D. Charles
Phone: (503) 229-5589

State of Oregon
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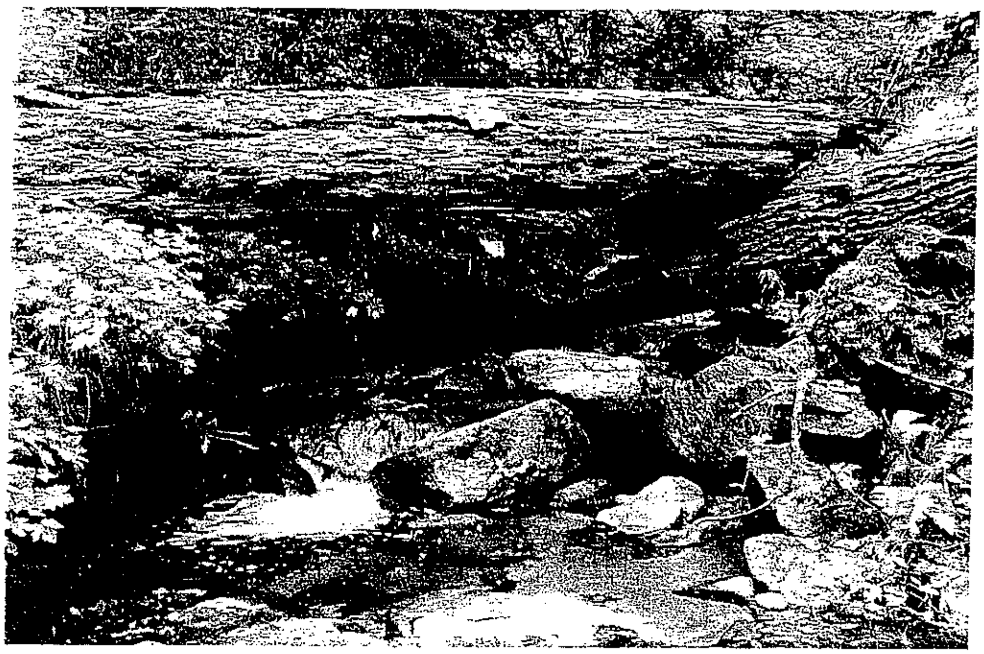
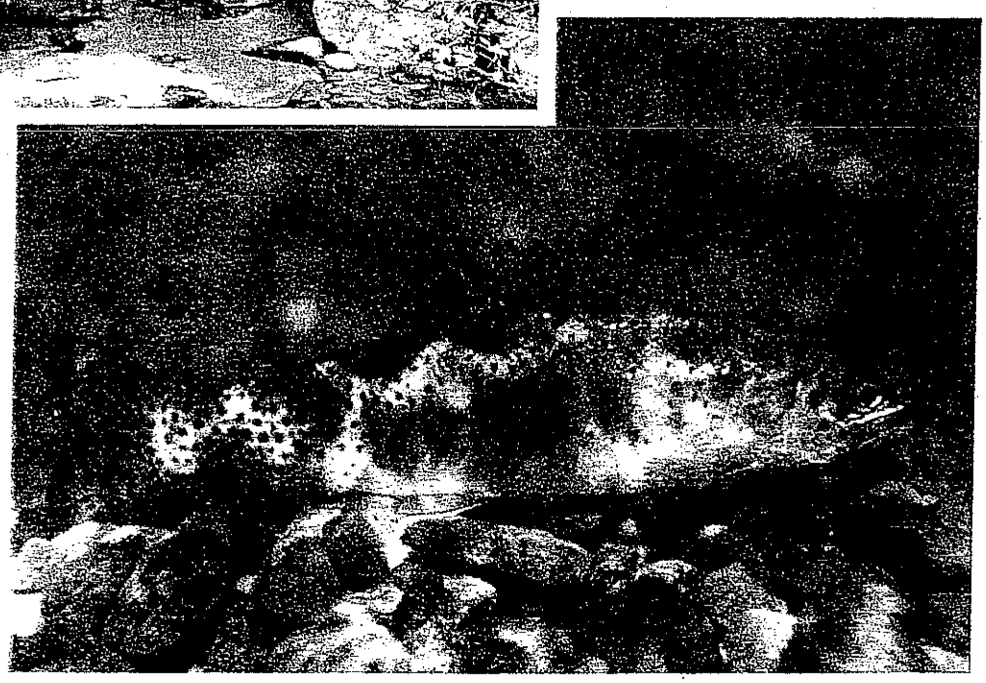
Sufficiency Analysis:
A Statewide Evaluation of Forest Practices Act Effectiveness in Protecting Water Quality





by:
Oregon Department of Forestry
and
Oregon Department of Environmental Quality

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EXECUTIVE SUMMARY

Background

In recent years, increased attention has been given to the development of Total Maximum Daily Loads (TMDLs) and the listing of 303(d) water quality limited streams[1] in the state of Oregon under the Clean Water Act. This has presented new opportunities for the Oregon Department of Forestry (ODF) and the Department of Environmental Quality (DEQ) to move forward together to address water quality issues on non-federal forestlands. To adequately address these issues, the ODF and DEQ have agreed through an April 1998 Memorandum of Understanding (MOU) to jointly evaluate the sufficiency of the Forest Practices Act (FPA) to protect water quality. The MOU outlines five specific water quality parameters that will be addressed: temperature, sedimentation, turbidity, aquatic habitat modification, and bio-criteria.

The purpose of this sufficiency analysis, as described the MOU (Appendix D) is to determine:

(a) The adequacy of the FPA pursuant to ORS 527.765 in the achievement and maintenance of water quality standards, with due consideration to regional and local variation in effects;
(b) If forest practices contribute to identified water quality problems in listed water quality limited streams; and
(c) If so, to determine whether existing forest practice rules provide sufficient control to assure that water quality standards will be met so that waters can be removed from the 303(d) list.

Consistent with the MOU, water quality parameters not specifically addressed in the sufficiency analysis "are generally not attributable to forest management practices as regulated by the EPA." Given the lack of any significant information on "other" parameters that might be influenced by current practices since the drafting of the MOU, the ODF and DEQ have agreed that an evaluation of parameters beyond those specifically listed in the MOU is not warranted at the time of this evaluation. The intent of the MOU and the focus of this report is on those parameters where it is known that forest practices have in some cases caused documented changes in water quality conditions.

The overall goal of the water protection rules as stated in Oregon Administrative Rules (OAR 629-635-0100 (7)) is to provide resource protection during operations adjacent to and within streams, lakes, wetlands and riparian management areas so that, while continuing to grow and harvest trees, the protection goals for fish, wildlife, and water quality are met.

> (a) The protection goal for water quality (as prescribed in ORS 527.765) is to ensure through the described forest practices that, to the maximum extent practicable, non-point source discharges of pollutants[2] resulting from forest operations do not impair the achievement and maintenance of the water quality standards.

[1] Water quality limited streams are those waters included on the 303(d) list maintained by the DEQ. These are waterbodies currently identified as not meeting water quality standards (see Appendix E).
[2] Non-point source discharges are those originating from diffuse sources across the landscape and cannot be traced to a single point or descrete activity.

(b) The protection goal for fish is to establish and retain vegetation consistent with the vegetation retention objectives described in OAR 629-640-0000 (streams), OAR 629-645-0000 (significant wetlands), and OAR 629-650-0000 (lakes) that will maintain water quality and provide aquatic habitat components and functions such as shade, large woody debris, and nutrients." OAR 629-635-0100 (7)

State policy on water pollution control for state and private forestlands originates from the Environmental Quality Commission (EQC) and applicable administrative statutes:

> "To protect, maintain and improve the quality of the waters of the state for public water supplies, for the propagation of wildlife, fish and aquatic life and for domestic, agricultural, industrial, municipal, recreational and other legitimate beneficial uses." [ORS 468B.015(2)]

> "Implementation of any limitations or controls applying to nonpoint source discharges or pollutants resulting from forest operations are subject to ORS 527.765 and 527.770." [ORS 468B.110 (2)]

Consistent with these statutes, the FPA is Oregon's water quality standard compliance mechanism with respect to forest operations on state and private forestlands:

> "The State Board of Forestry shall establish best management practices and other rules applying to forest practices as necessary to insure that to the maximum extent practicable nonpoint source discharges of pollutants resulting from forest operations on forestlands do not impair the achievement and maintenance of water quality standards established by the Environmental Quality Commission for the waters of the state. Such best management practices shall consist of forest practices rules adopted to prevent or reduce pollution of waters of the state. Factors to be considered by the board in establishing best management practices shall include, where applicable, but not be limited to:
> (a) Beneficial uses of waters potentially impacted;
> (b) The effects of past forest practices on beneficial uses of water;
> (c) Appropriate practices employed by other forest managers;
> (d) Technical, economic and institutional feasibility; and
> (e) Natural variations in geomorphology and hydrology." [ORS 527.765 (1)]

> "A forest operator conducting, or in good faith proposing to conduct, operations in accordance with best management practices currently in effect shall not be considered in violation of any water quality standards." [ORS 527.770]

These Oregon administrative rules are designed to achieve water quality goals consistent with the relevant statutes, ORS 468B.015(2), 468B.110 (2), 527.765, and 527.770 cited above. It is in this regulatory and policy context that applicable water quality standards and the FPA are implemented to address water quality protection for waters of the state.

Most of the parameters addressed in this sufficiency analysis are inter-related, and forest management activities often have the potential to affect more than one parameter at the same time. For example, habitat can be modified with changes in sedimentation and turbidity, and sedimentation can influence stream temperature by altering channel dimensions and subsurface hydrology, thus affecting the net heat load to the stream. It is logical to take a holistic approach and consider water quality conditions as a result of all the parameters interacting collectively rather than attempting to consider each parameter wholly independent of the others. Accordingly, this report takes a broad approach to examining the sufficiency of the FPA and considers the multiple factors and functions by evaluating water quality standards primarily through the FPA rule objectives.

Given the consistency between the FPA and state water quality statutes and their respective administrative rules, achieving FPA goals, as articulated in the administrative rules, will ensure achieving and maintaining water quality goals and water quality standards to the maximum extent practicable. This sufficiency analysis will therefore consider the adequacy of the rules in achieving the objectives and goals of the FPA. If current practices are meeting FPA objectives and goals, state water quality standards will be met as well. If the ODF and DEQ find FPA objectives and goals are not being met, the BOF will create or modify statewide or regional rules, or design other effective measures to address the water quality impairment.

In analyzing natural resource data and attempting to draw specific cause-and-effect conclusions between human activities and natural resource conditions, the quality and/or quantity of data necessary for a high level of scientific certainty is often not available. This effort at evaluating the sufficiency of the FPA is no exception. Available data pertinent to direct cause-and-effect linkages between the FPA and quantitative water quality conditions is very limited.

There are at least two general points of view regarding such scientific uncertainty. One is to assert that since it cannot be determined with certainty that a set of practices *is* achieving a given water quality standard, a conservative approach should be taken and the rules changed to provide a higher level of protection in case a significant risk does, in fact, exist. Another view is to assert that since it cannot be determined with certainty that a set of practices *is not* achieving a given water quality standard, there is no reason for a change in practices until further monitoring and/or research can prove that a significant risk does, in fact, exist. Both points of view are valid when scientific findings are uncertain, and values and beliefs play a large role in how these points of views utilize limited scientific information.

One task of the ODF and DEQ sufficiency analysis is to present and analyze all of the applicable science and information. Following the completion of this analysis, the Board of Forestry will consider the recommendations in light of the relevant social, economic, and environmental context of the FPA. The goal of this approach is to utilize the recommendations so that outcomes are consistent with both the scientific information and the existing socio-economic framework of the FPA.

Social, Economic, and Environmental Framework

For the report recommendations to be acted upon following its completion, a review of the legal and policy setting, Oregon's forest land base, and forest ecosystem dynamics will need to be considered by the Board of Forestry in reviewing the adequacy of the FPA in meeting water quality standards "to the maximum extent practicable" as defined by state statute. Appendix A provides this review and describes the overall context in which the FPA operates. There are different environmental, social, and economic implications, depending on the interpretation of "maximum extent practicable," and these implications should be considered for this evaluation to result in an outcome that does not create unintended negative consequences for resource protection. For example, increased forestry regulations in Washington state, combined with development pressures, are partly responsible for ten-times the area of forestlands being converted to other land uses as compared to Oregon over the last decade. While these increased regulations may have resulted in some increase in resource protection for forestlands at a site-specific level, it may have been at the cost of losing an area of land (400,000 acres) to other uses that may not provide as high a level of resource protection as forestlands. Taking into account the social, economic, and environmental aspects in evaluating FPA-sufficiency early on can help to avoid this type of unintended negative consequence, while also ensuring that statutory obligations are met.

Current Scientific Knowledge

Appendix B is a review and summary of the current scientific findings and monitoring results relevant to specific forest practice issues directly related to achieving water quality goals. Each of the water quality parameters that are the subjects of this report are linked to specific forest practice issues that address those parameters. The forest practice issues reviewed here include stream temperature, large wood, forest roads, landslides, and fish passage. The technical information included in this section of the report is used as the basis of the evaluations and recommendations developed in the remainder of this report, and they are referenced accordingly.

Description of Pollution Control Mechanisms

Appendix C describes the current pollution control mechanisms implemented to meet or exceed current water quality standards. These mechanisms include both the FPA and Oregon Plan voluntary measures. They are organized under the same forest practice issues outlined in Appendix B.

Evaluation

The following conclusions apply to all applicable standards (temperature, sedimentation, turbidity, aquatic habitat modification, and bio-criteria).

Site-Specific Evaluation

Current protection requirements may be inadequate in the following areas:

- Standards for some medium and small Type F streams in western Oregon may result in short-term temperature increases at the site level. However, the significance and scope of this increase is uncertain, and it may be offset at the landscape scale by other factors. Relevant to the habitat modification standard and criteria, large wood potential for some of these streams are less than what was assumed under the 1994 rules.

- Standards for some small Type N streams may result in short-term temperature increases at the site level that may be transferred downstream (this may impact water temperature and cold-water refugia) to fish-bearing streams. The significance and scale of this change is uncertain, and it may be offset at the landscape scale. Relevant to the habitat modification standard and criteria, large wood potential delivered by debris torrents (typically in areas of very steep topography) along these streams may be less than optimal.

For large Type F streams, shade levels appear to be adequate, and large wood outputs for these streams is consistent with that assumed under the 1994 rules.

With the exception of the issue of wet-weather hauling and steep-slope ground skidding and those areas noted above, the FPA appears to be adequate when implemented successfully.

Holistic Evaluation

Over time and space the forested landscape changes. Disturbance is an important process for maintaining productivity and resetting the environment, but it can also have a number of impacts to water quality parameters. Human activities can alter the frequency and magnitude of disturbance relative to historical patterns. While some human activities, like timber harvesting, may be more frequent than historical rates of disturbance, harvesting may also be less intense of a disturbance as compared to, for example, historical wildfire. Other impacts, like fire suppression, may reduce the frequency of disturbance, but result in somewhat more intense disturbances when fires do occur. The frequency and intensity of the event can influence vegetative and other disturbance recovery. Human activities to reduce adverse effects, therefore, need to be evaluated against historical patterns of disturbance.

The current distribution of forest stand age classes, the levels of tree stocking in managed plantations, and fire suppression have resulted in well-stocked, dense, closed canopy conifer stands across a larger portion of the forested landscape than has historically occurred. Thus the current rules and practices likely result in an increased level of shade at a landscape scale. At a site-specific scale, however, some level of risk exists along some streams, as noted in the next section. The significance of this risk in terms of influencing stream temperatures at a watershed (or sub-basin) scale is uncertain.

More arguably, higher conifer stocking levels across the landscape in upland and riparian areas may result in an increased potential for large wood delivery. The likelihood of such additional stocking resulting in increased large wood production is dependent upon the harvest levels, retained trees, natural mortality and other disturbance events. Until the sizes of riparian trees increase through normal growth volume may be limited, even though the number of trees may be relatively high. Nonetheless, current practices are likely sufficient at a landscape scale.

Temperature

The following is an evaluation of the temperature standard by specific stream types and sizes:

Medium and small Type F streams: Current research and monitoring results show that current RMA prescriptions for western Oregon may result in short-term temperature increases on some Type F streams; however the significance of the potential temperature increases at a watershed (or sub-basin) scale is uncertain.

Small Type N streams: Current research and monitoring results show current practices may result in short-term (two to three years) temperature increases on some Type N streams. The significance of potential temperature increases on Type N streams to downstream fish-bearing streams and at a watershed (or sub-basin) scale is uncertain.

All other streams: Influences on stream temperatures from shade levels resulting from specific BMP prescriptions for the other stream category types have not been assessed due to a lack of relevant data. However, in light of the data and findings specific to medium and small Type F streams, and given the higher level of vegetation retention on large Type F streams, it is likely that the standard is being met on large Type F streams.

Sedimentation Standard

The intent of the sedimentation standard as it applies to the FPA is to minimize soil and debris entering waters of the state. (OAR 629-30-000(3)) With the exception of wet-weather road use, complying with the road construction and maintenance rules currently in place is likely to result in meeting water quality standards. The rule and guidance recommendations described in the next section of this report will work towards ensuring the goals of the FPA and water quality standards are being met.

Turbidity Standard

Given the lack of quantitative data to specifically address the turbidity numeric standard, the turbidity standard is evaluated qualitatively. The intent of the turbidity standard, as it applies to the FPA, is to minimize soil and debris entering waters of the state. (OAR 629-30-000(3)). Both the FPA and water quality standards are being met when unfiltered surface runoff from road construction is entering applicable waters of the state and there is a visible difference in the turbidity of the stream above and below the point of delivery of the runoff for less than a two- or four-hour duration (depending on the stream grade and with all practicable erosion controls in place). When unfiltered surface runoff from general road use is minimized, and/or if all applicable BMPs have been applied, both the FPA and water quality standards are being met as well.

With the exception of wet-weather road use, complying with the road construction and maintenance rules and guidance currently in place is likely to result in meeting water quality standards. The rule recommendations will help improve compliance and implementation of the FPA to ensure the goals of the FPA and thus water quality standards are being met. Specific to wet-weather hauling, construction and maintenance standards should be developed for roads at risk for sediment delivery. Prohibiting hauling during periods of wet weather on road systems that have not been constructed with specific standards for surface materials, drainage systems, or other alternatives (paving, increased numbers of cross drains, sediment barriers, settling basins, etc.) will also minimize delivery of sediment streams.

Habitat Modification Standard

The FPA standard as it relates to habitat modification is "to grow and retain vegetation [along fish-bearing streams] so that, over time, average conditions across the landscape become similar to those of mature streamside stands;" and "to have sufficient streamside vegetation [along non fish-bearing streams] to support functions and processes that are important to downstream fish use waters and domestic water use."(OAR 629-640-0000)

The following is an evaluation of the habitat modification standard described above by specific stream types and sizes:

Medium and small Type F streams: Monitoring data indicates the assumptions used to determine basal area targets for small and medium streams in western Oregon may not be consistent with what the RMAs are capable of growing along these streams. The data also shows that 60 percent of harvest operations occurring along fish-bearing streams do not result in management within the RMAs. There is a reasonable possibility that, under the current rules, some of these streams are not likely to result in the "desired future condition" in a timely manner, as described in the goals of the FPA.

Small Type N streams: There is increasing scientific evidence that small non-fish-bearing streams prone to debris flows provide an important source of large wood for downstream fish habitat. While these streams are providing some level of functional large wood inputs and shade production under the current rules, the rules were not specifically designed to retain significant sources of large wood and shade in these areas. There is a reasonable possibility that, under the current rules, some of these streams are not likely to adequately support functions and processes important to downstream fish use waters, as described in the goals of the FPA.

All other streams: Influences on habitat modification resulting from specific best management practices for the other stream category types have not been assessed since they were considered a lower priority. However, given the higher level of vegetation retention on large Type F streams, and in light of the data and findings specific to medium and small Type F streams, it is likely the standard is being met on these streams.

Fish passage blockages: Since 1994, the FPA has required juvenile fish passage be provided on all fish-bearing streams. Current monitoring information does not indicate Forest Practices policies need to be significantly changed on how to install fish-passable stream crossings. With few exceptions, it appears when the guidelines are implemented correctly, the success rate is high for creating conditions believed to provide a high likelihood of fish passage.

Biocriteria Standard

This standard is consistent with multiple FPA purposes and goals that refer to the sound management of soil, air, water, fish and wildlife resources, while at the same time ensuring the continuous growing and harvesting of forest tree species. Given the general nature of this standard and the lack of specific criteria to use in evaluating this standard, biocriteria cannot be explicitly evaluated at this time. It is reasonable to assume that, given the inter-related nature of the temperature, sediment, turbidity and habitat modification parameters relative to biocriteria, to the extent these other parameters are being met, the biocriteria standard is likely to be met as well.

Recommendations

The FPA goals and objectives, as well as most of the state water quality standards and criteria being evaluated in this analysis (temperature and turbidity being the exceptions), are qualitative in nature. Thus, conclusions regarding the effectiveness of the rules in meeting the goals and objectives are qualitative as well. Available data relevant to those quantitative water quality standards (i.e. temperature and turbidity) is inadequate to draw specific and comprehensive conclusions about the adequacy of current practices; therefore, the evaluation of these criteria is also qualitative.

Data in many areas is lacking and, in many cases, not comprehensive. In light of this, any policy decisions made when this report is completed will depend upon professional judgement consistent with available scientific information. As the Board of Forestry considers these recommendations, social and economic factors, along with the scientific evidence on the adequacy of current practices presented here, will be considered as well.

The following recommendations are offered to highlight general areas where current practices could be improved upon to better meet the FPA goals and objectives and, in turn, provide greater likelihood of meeting water quality standards.

Recommendation #1: The RMA basal area retention standards should be revised, where appropriate, to be consistent with achieving characteristics of mature forest conditions in a timely manner; and to ensure that RMAs are providing desirable amounts of large wood and shade over space and time.

Recommendation #2: Revise current practices so desirable amounts of large wood are available along small stream channels that can deliver debris torrents to Type F streams. Ensure that adequate shade is maintained or rapidly recovered for riparian areas along small perennial Type N streams with the potential to impact downstream Type F waters.

Recommendation #3: Provide additional large wood to streams by actively placing the wood in areas where it will provide the greatest benefits to salmonids.

Recommendation #4: Reduce the delivery of fine sediment to streams by installing cross drains to keep drainage waters from eroding slopes. This will allow filtering of sediments and infiltration of drainage water into undisturbed forest soils. Cross drains should not be confused with stream crossing culverts. Cross drains take water from the road surface and ditch and route it under/across the road, discharging the water downslope from the road.

Recommendation #5: Develop specific standards for roads that will be actively used during the wet season. This would include a requirement for durable surfacing of roads in locations where fine sediment can enter streams. This would also include ceasing to haul if roads have not been constructed with effective surface materials, drainage systems, or other alternatives (paving, increased numbers of cross drains, sediment barriers, settling basins, etc.) that minimizes delivery of sediment into streams.

Recommendation #6: Develop specific guidance describing how roads in critical locations would be reviewed to reduce road length, and determining when, despite the relocation, the road location would pose unacceptable risk to resources and not be approved.

Recommendation #7: Construct stream crossings that adequately pass large wood and gravel downstream, and provide other means for passage of large wood and sediment at those crossings that restrict passage. The transport mechanisms for large wood and gravel should include both stream storm flows and channelized debris flows. This would reduce the risk of debris backing up behind the structure, potentially resulting in catastrophic sediment delivery caused by washouts.

Recommendation #8: Develop specific steep-slope, ground-based, yarding practices, or add a prior approval requirement for ground skidding in high-erosion hazard locations.

Recommendation #9: Manage locations most prone to landslides (high-risk sites) with techniques that minimize impacts to soil and water resources. To achieve this objective, best management practices to protect landslide-prone terrain currently in guidance should be incorporated into the forest practice rules, while developing a better case history for evaluating the effectiveness of those practices. These standard practices are designed to minimize ground alteration/disturbance on high-risk sites from logging practices.

Recommendation #10: Provide for riparian functions along stream reaches above impassable stream crossing structures that have a high probability of recolonization by salmonids once the structure is replaced/improved. If an upstream reach has the capacity to be a fish-bearing stream, but is currently a non-fish-bearing stream because a stream crossing structure cannot pass fish, the forest practices rules should be amended so the upstream reach is classified as a fish-bearing stream.

Recommendation #11: Facilitate the identification, prioritization, and restoration of existing culverts that currently do not pass fish. Culvert replacement should be accelerated above what is currently being done, specifically for family forestland owners who often do not have adequate resources to address this issue in a timely manner.

Recommendation #12: Provide a more effective and efficient means of classifying streams for "fish use." Revise the forest practice rule definition of Type F and Type N streams using a physical habitat approach to classify fish-use and non-use streams.

Compliance and Effectiveness Monitoring

The goal of the ODF forest practices monitoring program is to evaluate the effectiveness of the forest practice rules. Monitoring results are used to guide future management practices through the rule revision process. The goal includes a commitment to address specific Oregon Plan issues. The forest practices monitoring strategy is currently being revised. The key areas identified for improvement include:

- Building understanding, acceptance and support for the monitoring strategy.
- Using random sample design to select all sites. This has been used for two current projects.
- Combining monitoring efforts at each site to increase efficiency (i.e. compliance monitoring and riparian function at the same site)
- Increasing coordination with other Oregon Plan monitoring efforts, most notably DEQ and ODF&W.
- Addressing issues at a watershed scale.
- Improving communication of project status and results, both internally and externally using newsletters and project publications.

The following are specific recommendations for future monitoring:

1. Maintain a riparian monitoring program that continues to monitor the effectiveness of riparian prescriptions and riparian functions to ensure water quality goals are achieved in the future.

2. Monitor improvement of forest roads at a landscape level, looking specifically at implementation of the road hazard and risk reduction project.

3. Evaluate the need for further road compliance and effectiveness monitoring following the completion of the BMP compliance monitoring project relating to road BMPs. Also evaluate the progress and effectiveness of current voluntary efforts under the Oregon Plan to upgrade existing culverts that do not pass fish.

4. Monitoring of watershed-scale effects relative to current practices along small Type N streams should be a priority to help narrow the current level of uncertainty.

The following are remaining issues identified in this report that may warrant future examination as additional information is available:

- Is the occurrence of blowdown having an effect on meeting the goal of achieving "over time, average conditions across the landscape become similar to those of mature forest conditions" in RMAs?

- Are current forest practices meeting the water quality standard with respect to cold-water refugia? (This analysis will not be possible until the DEQ develops the specific guidance necessary to identify cold-water refugia on the ground that can be evaluated against the standard.)

- What effect, if any, are current practices along small non-fish-bearing streams having on downstream sediment regimes?

The Board of Forestry is currently deliberating the recommendations introduced by the Forest Practices Advisory Committee (FPAC) in September 2000. The process of implementing changes to current BMPs will occur over the next few years and is likely to consist of both regulatory and non-regulatory measures. The ODF monitoring program is also beginning a new series of effectiveness monitoring projects to evaluate BMP sufficiency in protecting riparian functions and water quality. There may also be some issues with water quality parameters that are not specifically addressed in this report that could have an unknown potential for current practices to cause changes in water quality conditions. In these cases, the DEQ will coordinate with the ODF and its monitoring program to address these parameters as concerns are identified and documented. Specific details of future monitoring efforts will be determined once the FPAC recommendations are developed further and implemented. ODF's monitoring strategy will continue to be developed at that time.

DEQ/ODF SA Recommendations and Corresponding OFPA Rule Change Concepts

Mike - Here is a table summarizing information related to proposed OFPA rule changes and our current position on those concepts. The content of this table is expected to change as ODF will continue to examine and revise these concepts prior to presenting them to the Board of Forestry. Since ODF has had to break these concepts into groups to get the Board to engage in the discussions, we have not seen the entire package yet. Many of the issues being addressed are closely connected, so it is important for us to look at the entire package to decide if we are in support of the OFPA changes. ODF staff are expecting to see comments from us when the entire package is available.

Items in blue are proposed to be presented to the BoF during January BoF meeting.

SA Recommendations	Evidence	Draft Rule Concepts	IMST	ODF Position	DEQ Position
1- revise basal area targets / achieve mature forest conditions and provide large wood and shade	Yes	8- basal area target increase for small and med type F streams (west)	5	Rule change	support rule change
		14- basal area targets (east)		No rule change	neutral
		6- stratification		Guidance on rules	guidance language uncertain
		10- no harvest withing 1/2 RMA (west)		Non regulatory - insufficient science	neutral
		11- retain largest trees within RMA (west)		Non regulatory - insufficient science	neutral
		5- channel migration zones		Non regulatory - insufficient science	neutral
		9- 60% basal area cap (west)		Non regulatory - insufficient science	neutral
2- revise to provide adequate large wood and shade in small streams including small type N with potential to impact downstream type F waters	Yes	4- Wood from debris flows and landslides	13	Rule change	rule language uncertain
		12- small type N streams (west)	3	Rule change	rule language uncertain
		16- small type N streams (east)		Rule change	rule language uncertain
		18- small type N stream monitoring		Rule change	rule language uncertain
3- provide additional large wood to streams by actively placing wood to benefit salmonids	Yes	7- Large wood placement		Rule change	rule language uncertain
		17- Fish habitat incentives		Non regulatory	rule language uncertain
10- provide riparian functions along stream reaches above impassable culverts that are likely to be recolonized by salmonids after structures are removed or improved	No	3- RMA above fish barriers		Rule change	rule language uncertain
11- facilitate the identification, prioritization, and restoration of existing culverts that currently do not pass fish	No	3- RMA above fish barriers		Rule change	rule language uncertain
12- revise the FPA rule definition of type F and type N streams by using physical habitat approach to classify fish use and no fish	No	2- treat medium and large type N streams as same size type F streams	3	Non regulatory	prefer rule
		3- RMA above fish barriers		Rule change	rule language uncertain
Other		15- no harvest alternative (east)		No rule change	support no rule change
		1- clarify water protection rules policy statement	1	Rule change	prefer to include TMDL language

		13- revision of desired future condition (east)		No rule change	support no rule change
		FPAC- creation of funding source for culvert improvements		No rule change	neutral
		FPAC- maintain or provide additional monitoring		No rule change	neutral
		FPAC- comprehensive riparian management plan for other land uses		No rule change	neutral
		FPAC/ERFAC- create position for riparian specialist		No rule change	neutral
		FPAC- alternate vegetation retention prescription		No rule change	neutral
		ERFAC- monitor strategies for wetlands		No rule change	neutral
		ERFAC- statewide riparian policy to address wild and domestic ungulates issues		No rule change	neutral
		ERFAC- training for landowners, operators, and public		No rule change	neutral
		ERFAC- training for FPF's		No rule change	neutral
		IMST- develop policy framework to include watershed level planning and operations on forests within salmonids habitat	2	No rule change	neutral
		IMST- provide increased riparian protection for 100 yr floodplains	4	No rule change	neutral
		IMST- monitoring OFPA for large wood	6	No rule change	neutral
		IMST- protection for core areas	7	No rule change	neutral
		IMST- culvert improvements	15	No rule change	neutral

Oregon

Theodore R. Kulongoski, Governor

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"STEWARDSHIP IN FORESTRY"

March 1, 2004

Mikell Omealy
Oregon Department of Environmental Quality
811 SW Sixth Avenue
Portland, OR 97204-1390

RECEIVED

MAR 02 2004

Oregon DEQ
Office of the Director

Dear Mikell:

I appreciated the opportunity to discuss the Oregon Forest Practices Act and our ongoing efforts to implement the recommendations of the joint sufficiency analysis with members of the Environmental Quality Commission (EQC) at their last meeting. The purposes of this letter it to follow-up on some issues raised at the meeting. One question posed at the meeting by the Commission was about enforcement under the Forest Practices Act. A second question related to the perspectives of the Board of Forestry about the role of forest practices in supporting water quality objectives.

The table below summarizes citations issued under the Oregon Forest Practices Act for the past ten years. The revised penalty amount reflects penalty amounts that are reduced when violators agree to do resource enhancement work in lieu of civil penalty payment or where we have negotiated a lessor amount due to other circumstances. (Note: enhancement work is in addition to repair of damage. Enforcement actions require that the operator repair damage that results from their violation.) In addition to citations, we also issue "notices of unsatisfactory conditions" as another enforcement tool. These notices are issued before "damage" has occurred and corrective action may still be taken to avoid a violation. In most years, we issue more notices of unsatisfactory conditions than actual citations.

Year	Number of Citations	Civil Penalty Assessed	Revised Penalty
1994	304	$227,147.00	$114,172.00
1995	407	$336,735.50	$154,537.50
1996	271	$306,650.00	$220,150.00
1997	284	$252,730.00	$141,367.50
1998	182	$262,187.50	$192,583.00
1999	162	$150,537.50	$99,231.25
2000	136	$169,762.50	$129,537.50
2001	118	$139,573.00	$110,650.00
2002	66	$49,000.00	$47,337.50
2003	61	$37,900.00	$38,150.00
TOTALS	1991	$1,932,225.00	$1,247,716.25
AVE	199.1	$193,222.50	$124,771.63

Also with regard to compliance, during 2000-2002 the Department of Forestry completed a statistically valid compliance monitoring study to determine overall compliance levels with forest practice rules. The Compliance Monitoring Project goal was to identify the statewide level of compliance with the Forest Practice Rules relating to the protection of water quality based on a statistically reliable sample. The purposes for this were to determine if adjustments to the administration of the compliance program are needed, identify areas where forest practice rule language can be clarified, and to identify where additional education and training is needed. Compliance rates for individual units ranged from 78.8% to 100% (Figure 1) and averaged 96.1%. The majority of units (76%) had at least one noncompliant practice of some sort, and 40% had at least one noncompliant practice that resulted in an impact to riparian and channel conditions. While it was common to find compliance issues when units were evaluated strictly, it would be an oversimplification to rate compliance solely on existence of a compliance issue of any kind on a unit. An accurate representation of compliance must account for the high numbers of Best Management Practices applied to each unit (average of 71), the specific sources of noncompliance, and impacts to riparian and channel conditions (units had an average of 98.7% of practices with no impact). The full report on the Department's website is at: ***http://www.odf.state.or.us/DIVISIONS/protection/forest_practices/fpmp/Projects/BMPCMP/BMPCMPPage.htm***

I have enclosed a "white paper" that describes the developing perspectives of the Board of Forestry about the role of forest practices in supporting water quality objectives. As we discussed at the EQC meeting, applying both water quality standards and forest practices in the context of a dynamic environment is a challenge we will need to continue to collaborate on. I suggest that this should be a key element of the proposed joint October Commission and Board meeting/field trip.

I look forward to future opportunities to update your Commission about the completion of our work under the Sufficiency Analysis and to discuss our shared interests.

Sincerely,

Ted Lor

Ted Lorensen
Assistant State Forester
Ph: 503-945-7206

TL:kg

Attachment

c: Marvin Brown, State Forester
Lance Clark, GNRO
James E. Brown, GNRO
Gregg Cline, ODF

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White Paper - Forest Practices "Protection" on Forestlands in the Context of Dynamic Ecosystems

Issue Summary

What does forest protection mean and how should protection be accomplished in dynamic forested landscapes where different ownerships are dedicated to different purposes? To develop a new approach in response to this question is not a trivial task as it involves a revolutionary change in nearly 100 years of how forest protection is perceived. A static perspective dominates the existing policy and science frameworks under which "protection" is applied. There is considerable debate in the scientific community and a tremendous diversity of views among scientists and interests about what is protection and what forms and levels of protection are "adequate." It does seem apparent that the current approaches to protection often fail to meet their objectives. And there is emerging scientific evidence that the basic underlying premises about forest protection are flawed. Based upon this evidence there is a strong argument to be made that by better considering key ecosystem processes and cause-effect relationships we may be able to achieve less costly and more efficient and effective protection strategies. At a minimum we need to learn to ***not*** *"fix", or attempt to prevent impacts that we have historically viewed as "damage" such as riparian windthrow or in-unit landslides. On a technical basis, analytical tools are being developed that can help us evaluate alternative approaches at a watershed scale and assess their potential impacts to both aquatic habitats and timber production. Vegetation can be retained more efficiently if retention emphasizes locations where disturbance will occur and where interaction with the vegetation and disturbance events will do the most good for habitat values. Protection focus needs to shift from disturbance prevention to utilizing the inevitable disturbance as an opportunity. Research emphasis is needed to better evaluate and document the impacts of wood production emphasis forests on key functions and processes that are thought to be vital to maintain fish habitat. Equal emphasis is needed to document how truly vital these key functions and processes are to maintaining fish habitat and other values. This paper is offered as a starting point for further discussion about a "new approach," but it is clear that considerable energy will be needed to overcome existing barriers to develop and move potential new concepts to reality.*

1.0 Purpose

At its July 2003 field tour and meeting, the Oregon Board of Forestry discussed how to better provide resource protection under the Oregon Forest Practices Act in the context of dynamic landscapes. This means how does "protection" in the near term relate to protection in the long term when ecosystems are constantly changing over space and time due to forest growth and succession combined with periodic events such as drought, insect and disease epidemics and wildfire. The Board members expressed concern that protection for one forest value or from one risk to that value in the near term may actually decrease protection from other risks or even decrease protection from the same risk over the long term. As a result of the Board's discussion, the Department of Forestry agreed to draft a white paper that:

- Describes current policy and science related to resource "protection" under the Oregon Forest Practices Act;
- Explores the underlying premises of how "protection" is currently applied in consideration of what is now understood about dynamic ecosystems;
- Explores alternative concepts for better providing resource "protection" in dynamic landscapes under the Oregon Forest Practices Act; and
- Recommends possible courses of action to develop concepts into practicable, ecologically and economically appropriate alternatives to current Forest Practices Act rules for application to forestlands managed for different purposes, i.e., rules for wood production forests might be different than rules for reserve or multi-resource forests.

2.0 Introduction

Foresters describe many resource management practices as "protection." The phrases "stream protection," "fire protection," "endangered species protection," "ecosystem protection," "protected areas;" etc., are all used in a context of "protection" of forest resources. Based upon a range of desired outputs, values and beliefs, "protection" can mean many things to different people. For example, to some people forestland is protected only if it has been formally designated as a "reserve" where "natural" processes "manage" the forest. Other people view reserved forestland as unprotected, since the potential ravages of nature -- fire and insects -- are left to take their course.

In either view, use of the term "protection" implies that we are trying to prevent something from changing or from being "damaged." Despite this implication, processes will occur that ultimately will change the landscape or ecosystem at any number of scales. How those changes are viewed is often very different based upon perceptions of the role of natural processes. Thus, to provide a consistent context, this paper first discusses disturbance, resiliency and dynamism over time and across forested landscapes.

Second, this paper discusses the existing policy framework under which "protection" is applied focusing on those policies that attempt to impose a static perspective. With regard to forest management policy, the Board of Forestry recently adopted a new policy document, the Forestry Program for Oregon (FPFO). The FPFO articulates a framework of different roles for different ownerships in achieving sustainable forestry, roles that range a spectrum of primary purposes from wood production to multi-resource to reserve to urban forests. This framework implies that resource protection approaches and policy would vary according to these different roles or purposes.

Over the past 2-3 decades our scientific understanding of forest dynamics from the site to stand to landscape to regional scales has changed our view of what it means to sustain or protect desired forest conditions. Desired conditions of forests or aquatic systems cannot be sustained by static or fixed place rules or land allocations because of natural ecosystem dynamics and the vital roles that disturbances play in maintaining healthy, productive, and resilient ecosystems over space and time. While we can generally predict changes such as vegetation growth and succession, most disturbances cannot be predicted either spatially or temporally. And we have discovered that some of our most successful "protections" have created conditions that drive uncharacteristically intense disturbances that our forests have not evolved to accommodate, e.g., uncharacteristic wildfires in dry pine and mixed conifer forests. Thus, it is timely that the Board of Forestry discusses under the scope of both the Forestry Program for Oregon and the forest practices program, what does forest protection mean and how should protection be accomplished in dynamic forested landscapes where different ownerships are dedicated to different purposes. This is by no means a trivial task as it involves a revolutionary change in nearly 100 years of how forest protection is perceived.

3.0 Forest Ecosystem Dynamics

3.1 Historic Disturbance

Forests are ever changing. Fire, windstorms, floods, insects and disease are natural change agents that often work in combination to set the stage for forest renewal. The following is from the recent (IMST) [1] report on the recovery of wild salmonids in western Oregon forests:

> "Periodic disturbance plays an important role in maintaining the integrity and variability of salmonid habitat, since the extent, magnitude, and frequency of disturbance are key components in shaping landscape structure and functions. For example, within the Oregon Coast Range, historic patterns of disturbance are dominated by climatic events that result in heavy precipitation, windstorms, and lightning-caused fire (Benda et al., 1998; Agee, 1993). The frequency, intensity, and magnitude of the response to these disturbances vary widely, depending on the structural components of the landscape (i.e., topography, channel networks). These structural components ultimately determine the impact of disturbances and their effect on habitat integrity. For example, input of large wood into streams involves an interaction between disturbances that kill trees (e.g., fire) and floods that are of sufficient magnitude to transport them. Variation in the frequency of fires affects the rate of wood input to streams, as well as its potential size. Along the northern Coast Range, for instance, the fire frequency exceeds 400 years (Agee, 1993), allowing time for forests to produce very large trees.
>
> "Although fire is not the only cause of tree mortality, the synergy created when a catastrophic fire is followed by intense storms leads to massive inputs of sediment, rock, and wood into aquatic systems (Benda et al., 1998). The variability in the amount of wood and sediment added to streams over time and space is just one part of landscape dynamics that should be considered when developing management strategies to protect salmonid habitat. Although we may never be able to recreate the historic patterns of landscape disturbance, they can

[1] The Independent Multidisciplinary Science Team was established under Oregon Senate Bill 924 (1997 Or. Laws, ch. 7) to provide independent scientific oversight of the Oregon Plan.

be used as a guide to choosing management options which may ultimately maintain habitat integrity and function across the current landscape."(IMST 1999, p.15)

Disturbance is a process in ecosystems. Climate cycles, forest fires, windstorms, landslides, floods, and insect and disease outbreaks have been normal events in the dynamic landscape of the Pacific Northwest. Over the centuries, small and large disturbances in combination with forest succession created diverse forests. The landscape was never homogeneous, and only part of the forest was old growth at any one time (Agee, 1993). Wimberly et al. (2000) estimated that old-growth forest coverage in the Oregon Coast Range varied from 25-75% during the past 3000 years.

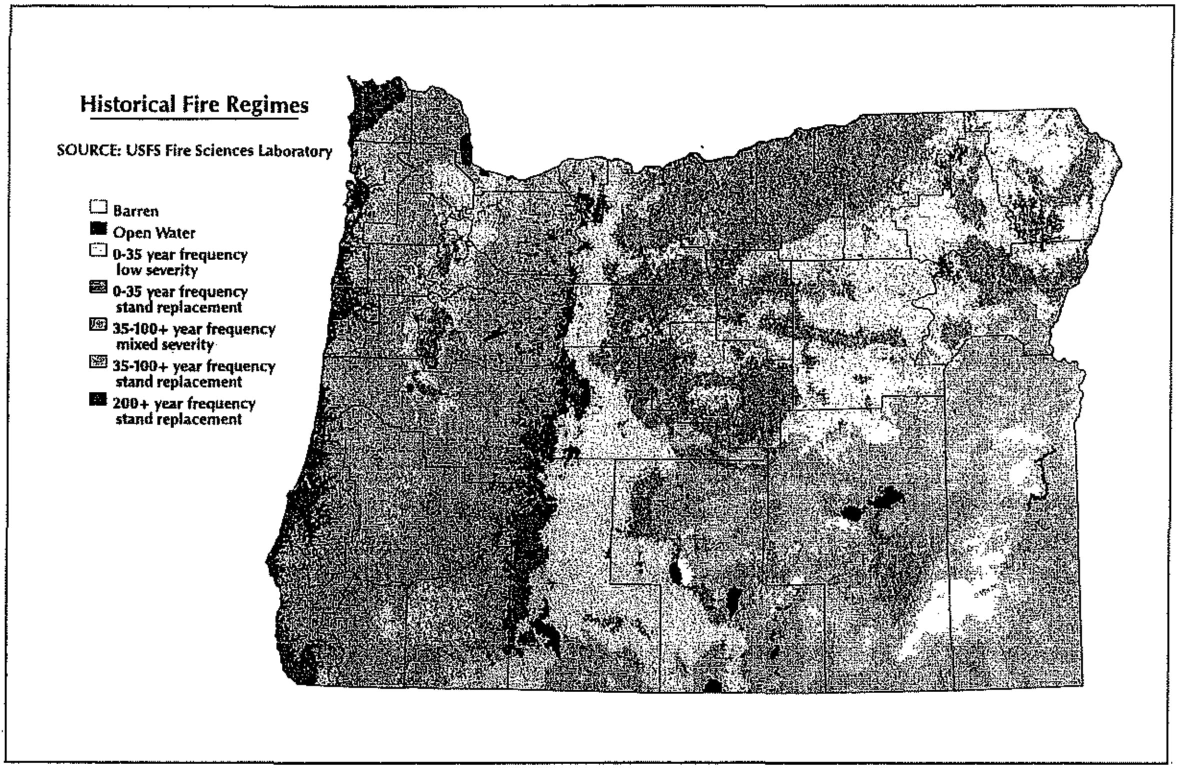
Disturbances range from infrequent to frequent, simple to complex, and very large to very small. In forests, large-scale disturbances generally favor colonizing species such as Douglas fir. Small-scale disturbances can create gaps where shade-tolerant understory species and herbaceous plants flourish, and also increase the supply of snags and large woody material in the forest.

However, even without disturbance events, forests change significantly over time. Through forest succession, biomass accumulates, canopies close and open, and understory and over story vegetation changes. The source of energy for forest ecosystems is the sun. Forests accumulate organic material (nutrients and energy as carbon) through photosynthesis, transpiration and subsequent plant tissue growth. Accumulation varies over time and space, with the rate of accumulation increasing through 80 to 120 years after stand initiation, then with the rate of accumulation decreasing as the stand further matures. This timeline varies by forest type. Energy and nutrients are passed from organism to organism through the food chain as one organism eats another. Over time, plant (and some animal) mortality results in an increase in dead organic matter on and in the duff layer of the forest floor.

The ultimate fate of energy in ecosystems is for it to be lost as heat. Decomposition of dead organic matter releases limited amounts of heat and all of the carbon initially sequestered by plants upon full composition, while in most forests in Oregon (without removal of wood etc. through harvesting), the major loss of heat and of some carbon ultimately comes through combustion. The fire regime describes the frequency and intensity of the combustion cycles. Fire regimes are highly variable throughout Oregon. Map 1 illustrates some of the general fire regimes across Oregon. Even within these general regimes, fire cycles vary based upon aspect, topography, stand type and other factors.

Some animal species depend on or are associated with early successional habitats created by disturbance, and on the pattern of habitats across the landscape (Pickett and White 1985). Similarly, some animals depend on or are associated with older forest habitats. In either case, structural legacies such as downed wood and snags created by disturbances provide habitat. For example, trees that topple in a windstorm become, as they rot, homes to fungi, voles, mice, nitrogen-fixing bacteria, and amphibians. Big game such as deer and elk need open areas of meadows, shrub fields or young forest to graze, but also need forest cover during winter storms or to hide from predators. Hundreds of species find homes in Pacific Northwest forests, and each species has a different set of habitat needs.

Map1



The historic condition of vegetation patterns that characterized the riparian forests in which salmonids evolved and thrived was significantly influenced by natural disturbances such as fire, insects, disease, wind throw, landslides, and floods. A high degree of spatial and temporal variability was present at both small and large scales. Fire disturbance has received increased attention in recent years, perhaps because it is arguably the disturbance type that has been most influenced by human activities across the landscape (Agee, 1998). More recently, increased attention has been given to the effects of landslides and flooding in how they influence the physical and biological characteristics of riparian areas and associated aquatic species. From a scientific perspective, what has been recently hypothesized and supported through currently limited research is that disturbance maintains and creates biodiversity and enhances ecosystem productivity. Nonetheless, disturbance, just like forest succession, creates winners and losers among the forest's inhabitants (including humans).

In summary, disturbance and plant succession play important roles in the condition and composition of upland and riparian forests. Management and/or regulatory prescriptions that do not consider the role of disturbance and historical patterns of forest succession may result in riparian forests that differ significantly from what occurred in the past. However, it is an unproven assumption that such differences are meaningful or adverse to our protection objectives.

3.2 Forest Succession

Pacific Northwest forests generally follow a typical progression of stand structures over time following a major stand-replacement disturbance. One model of forest succession following disturbance has been described by Oliver and Larson (1996). Their model includes stand initiation, stem exclusion, and understory reinitiation. The final stage of stand progression identified by Oliver and Larson is older forest structure. This definition is based upon natural stand progressions that could take 200 to 1,000 years or more in the western hemlock/Douglas-fir forests.

Partial disturbances, caused by natural agents such as low intensity fires and windstorms, can result in patchy openings in stands and may not affect all sizes of trees in the stand. Such disturbances can result in stands with numerous variations in structure, often with remnant patches or individual trees larger or smaller than the rest of the stand. In some instances, the residual trees grow fast enough to prevent the establishment of another age class. In other instances, new trees, shrubs, and herbs regenerate in the larger openings. The patches of new regeneration will generally follow the same sequence of development that occurs in stands that regenerate following a major disturbance. Partial disturbances may thus result in stands with a variety of age classes and vegetation development (McComb et al., 1993).

The disturbance pattern in high order floodplains (lowland streams) is generally more frequent but of much less magnitude than upland streams. However, the area of affected floodplain is much greater (wider) for lowland than upland streams. In my opinion, the pattern of natural vegetative succession may well have been more dynamic in lowland areas, where hardwood species were likely more dominant in the riparian forests and beavers and other floodplain herbivores likely modified vegetation patterns in significant ways. Our riparian monitoring data illustrates reduced conifer stocking and increased presence of hardwood as stream size increases, with "large" streams having on average less conifer basal area than medium and small streams.

An investigation of forest succession following a high intensity fire is presented by Tappeiner et al. (1997). In this study, the diameters and diameter growth rates for the first 100 years of old-growth stands on the Oregon Coast were compared to 50-70 year-old second-growth stands. It was determined through stem analysis that the regeneration of old-growth forests does not necessarily follow the scenario of a stand replacement disturbance followed by an even-aged forest. The ten old-growth study sites that were examined showed that the development of these forests occurred over a prolonged period where the trees grew at a low density with little self-thinning. It is suggested that where the management objective is to speed development of old-growth characteristics, thinning may be needed in dense young stands. This analysis determined as few as 40-49 trees per acre in the early stages of some old-growth stands:

> Density of young-growth stands in this study was greater than that of old stands [when the stand was younger than 100 years], and diameter growth rates of individual trees were much less, even in the thinned stands. Our stand simulations also indicated that young stands with even as few as 250 trees/ha [about 100 trees/ac] will develop along a different pathway than the old stands. (Tappeiner et al., 1997)

In addition to natural disturbances, forest succession dynamics have been greatly influenced by extensive logging of old growth forests, intensive forest management, and recent decades of fire suppression.

Plantation forestry began as early as 1915 in the Coast Range. Past management in western Oregon emphasized reforestation with Douglas fir. In more recent years, reforestation efforts have shifted more towards a diverse mix of native conifers and hardwoods. Specific sites are more closely evaluated for the appropriate species to plant, favoring those that occur there naturally. While Douglas fir still dominates in many locations this has resulted in the greater use of species such as western hemlock, western red cedar, Sitka spruce and red alder. Thinning prescriptions on state forestlands in recent years have tended to favor opening stands up more, encouraging more diverse understory development.

Harvesting practices have also increased the percent of the forest landscape in the stem exclusion stage of development. This is particularly true in western Oregon where clear-cut harvesting is the preferred method for the growing and harvesting of Douglas-fir forests. Harvest rotations are on average about 50 years (some now as short as 35 years), and other than the period immediately following harvesting and thinning operations, these forests are generally in the stem exclusion stage of development their entire life.

Fire suppression has generally resulted in stands of increased density, particularly in eastern Oregon. Where fire has not been allowed to thin out the small trees and fire sensitive tree species, tree densities have increased and resulted in competition for water and nutrients. Trees that are under water or nutrient stress are more vulnerable to insect attack and disease outbreaks. Drought conditions will increase some of the stress factors, all of which result in a higher risk of more intense disturbance events (Oester et al., 1992). In recent decades, harvesting methods that involve the thinning of over-stocked stands has become a preferred approach in many areas to improve forest health and minimize some of the negative effects of fire suppression.

3.3 Fire

Fire is a significant force in the development of Pacific Northwest forests. A number of factors affect fire return intervals, including rainfall pattern, frequency of lightning, and frequency of fires started by people. In the north and central Coast Range, there is evidence that large forest fires occurred infrequently, about once every 300-to-350 years in any particular spot, but were usually high-intensity, stand-replacement fires.

Smaller fires were more frequent, occurring about every 50-to-100 years. In the Cascades, more lightning led to moderate fire frequencies, with the return interval ranging from 25-to-100 years. In eastern Oregon and southern Oregon, fire return intervals range from 10-to-100 years. Fire effects covered a wide range, including severe, stand-replacement fires; patchy fires; and understory burns (USDA Forest Service et al., 1994a). These patterns represent broad trends with local exceptions likely due to topography, microclimate and other influences.

In the Pacific Northwest, forest fire ignition historically came from two primary sources: lightning and Native American fires. Although fire was already part of the western Oregon landscape when European-American settlers arrived, the evidence indicates that the frequency of large fires increased in the 1840s, with the growing number of European-American settlers (Pyne 1982). Between 1846 and 1853, a series of large fires burned over 800,000 acres between the Siuslaw and Siletz Rivers in the central Oregon Coast Range. The largest fire, known as the Yaquina Burn, covered 480,000 acres. The Nestucca Fire burned over 300,000 acres. It is not known whether the fires were caused by lightning, Native Americans, or settlers. There were a number of large fires throughout the Pacific Northwest in 1868, with the largest fire in northwestern Oregon burning around Yaquina Bay.

By the early 1900s, people had begun to form fire control organizations to fight fires. The growing and harvesting of forest tree species was not practicable until forest fires could be more effectively controlled. From the 1920s to the 1960s, the annual area burned by forest fires declined steadily. But the annual area burned began to increase in the 1960s, possibly due to more logging and more prescribed burning, with some prescribed fires escaping control.

Because there were long intervals between fires in northwestern Oregon, very old forests with large trees persisted in many areas. When major fires did occur, they generally killed most trees and covered large areas. These often dramatic fire events, which usually were associated with drought years and warm, dry winds, left large amounts of dead and downed wood and snags in the forest (Agee, 1990).

After large fires, natural regeneration depended on the fire intensity, weather patterns, source of seed, and numerous other factors. As a result many different types and compositions of stands developed. Fire intensity and fire return intervals influenced what tree species were present in a forest. Infrequent crown fires or severe surface fires that usually killed all trees in the stand characterized the north coastal mountains and western hemlock/Douglas-fir forests. After the fire, western hemlock seedlings often outnumbered Douglas fir. But Douglas fir were usually more robust and dominated the site for 250-to-1, 000 years, when the species began to disappear from the stand. Western hemlock became more common until eventually it dominated the stand.

In the Cascades and central Coast Range, more frequent but more moderate fires often left a mosaic composed of patches of dead and surviving trees. Stands often consisted of two or more age classes, with the various age classes originating after different fires.

In eastern and parts of southern Oregon, historic fire recurrence was relatively frequent. Low-intensity burns occurred every 8-to-20 years in lower elevation ponderosa pine and every 20-to-40 years in mixed conifer forests (Oester et al., 1992). The fire-tolerant ponderosa pine and western larch would be left after these periodic fires, and the fire-sensitive fir species would be eliminated. This resulted in relatively open stands across the landscape with minimal build up of brush in the understory and low tree densities.

In all forest types, exposed soils were more likely to erode or collapse in slope failures in the years after a large fire. Slope failures deposited wood, other vegetation, boulders, and sediment in streams. These slides or debris flows may have adversely impacted fish habitat in the short term, but over the long term helped to create more complex habitat. The logs and boulders created pools, gravel formed spawning beds, and structural complexity created complex habitats (Reeves et al., 1995).

Fire interacted with other disturbances such as heavy rains and windstorms. Severe fires created large open areas. Fires reduced the amount of fine root biomass and altered the routing of precipitation through the soil profile, increasing the probability of mass soil movements on slopes. Also, the trees on the edges of fire openings were more susceptible to wind throw during storms. Finally, a variety of insects and diseases attacked injured and dead trees. In general, fire is now less prevalent on the landscape than it was before the Twentieth Century. When large fires do occur, fire effects can be severe because fire suppression has created more uniform stands and allowed fuel loading to increase.

Decades of fire suppression has increased the frequency and intensity of insect and disease disturbance in eastern Oregon, where relatively dense stands of pine and mixed conifer forests have become stressed due to increased competition for limited resources. As a result, these forests can be more susceptible to high-severity fire and insect and disease outbreaks than was historically the case. For low-severity fire regimes, Agee (1998) suggests that a combination of under burning and thinning to modify the fuel loads in the system can result in a forest that more closely resembles a natural pattern. In areas where moderate-severity fire regimes were historically present, harvesting techniques that utilize partial cuts, small patch cuts with snag retention, and a system of reserves will result in a forest structure that more closely resembles the historic pattern than either even-aged management or a no-harvest reserve system that does not recognize natural disturbance processes (Agee, 1998). Management options that influence fire behavior in forests adapted to high-severity fire regimes are relatively limited. Severe weather appears to be the controlling factor in these forest-types, thus large stand-replacement fires are probably going to occur regardless of the fire suppression activities or harvesting methods that are employed (Agee, 1998).

In considering forest ecosystem dynamics, many scientists believe that riparian forests have different rates of disturbance from fire than adjacent uplands. Recent research (D Olson) has investigated the role of fire in riparian forests. This study reconstructed the historical occurrence of fire within riparian forests along different stream sizes within three different national forests in Oregon. Two study areas were located in mostly dry, low-severity fire regime forests in the Blue Mountains of northeastern Oregon and the third study area was located in more mesic, moderate-severity fire regime forests on the western slopes of the southern Oregon Cascades. Based on the data from this study, fire was common historically in the riparian zones of all three study areas. Fire return intervals for riparian forests in one of the dry sites ranged between 13 and 14 years, and were only slightly longer than those for upslope forests (averaging one year longer). In the second dry site, differences between riparian and upslope forest return intervals were greater, ranging between 13 and 36 years for riparian forest, compared to 10 to 20 years for upslope forests. However, further analyses suggested that forest type and slope aspect play a larger role than proximity to a stream when it came to differentiating fire regimes in the second study area. For both dry sites it appeared that stream channels did not necessarily act as fire barriers during the more extensive fire years. The moderate severity site riparian return intervals were somewhat longer (ranging from 35-39 years) than upslope return intervals (ranging from 27-36), but these differences were not significant. Fires were probably more moderate in severity and likely patchy, considering the incidence of fires occurring only at a riparian plot or an upslope plot within a pair, but not at both. Based on the results the author concludes that: 1) restoring fire, or at least conducting fuel reduction treatments, will be necessary to maintain riparian forests in comparable forest ecosystems, 2) forests should be managed according to forest type, not just by proximity to a stream, and 3) historical recruitment of large woody debris was likely small but continuous for low-severity fire regime riparian forests, with a relatively short residence time, and patchy and more pulsed for the more moderate-severity fire regime forests.

3.5 Wind

Severe windstorms can blow down or snap off most trees in a stand, but usually storms blow down scattered trees over a large area. Although severe storms have dramatic effects, ultimately small-scale events have more impact on the forests because they are more common. A number of factors make trees more susceptible to wind. Root disease and stem decay are the most common biological factors contributing to blowdown. Poorly anchored trees are more likely to be uprooted by wind; trees may have shallow rooting as a result of shallow soil, bedrock, or a high water table.

In northwest Oregon, periodic severe windstorms typically occur between October and March. The Columbus Day storm on October 12, 1962, blew down an estimated 17 billion board feet of timber in western Oregon and Washington. Other major windstorms occurred on January 9, 1880, in northern Oregon; December 4, 1951, in western Oregon; and the winter of 1995-96 in western Oregon. The winters of 1949-52 and 1955-56 also had heavy winds.

As is typical of most disturbances, windstorms interact with other events in many ways. Douglas-fir bark beetles killed over 2 billion board feet of live trees between 1951 and 1959, after getting started in blowdown from the winters of 1949-52 and 1955-56. After the Columbus Day storm in 1962, beetle damage killed an additional 2.6 billion board feet of timber by 1965.

3.6 Floods and Landslides

Western Oregon, especially the Coast Range, has frequent, intense winter rainstorms. Heavy rain periodically results in flooding. The most severe floods, such as the flood of February 1996, are usually rain-on-snow events, when heavy rain falls on snow, swelling the streams with melted snow and rain. Heavy rains also saturate soils, particularly where other disturbances such as fires have exposed the ground. The saturated soils can give way and start landslides and debris flows.

Floods and landslides are more common in the cool, wet periods of climate cycles. Over the past 150 years, major floods occurred in Oregon in 1861, 1890, 1948, 1964, and 1996. Floods and landslides have different effects on complex, resilient streams and simplified streams. Complex streams have a much better ability to absorb impacts from flooding, and the impacts are more likely to be positive. Simplified streams are more likely to be scoured and damaged by the same event (Rapp 1997). Major floods can scour streambeds, move sediment and logs, and carve new channels. Scouring will damage streams, but floods can bring in wood and gravel that creates new and more complex habitats.

These events interact with fire in shaping landscapes. In a comparison of streams in the Coast Range (Reeves et al., 1995), scientists found that the stream habitat most complex and favorable to coho salmon was where catastrophic fire and landslides had occurred 160 to 180 years ago. Historically, western Oregon streams would have represented a mosaic of habitat conditions, with some streams accumulating sediment (aggradation) and others losing sediment (degradation), in cycles lasting decades or centuries.

3.7 Insects and Disease

Insects and diseases are also significant disturbances in forests. Periodic insect outbreaks have impacted extensive areas of forestland. The Douglas-fir bark beetle has probably killed more Douglas fir in Oregon than any other insect. This insect builds huge populations in wind thrown, fire-killed, or weakened timber. Bark beetles have killed trees comprising over two billion board feet of timber after major windstorms, at least twice in the last fifty years in western Oregon.

The hemlock looper, a pest of old growth hemlock stands, has had several major outbreaks in western Oregon this century. The looper-killed trees consisted of approximately 50 million board feet of timber in Tillamook County between 1919 and 1921. Other looper outbreaks occurred east of Seaside in 1944 and in the Coast Range from 1961 to 1963. The spruce aphid and hemlock sawfly can also kill significant numbers of trees in outbreaks. With the exception of the Douglas-fir beetle, most of these insects rarely cause significant damage in present-day forests.

Diseases were also common in the original forests of northwest Oregon. Stem decays were more abundant in older forests than in younger ones, largely because decay increases, as trees get older. Root diseases were also common, but kept in balance by the natural processes of wind throw and colonization of disease patches by resistant or immune tree species. Hemlock dwarf mistletoe was abundant, but periodic large fires diminished local populations.

Disease and insects combine with wind damage to create patchy stands. The interactions of wind, root disease, and bark beetles create canopy gaps, mix soils during tree uprooting, and increase structural and biological diversity in stands.

3.8 Resilience and Legacies

As described earlier, some view ecosystems as fragile, while others view ecosystems as hardy and resilient. With the relatively recent eruption of Mt. St. Helens and some of the very recent large catastrophic fires, lessons in resilience are underway. I believe that many were surprised at how well many species survived the St. Helens eruption in a number of different ways; and many were surprised at the rapid rate of "recovery." These events also provide a backdrop about how different management objectives and approaches may impact the pathways for revegetation and recovery.

There are many unknowns about ecosystem resilience. To a large degree resilience in some ecosystems may be greatly affected by "legacies," both physical and organic (e.g.; downed wood and snags) left after disturbances. Given the range of forest management strategies and diversity of forest ownerships, we have the framework to evaluate resiliency under the suite of forest management approaches consistent with appropriate expectations based upon those roles.

4.0 Policy Background

Change agents and forest succession are viewed very differently by different elements of society. Some people, including some scientists, view change agents, as detrimental to a "healthy" forest since they can prevent desired outputs such as timber. From this perspective, protecting forests to prevent or control fire or insect outbreaks is viewed as critical to achieving the primary purpose for the forest and would be entirely appropriate for wood production and urban forests and possibly for many multi-resource forests.

Others, also including some scientists, view natural change agents as relatively benign since they are part of a natural pattern that is believed to lead to a healthy state, such as old-growth forests that are felt by some to be perpetual. From this perspective, change caused by man under the guise of protection is considered adverse, while change caused by "natural events" is desirable or somehow "better" protection. This view is entirely appropriate for forests whose primary purpose is reserves for natural values such as National Parks and wilderness areas.

Both points of view dominate different personal value systems and different parts of current forest management policy. And they dominate different sectors of the scientific community, meaning there is not scientific unanimity on understanding how ecosystems function or what appropriate policies for their "protection" should be. This schism in the scientific community, between those who see nature as dynamic and robust and those who see it as static and fragile, is not likely to change in the near term, and perhaps never. But it certainly complicates understanding of the issues for policy-makers and the public.

From a landscape perspective the outcomes desired by forest policies are often not being achieved. With regard to forestland fire protection policy, aggressive fire prevention and suppression remains a dominant tactic. However, this tactic without otherwise managing forest stand composition has in recent years led to overstocked and unhealthy forest across significant portions of Oregon's drier forests. Fire policy is only one set of policies impacting forestland management. Federal Clean Water Act (CWA) and Endangered Species Acts (ESA) rules often call for protection from any short-term adverse effects of management practices, almost assuming a steady state of outcomes where protection will maintain the existing conditions of the forest for all time. Policy related to management of federal forestlands recognizes the need to manage dynamic landscapes, yet relies on a static "reserve" strategy where active management is shunned, but where fire suppression often continues. It is fair to say that the idea behind the reserve system (while the location and extent of reserves would remain static) was to allow natural processes to dominate and, thus, the ecosystems within the reserves were not viewed as static. CWA and ESA standards and processes often hinder active management on federal lands. Both land allocation and management standards on federal lands are established based in part on perceptions of the need to "mitigate" resource protection and land uses on non-federal lands.

On non-federal lands, resource protection is provided mainly through the standards of the Oregon Forest Practices Act in combination with the Oregon Statewide Land Use Program. The land use program has as one goal the maintenance of forestlands for forest purposes, with the focus of retaining relatively higher timber production lands as the commercial forestland base. The Forest Practices Act is a "best management practices" (BMP) program that establishes resource protection objectives and requires application of BMPs as is needed to achieve the objectives.

Public expectations about forestland policies have generally placed higher protection burdens on private forestlands than other private land uses. These public expectations continue to evolve. Since the inception of the Oregon Forest Practices Act, the overall policy direction related to management of private forestlands is:

> "To encourage economically efficient forest practices that ensure the continuous growing and harvesting of forest tree species and the maintenance of forestland for such purposes as the leading use **on privately owned land**, consistent with sound management of soil, air, water, fish and wildlife resources" (emphasis added)

Policy direction related to protection of water, fish and wildlife has evolved and become more specific over time. Specific policy was established in the Forest Practices Act statutes (1987 and 1991) for protection of water quality ("to the maximum extent practicable meet state water quality standards"). General policy was established in the original statute for fish and wildlife protection ("overall maintenance"). Policy for protection of "sensitive resource sites" was established by Oregon's Legislature in 1987. In considering private forestland protections for fish and wildlife, the Board has the discretion to consider the role that federal and state lands play in "overall maintenance" when determining the degree that forest practices on private lands will contribute to the overall maintenance, or with maintenance of specific resource sites. The 1991 Legislature established specific targets for the retention of downed wood and snags to maintain and develop legacy "structures." These standards reflect a set of public expectations that appear substantially different for forestlands compared to other private land uses. As a simple example, residential and farm uses do not have either specific or general regulatory expectations for protecting wildlife (e.g., no requirements to leave downed wood or green trees/snags) with the exception of avoiding actual "take" as that term is applicable when ESA listed species are at issue.

During development of the 1994 Water Protection rules, the Board of Forestry established in rule **(629-635-0100)** that:

> "There is a unique concentration of public resource values in and near waters of the state because these areas are critical for the overall maintenance of fish and wildlife and for maintaining water quality. Consequently, the policies of the Forest Practices Act, including encouraging economically efficient forest practices, are best achieved by focusing protection measures in riparian management areas. "

Focusing protection in riparian management areas is consistent with the approach used in the forest practice rules for "sensitive resource sites" such as spotted owl or bald eagle nest sites. Nonetheless, the policy choice to emphasize resource protection as the leading use in riparian areas, rather than growing and harvesting trees in these areas was controversial at the time, and for some remains controversial.

The forest practice rules and rule guidance have accepted that temporary disturbance is allowable and even desirable in the context of acceptable short- and long-term impacts and benefits, recognizing that vegetative and resource recovery will occur. Some critics of this policy argue that this site-specific approach needs to be applied in the context of watershed or landscape assessments to avoid the potential for adverse cumulative impacts.

Scientific perceptions about the appropriate scale and scope of forest protection policies are changing. The current forest practice rules are applied on an operation-specific basis. While the rules were developed with possible broader scale impacts in mind, they do not include a process to limit operations based upon broader scale cumulative conditions. The September 14, 1999 Technical Report 1999-1 from the Independent Multi-disciplinary Science Team (IMST) argues that "a policy framework that incorporates landscape perspectives and makes regulation, management, and voluntary actions possible at this scale is needed."

As discussed earlier, the Board of Forestry's FPFO articulates a policy framework of different roles for different ownerships in achieving sustainable forestry. These roles include "reserved," "multi-resource," "wood production" and "urban" forests. This policy framework is based upon the hypothesis that this combination of different roles will, in aggregate, best sustain the full array of forest benefits that constitute the greatest permanent good. Assessment and monitoring projects are underway or are being designed to test this hypothesis. Note: The department is working with ODFW and others to implement the

Technical Report 1999-1 from the IMST concludes that the policy approach for recovery of salmonids should be the "emulation (not duplication) of the historic range of conditions across the landscape." The IMST concludes that:

> "The historic range of ecological conditions in the Pacific Northwest, both of habitat and of salmonid stocks, is important because it provides a framework for developing policy and management plans for the future. The performance of salmonids under historic ecological conditions is evidence that these habitats were compatible with salmon reproduction and survival. Land uses resulting in non-historical ecological conditions may support productive salmonid populations, but the evidence for recovery of salmonids under these circumstances is neither extensive nor compelling. Therefore, we conclude that the goal of management and policy should be to emulate (not duplicate) natural processes within their historic range. The recovery of wild salmonid stocks is an iterative process. Just as policy and management have changed in the past they will continue to change in the future, guided by what we learn from science and from experience."

One could infer from this conclusion that "protection" for salmonids requires emulation of both natural conditions and natural processes within their historic range. For managers of wood production, urban and some multi-resource forests, this creates some enormous conflicts. Are managers of forests with those primary purposes to emulate processes such as wildfires, floods and landslides over the full range of their historic magnitudes? And if so proposed how might federal ESA and CWA regulatory agencies respond with their requirement to avoid short-term risk to water quality or individual organisms?

Federal forestland protection policies are set through both land management policies (for federal lands) and federal regulatory programs (e.g., CWA and ESA). These policies have both direct and indirect impacts to non-federal forests. Recent changes to the 2001 federal Wildland Fire Management Policy are illustrative of the current federal policy setting and its relationships to non-federal lands. The 2001 federal Wildland Fire Management Policy includes an implied assumption that the federal objectives of "ecosystem sustainability" and "protect and sustain ecosystems" are fully applicable across a landscape that includes private and other non-federal public lands. Furthermore, these objectives then result in the application of a strategy that "Wildland fire will be used to protect, maintain, and enhance resources and, as nearly as possible, be allowed to function in its natural ecological role." But it cannot possibly be allowed to do this while "protecting" forest values and private property without first receiving massive treatments to return fuels to conditions more consistent with natural fire regimes. And this strategy appears to ignore the primary purpose for wood production, urban and some multi-resource forests.

The lessons learned from the 2002 Fire Season indicate that implementation of these objectives and strategies results in increased loss of private and public forest resources. The recent fire seasons may also indicate that current federal wildland fire management policy may not be meeting the objectives for which the federal land use allocations have been established; i.e., it is (1) not maintaining late successional reserve forests at the levels that were planned or (2) the desired outcomes of natural processes in the reserves are undermined by uncharacteristic wildfire that results in conditions outside the range of historical conditions. Furthermore, the costs associated with "managing" the recent fires have exceeded the fire suppression budget, impacting budget allocation for non-fire program areas and undercutting other resource management investments.

It is true that to some degree, current federal policy has not been implemented as designed or intended due to various external and internal factors. Nonetheless, as discussed below, a new policy needs to be considered that recognizes that social, environmental and economic values all must be considered and sustained. The shift in policy we suggest is from one that "allows fire to function in its natural role as much as possible" to one that "emulates the functions of fire (when supportive of land management objectives) through active management that can include the use of fire." Context for this policy includes **both** the natural disturbance regime **and** the management objectives for the lands. This context should however, not assume that the natural fire regime is positive or superior to land management objectives, i.e., the primary purpose for the forestland in question. The strategies need to consider whether the role of fire (when it needs to be maintained given the land management objectives) is "better" emulated through other means than fire. In this context, "better" includes such factors as costs, risks, safety and the social, environmental and economic benefits of alternatives. Tools to conduct such analysis may be limited and in need of development.

Like fire protection, resource protection under regulatory programs such as the forest practices act continues to generate strong debate because of the highly polarized views about what is "adequate" protection. As we move toward improved integration of economic, social and environmental needs, tools to better weigh risks, benefits, and costs will be needed.

The Clean Air Act, designed to protect air quality is one factor in preventing the use of prescribed fire to address overstocked and unhealthy forests. Premises of the Clean Air Act include "manmade air pollution" which means air pollution that results directly or indirectly from human activities, and preventing the visual impairment of Wilderness and National Parks. In this policy context, smoke from wildfire is "natural," while smoke from prescribed fire is "man-made." Such a distinction when most wildfires are suppressed makes little sense.

Similarly, in a recently proposed DEQ rule related to water temperature standards they would define "Natural Condition" to mean "conditions or circumstances regarding the physical, chemical or biological integrity of a water of the State that are not caused or significantly contributed to by anthropogenic activities. Disturbances from wildfire, floods, earthquakes, volcanic or geothermal activity, wind, insect infestation and diseased vegetation are considered natural conditions." Such a definition does not recognize that many of these disturbance factors have been much reduced. As an alternative approach "Natural Condition" could be defined as "conditions or circumstances regarding the physical, chemical or biological integrity of a water of the State that are consistent with or mimic natural conditions and natural disturbance patterns. Natural disturbances from wildfire, floods, earthquakes, volcanic or geothermal activity, wind, insect infestation and diseased vegetation, or human disturbance designed to mimic natural disturbances are considered natural conditions."

In similar work done by the Forest Service and BLM related to "sufficiency" of federal forest management practices with water quality standards, sufficiency is judged against the assumption that the maximum possible shade is the most beneficial condition for "protecting" salmonids, an assumption not well supported in the scientific literature. The assumption may be flawed for at least three reasons. First, abnormally high shade levels have the potential to have a negative effect on fish productivity and survival because little sunlight, which supports the aquatic food base, gets to the streams. Second, hypothetically, overstocked riparian stands with abnormally high shade levels may result in uncharacteristically intense fire occurring in riparian zones, possibly allowing excessive sunlight that warms water beyond fish tolerances. Third, excessive shade in already cold streams may actually make them colder than ideal for fish and fish prey productivity.

In addition to federal and state policies, there exists other non-regulatory initiatives such as "sustainable forestry certification" that reflect yet another set of protection beliefs and policies. While intended to be market driven and voluntary, protection that might be achieved under these programs may not be supportive of state or federal policies. The Department had proposed for the State of Oregon to conduct reverse assessments, or critiques, of the two dominant certification assessment processes, SFI and FSC. The primary goal of the project was educational. The project results were intended to help both public and private landowners make more informed decisions regarding forest certification and to help certification systems operate in Oregon in a manner that promotes forest stewardship and complements Oregon's forest policies. However, the intended work remains on hold as funding and other issues remain limiting.

For additional information about federal policy issues, attached as appendix A is a monograph presented by Jack Ward Thomas at the conference "Fire in Oregon's Forests," Oct. 23, 2002 titled "Dynamic vs. Static Management in a Fire-Influenced Landscape - The Northwest Plan."

5.0 Processes and Functions

The recent Independent Multidisciplinary Science Team (IMST) report on the recovery of wild salmonids in western Oregon forests states:

> "On the basis of scientific evidence, we conclude that managing riparian areas differently than upslope areas as a strategy for protecting fish habitat is scientifically valid only if done with the goal of maintaining the dynamics of landscape structure and function. Riparian buffer strategies, as a single landscape feature with sharp upslope demarcations are not consistent with historic patterns."

Based upon our understanding of current science, riparian buffers have been demonstrated to provide and maintain a number of key functions such as shade. However, as the IMST appears to be arguing, riparian buffers are different features than what might be expected under natural disturbance patterns. Some obvious process differences may result. For example, the edges created by buffers may make retained trees more vulnerable to wind throw and thus, may accelerate large wood inputs in some locations.

Private forestlands have an established policy role of "growing and harvesting trees as the leading use." This choice results in harvest regimes that are not consistent with historic patterns. Furthermore, this choice results in fire suppression to protect the landowners' investments. Thus, there isn't an analogue in current management practices for severe disturbance events and the resultant processes that often result in the combined large pulses of wood and sediment to aquatic systems. This is one reason why blanket application of a rule or concept is inappropriate when taken out of context, that is, in ignorance of the primary purpose for the land in question. An extreme example of such an application would be to argue that wildfire and floods must be emulated in Portland Metro because it used to be forested and its lowland areas used to flood. Forest is no longer the primary purpose for Portland just as natural forest is no longer the primary purpose for forests that produce the wood our society needs for its high quality of life.

Forest types vary across Oregon based upon site conditions. Climate and topography are key variables in what forest type develops. Map 2 below shows the general forest types across Oregon. Within these general types there is considerable variability, with the relative variability increasing in drier climates where aspect and elevation become additional key variables. Illustration 3 demonstrates some of the general vegetation patterns in eastern Oregon.

Map 2

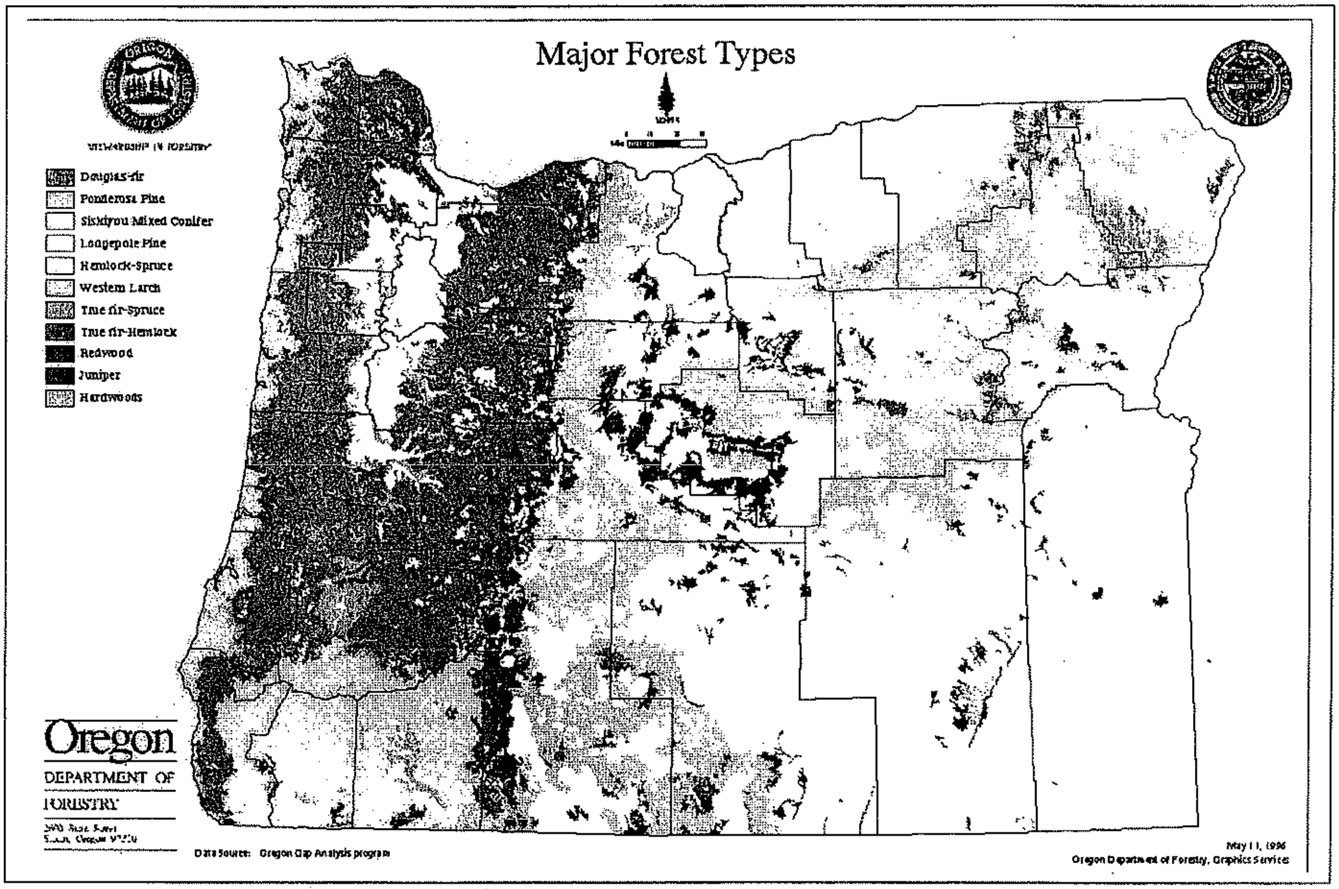
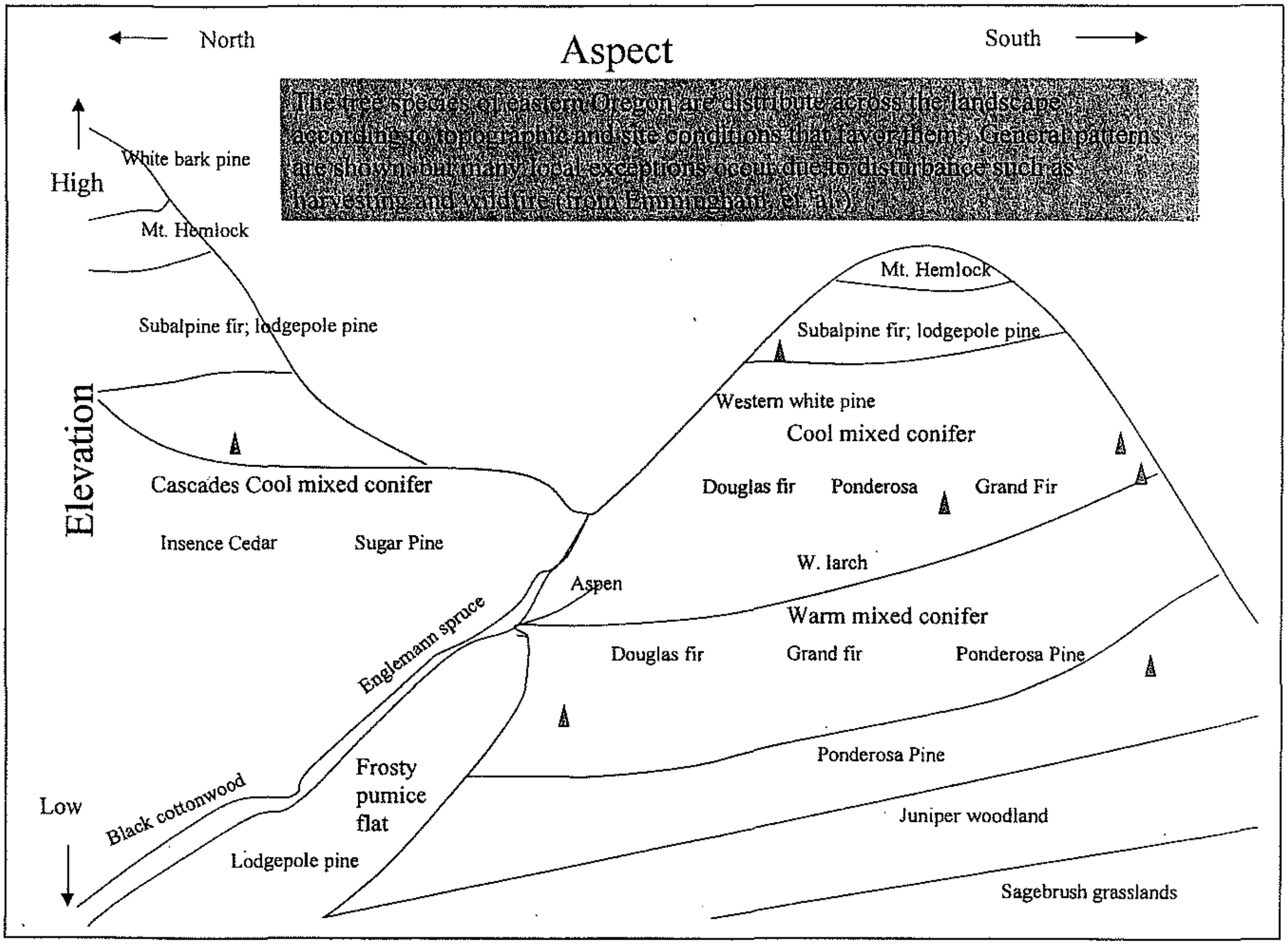

Major Forest Types
Douglas-fir
Ponderosa Pine
Siskiyou Mixed Conifer
Lodgepole Pine
Hemlock-Spruce
Western Larch
True fir-Spruce
True fir-Hemlock
Redwood
Juniper
Hardwoods
Oregon
DEPARTMENT OF
FORESTRY
Data Source: Oregon Gap Analysis program
May 11, 1996
Oregon Department of Forestry, Graphics Services

Illustration 3



The table below is a hypothetical example created by the author of key processes for delivering wood and sediment to streams and their likely outcomes based upon historic disturbance regime for several different general vegetation types.

Forest Type	Dominant Disturbance types	Large Woody Debris (LWD) Delivery Processes
Hemlock Spruce	1. Moderate wind 2. Intense wind 3. Flood	1. Small but continuous input of near stream LWD 2. Moderate to large pulses of near stream LWD 3. Moderate to large pulses of LWD and sediment both near stream and upslope
Douglas fir	1. Moderate wind 2. Intense wind 3. Flood 4. Stand replacement or mixed severity fires	1. Small but continuous input of near stream LWD 2. Moderate to large pulses of near stream LWD 3. Moderate to large pulses of LWD and sediment both near stream and upslope sources 4. Large to extreme pulses of LWD and sediment both near stream and upslope sources

True fir hemlock	200 year intervalstand replacement	Large to extreme pulses of LWD and sediment near stream.
Lodge pole pine	35-100 year interval stand replacement fires	Large to extreme pulses of LWD and sediment near stream. Upslope sources may be significant if fire followed by intense thunderstorm.
Ponderosa Pine	Low intensity frequent fires	small but continuous input of LWD

With fire suppression, a dominant process that provides both near stream and upslope sources of wood and sediment has been greatly reduced. Fire, where not stand replacement, may often be selective in favoring certain trees species or sizes. For example, in the Siskiyou mixed conifer type there is evidence that hardwoods are now less frequent in riparian stands due to fire suppression. Fire suppression along with harvesting large trees in riparian areas may result in riparian stands with relatively fewer large trees. Depletion rates for large wood that does enter streams may be much greater due to overall smaller piece sizes.

Fire suppression and other modifications to disturbance patterns create different dilemmas based upon the land management strategies. For reserve forest strategies, fuel buildups will occur until uncharacteristic fire becomes a much more likely outcome. For intensively managed wood production forests, the question becomes one of whether or not riparian or aquatic protection strategies that do not emulate natural conditions will be successful. The IMST argues that our management goal should be to emulate natural processes. They also argue that riparian buffer strategies by themselves are inadequate to recover salmon. This is certainly true given what we now understand about the effect of dams, water diversions, ocean conditions, hatcheries and harvest in the life cycle of salmonids. This may also be true to the extent that upland management effects are important and would not be mitigated by riparian protection measures.

In my opinion, an argument could be made, given the partial role that forests and forestland riparian areas play in the salmon life cycle, that the protection and habitat now provided by private forestlands under the Forest Practice Act rules and the Oregon Plan for Salmon and Watersheds is more than adequate. This argument would be strengthened by considering the combined roles of public and private forestlands, and in consideration of the relative contributions of other land uses and until such time as other possibly more limiting factors in salmon distribution and abundance are proportionately addressed.

While data may be limited, according to the State of the Environment Report (based upon DEQ monitoring sites) water quality from most forested streams remains good to excellent (and overall water quality is improving). Current habitat condition is arguable, since current conditions are the result of many legacy practices and past direct modification of instream habitat, but most streams have habitat and water quality within the range found for "reference streams." Modeling (Nickelson and Lawson from Oregon Plan Review Draft) can demonstrate that current habitat quality for most coastal streams is adequate to sustain coho populations at levels above current stocking. Furthermore, based upon ODF monitoring data, riparian protection on forestlands should provide recovery of habitat conditions consistent with the rule's targets over time. Recovery of habitat elements provided by large wood inputs could be accelerated by active placement, but this type of practice has been greatly reduced due to federal permit requirements.

However, many will make an equal argument that forest practices and riparian protections on private forestlands are inadequate. For example, some would argue that the rules fail to adequately extend riparian protection up the channel system to include (most) small channels that might transport wood downstream. Others argue that retention along small fish bearing channels does not include the volume and size of wood necessary in those cases when such channels might transport wood.

These arguments are not resolvable without research and time. Nonetheless, the one area where we have unarguably modified both function and processes on private forestland relates to upslope sources of wood and sediment from earthflows and debris torrents. In steep highly dissected steep terrain, "aquatic habitat extends to the headwalls."

Regardless of the debate or point of view, by better considering key processes and cause-effect relationships we may be able to achieve less costly and more efficient and effective protection strategies than currently in existence. At a minimum we need to learn to **not** "fix" impacts that we have historically viewed as "damage" such as riparian windthrow or in-unit landslides. We are also in the process of considering how better to emulate the "upslope sources of sediment and wood" from private forests. On a technical basis, analytical tools are being developed that can help us evaluate alternative approaches and assess their potential impacts to t both aquatic habitats and timber production.

6.0 Short-term versus long-term risk

Recent court and agency interpretations that direct the application of federal policies generally have given priority for "static" forest management strategies and short-term protection of a single species or single resource values such as air or water. For example, restoration actions that reduce conifer basal area to a limited degree in riparian zones (provided as an incentive) are expressly excluded from the Army Corp of Engineer's Regional General Permit allowing certain types of restoration practices. In another noted example, stand management practices that might reduce uncharacteristic wildfire are routinely stopped through court actions. This priority has often been at the expense of long-term forest ecosystem health, including failure to address conditions that increase the risks to Oregon forests from severe fire, pests and drought.

Federal actions are generally burdened by the precautionary principle; that is, if you cannot demonstrate potential adverse consequences are minimized do not go forward.

Conversely, ORS 527.714 of the Oregon Forest Practices Act sets a standard that additional standards of protection cannot be adopted unless a problem with current forest practices degrading resources can be demonstrated. These differences in burden of proof result in very different outcomes and these differences may be appropriate given the different roles and responsibilities of the public and private lands. In either case, providing new tools and frameworks for better considering scientific uncertainty and separating facts from conclusions from opinions is important.

A recent symposium sponsored by OFRI and OSU addressed the issue of balancing risks and tools that might support better decision-making. It is clear that such tools need considerable development in many cases to be useful. Risk needs to be considered at a range of scales. For example, research (Bowyer) confirms that wood, a fully renewable resource manufactured in a low pollution process, is environmentally superior to alternative products such as steel, cement and plastic for most purposes. Many scientists and forest resource professionals are concerned that the import of foreign wood, logs and other natural resources might introduce invasive, damaging species, pests and diseases, putting Oregon's resources at risk and limiting the ability to export Oregon products. In addition, wood grown in Oregon meets some of the highest environmental standards in the world. Thus, policies need consider the extent that risks are increased through substitution of less environmentally sound products or through production in regions with less enlightened management.

7.0 Active versus Passive Management (Protection)

There are highly polar views of whether protection means, "leave it alone" or "manipulation of the forest." Ironically, because of the polarity of these views, it has been difficult to develop and then implement multiple management strategies. "Letting nature take its course" now occurs by design or default on more than one third of Oregon's forests. Adaptive elements of this strategy are limited for a number of reasons. The remaining two-thirds of the forest has generally active management on the uplands (for a number of purposes, but primarily for timber production on private lands) and in practice, mostly a reserve strategy for riparian zones (as discussed below, most landowners do not enter riparian zones even when allowed). For operations regulated under the FPA, active management is allowed in riparian zones for several purposes. These purposes include enhancement of riparian functions and restoration of aquatic habitat, but also include management that promotes or captures a "harvestable surplus" of timber. A number of incentives were included in the rules to encourage active management. Despite provisions and incentives for active management, limited effort occurs. Nonetheless, some view these provisions for active management as a high risk because they perceive that larger conifers may be selectively removed or that other risks may be created. Somewhat ironically, most riparian zones on private forestlands are not entered for management purposes during harvest. In limited cases when management does occur, some of the larger trees in the outer RMA may be removed. Nonetheless, with the current behaviors, most riparian areas remain on track with the desired future condition of mature forest conditions with significant numbers of large conifer trees over the course of the next rotation.

Current work on water protection rules under the Forest Practices Act is instructive of the passive versus active management discussion. Some "passive" approach supporters want to remove barriers to natural processes and let those processes operate; under the premise that this approach has worked for a long time before European-based settlement, "so it is proven and right." But humans no longer inhabit the land as they did 150 years ago. The "engineering" perspective of some says, "tell us what you want, and we will provide it." The engineering advocate wants to reduce ecosystem processes to known components, and then do precisely what is needed and no more. This viewpoint gives limited value to the extreme complexity and variability of forest ecosystems. Of course, these viewpoints are extremes, almost caricatures. Most policy-makers balance these viewpoints in promoting and adopting policies. For example, the current forest practice rules use mature forest condition as the target to shoot for in riparian areas based upon it being an "average condition" across the landscape. This approach was used based upon the belief that that condition will provide desirable riparian functions, even though we cannot quantify everything that happens or how much of each riparian function is needed. On the other hand, RMA widths are based on scientific information about sources of near stream riparian function potential. However, by uniformly applying the widths without regard to other factors such as inner gorges, slope, unstable sites, floodplain and terrace configuration, we may be missing opportunities to capture the near stream wood with the most potential to actually enter the stream. Widths were chosen based upon the relative efficiency and functionality of both delivery and rule administration. Where, in the balance, is the right place to be is always the difficult question, and it is always a policy choice.

8.0 Current approaches: Desired Future Condition/Properly Functioning Condition/Cumulative Effects

Several concepts have been developed to help evaluate or set objectives for the protection of riparian, aquatic and other ecosystem values. Among these concepts are "desired future condition" and "properly functioning condition." Both these concepts have been used in part in the current forest practice water protection rules. The issue of cumulative effects has resulted in additional approaches used mostly on federal lands that try to establish watershed "thresholds" under which additional or different constraints are applied to proposed management practices.

Desired future condition describes the future range of conditions of forest resources that meet management objectives. Desired future condition is based on ecological, social, and economic considerations. Because ecosystems are dynamic and not entirely predictable or manageable, desired future condition must be expressed as ranges of ecological status or management status of vegetation and desired soil qualities. For Oregon's forest practice rules, the desired future condition for streamside areas along fish use streams is:

> "To grow and retain vegetation so that, over time, average conditions across the landscape become similar to those of mature streamside stands. Oregon has a tremendous diversity of forest tree species growing along waters of the state and the age of mature streamside stands varies by species. Conifer trees often

dominate mature streamside stands. For many conifer stands, mature stands occur between 80 and 200 years of stand age. Hardwood stands and some conifer stands may become mature at an earlier age. Mature stands provide ample shade over the channel, an abundance of large woody debris in the channel, channel-influencing root masses along the edge of the high water level, snags, and regular inputs of nutrients through litter fall."

The desired future condition for streamside areas that do not have fish use is:

"To have sufficient streamside vegetation to support the functions and processes that are important to downstream fish use waters and domestic water use and to supplement wildlife habitat across the landscape. Such functions and processes include: maintenance of cool water temperature and other water quality parameters; influences on sediment production and bank stability; additions of nutrients and large conifer organic debris; and provision of snags, cover, and trees for wildlife."

The rules further describe the approach under which the DFC was determined and how it is to be applied:

"The rule standards for desired future conditions for fish use streams were developed by estimating the conifer basal area for average unmanaged mature streamside stands (at age 120) for each geographic region. This was done by using normal conifer yield tables for the average upland stand in the geographic region, and then adjusting the basal area for the effects of riparian influences on stocking, growth and mortality or by using available streamside stand data for mature stands.

The desired future condition for streamside areas that do not have fish use is to have sufficient streamside vegetation to support the functions and processes that are important to downstream fish use waters and domestic water use and to supple-met wildlife habitat across the landscape. Such functions and processes include: maintenance of cool water temperature and other water quality parameters; influences on sediment production and bank stability; additions of nutrients and large conifer organic debris; and provision of snags, cover, and trees for wildlife.
The rule standards for desired future conditions for streams that do not have fish use were developed in a manner similar to fish use streams. In calculating the rule standards, other factors used in developing the desired future condition for large streams without fish use and all medium and small streams included the effects of trees regenerated in the riparian management area during the next rotation and desired levels of insert large woody debris.

For streamside areas where the native tree community would be conifer dominated stands, mature streamside conditions are achieved by retaining a sufficient amount of conifers next to large and medium sized fish use streams at the time of harvest, so that halfway through the next rotation or period between harvest entries, the conifer basal area and density is similar to mature unmanaged conifer stands. In calculating the rule standards, a rotation age of 50 years was assumed for even-aged management and a period between entries of 25 years was assumed for uneven-aged management. The long-term maintenance of streamside conifer stands is likely to require incentives to landowners to manage streamside areas so that conifer reforestation occurs to replace older conifers over time.

Conifer basal area and density targets to produce mature stand conditions over time are outlined in the general vegetation retention prescriptions. In order to ensure compliance with state water quality standards, these rules include requirements to retain all trees within 20 feet and understory vegetation within 10 feet of the high water level of specified channels to provide shade.

For streamside areas where the native tree community would be hardwood-dominated stands, mature streamside conditions are achieved by retaining sufficient hardwood trees. As early successional species, the long-term maintenance of hardwood streamside stands will in some cases require managed harvest using site specific vegetation retention prescriptions so that reforestation occurs to replace older trees. In order to ensure compliance with state water quality standards, these rules include requirements in the general vegetation retention prescription to retain all trees within 20 feet and understory vegetation within 10 feet of the high water level of specified channels to provide shade. The rules might better fit with what we now know about historical hardwood-dominated areas if they more appropriately allowed and encouraged hardwood reforestation.

In many cases the desired future condition for streams can be achieved by applying the general vegetation retention prescriptions, as described in OAR 629-640-0100 and OAR 629-640-0200. In other cases, the existing streamside vegetation may be incapable of developing into the future desired conditions in a "timely manner." In this case, the operator can apply an alternative vegetation retention prescription described in OAR 629-640-0300 or develop a site-specific vegetation retention prescription described in OAR 629-640-0400. For the purposes of the water protection rules, "in a timely manner" means that the trees within the riparian management area will meet or exceed the applicable basal area target or vegetation retention goal during the period of the next harvest entry that would be normal for the site. This will be 50 years for many sites.

Where the native tree community would be conifer dominant stands, but due to historical (human disturbance) events the stand has become dominated by hardwoods, in particular, red alder, harvesting is allowed to produce conditions suitable for the re-establishment of conifer. In this and other situations where the existing streamside vegetation is incapable of developing characteristics of a mature streamside stand in a "timely manner," the desired action is to manipulate the streamside area and woody debris levels at the time of harvest (through an alternative vegetation retention prescription or site specific vegetation retention prescription) to attain such characteristics more quickly. "

Properly functioning condition is another methodology for assessing the physical functioning of riparian and wetland areas and applying protection. This approach has most commonly been used in agricultural and/or grazing settings where a more "functional approach" is viewed to be more acceptable given the land use objectives (and growing old-forests is viewed as an unacceptable use). Properly functioning condition is used to describe both an assessment process, and a defined, on-the-ground condition of a riparian-wetland area. Properly functioning condition defines a minimum or starting point. The PFC assessment provides a consistent approach for assessing the physical functioning of riparian-wetland areas through consideration of hydrology, vegetation, and soil/landform attributes. The PFC assessment synthesizes information that is foundational to determining the overall health of a riparian-wetland area. The on-the-ground condition termed PFC refers to *how well* the physical processes are functioning. PFC is usually expressed as a state of resiliency that will allow a riparian-wetland system to hold together during a 25 to 30 year flow event, for example, sustaining that system's ability to produce values related to both physical and biological attributes. PFC is occurring when a riparian-wetland area is physically functioning in a manner, which will allow the maintenance, or recovery of desired values, e.g., fish habitat, Neotropical birds, or forage, over time. A riparian-wetland area that has recovered to a *proper functioning condition*, would either be providing quality habitat conditions, or would be moving in that direction if recovery were allowed to continue.

A number of systems have been developed to apply cumulative effects screens based upon perceived thresholds of "excessive disturbance." Such concepts as "road density" or "hydrologic maturity" may be used in these systems to express assumptions that undesirable cumulative effects are occurring. Once thresholds are reached, actions may be limited until restoration or other recovery occurs to move the watershed below the thresholds. There remains considerable debate about the validity of such thresholds and the efficacy of this type of approach. Since federal land management is required to consider cumulative effects in their decision-making processes, such tools become a necessity.

Conclusions and Recommendations

As pointed out earlier, the IMST concluded in their forest report that: "The historic range of ecological conditions in the Pacific Northwest, both of habitat and of salmonid stocks, is important because it provides a framework for developing policy and management plans for the future."

Ironically, even this conclusion represents a somewhat static perspective. Since salmon first occupied Oregon's streams, we have gone from a cold, highly glaciated environment to a warmer, mostly un-glaciated environment. To quote from Lackey, Robert T. 2000. Restoring wild salmon to the Pacific Northwest: chasing an illusion? In: *What We Don't Know about Pacific Northwest Fish Runs --- An Inquiry into Decision-Making*. Patricia Koss and Mike Katz, Editors, Portland State University, Portland, Oregon, pp. 91 - 143:

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> *"Apart from human influence, the size of salmon runs has varied enormously over the past 10,000 years (Chatters* et al., *1995). Anthropological data are inexact and open to various interpretations, but it is certain that at the end of the last Ice Age, 10,000 - 15,000 years ago, humans and salmon expanded into the Pacific Northwest (Pielou, 1991; Chatters* et al., *1995). Until 7,000 to 10,000 years ago, many of the upper reaches of rivers were blocked by glacial ice. Eroding glacial deposits and low water flows limited the size of salmon runs for the next several thousand years. Ecological conditions improved for salmon approximately 4,000 years ago, probably from better oceanic conditions and more favorable freshwater environments (Chatters* et al., *1995).*
>
> *Aboriginal harvests of salmon increased gradually over the 4,000 years prior to "European" contact, and affected runs in at least some rivers, especially toward the southern and eastern extent of the salmon distribution (Swezey and Heizer, 1977; Taylor, 1999; Yoshiyama, 1999). It is often assumed that aboriginal fishing may be dismissed as an influence on historical run sizes. Taylor (1999), after reviewing the results of recent anthropological research, concludes:*
>
> > ***Taken as a whole, the aboriginal fishery represented a serious effort to exploit salmon runs to their fullest extent. Aboriginal techniques could be frighteningly efficient, and in many respects they compare favorably to modern practices. Weirs blocked all passage to spawning grounds; seines corralled large schools of salmon; and basket traps collected without discrimination. Indians in fact possessed the ability to catch many more salmon than they actually did. [emphasis mine]***
>
> *The level of salmon harvest by aboriginal fishermen in the Central Valley of California was roughly comparable to the peak commercial harvest of industrial fishermen of the mid to late 1800s (Yoshiyama 1999). Many Indian tribes possessed fishing gear that enabled them to catch salmon effectively in various settings and under a range of conditions (Figure 3). Figure 3. Although not as great as the harvest levels of commercial salmon fishermen of the late 1800s and early 1900s, prior Indian harvest was significant because many tribes possessed fishing gear that enabled them to catch salmon effectively in various settings and under a range of conditions.*
>
> *Their gear encompassed a spectrum comparable to that available to 19th century "industrial" fishermen who supplied salmon to canneries (Smith, 1979). There was, however, a major difference between the two groups of fishermen. For Indian fishermen prior to 1500, a rough equilibrium existed between the size of the salmon catch and the region's human population because the number of*

salmon that could be consumed, sold, or traded was constrained (compared to modern standards) by technical limitations in fish preservation, storage, distribution, and, most importantly, a relatively *low population of about a million people across the entire region.*

Although aboriginal fishing may have affected individual stocks, especially those in smaller rivers and streams (that are more vulnerable to the effects of fishing), the aggregate effect on salmon runs was less than that of the past 150 years (Schalk, 1986). Further, except for using fire to clear vegetation, aboriginals lacked the capability to greatly affect salmon habitat. In summary, from roughly 4,000 years ago to approximately the 1500s, salmon runs probably fluctuated greatly, but with a long-term upward trend.

The 1500s marked the beginning of a dramatic change in the history of the salmon/human relationship in the Pacific Northwest. From the early 1500s through the mid 1800s, a series of human disease epidemics (caused by Old World diseases, principally smallpox, measles, whooping cough, mumps, cholera, and gonorrhea) decimated aboriginal human populations (Denevan, 1992; Harris, 1997; McCann, 1999); this reduction in the human population caused a significant decline in fishing pressure (Taylor, 1999). For example, to illustrate the extent of the decline, prior to 1800 the population of what is now British Columbia was greater, possibly much greater, than 200,000 (Harris, 1997). By 1850, the total population of British Columbia was estimated to be only several tens of thousands. Thus, the large salmon runs observed in the early to mid-1800s were likely a reflection of the general, long-term trend of improving (from a salmon perspective) ecological conditions, coupled with a curtailment in harvest due to the diminished human population."

Thus, the reference conditions (implied by the IMST report) that are often used to characterize salmon habitats and populations may well represent the pinnacle of favorable habitat along with a low point of human exploitation, but not a very broad view of the historic range of ecological conditions. The recent report on the Biscuit Fire (Sessions, et.al.) argues that the forests that burned in the fire may have successfully initiated and developed due to the little ice age that at that time favored conifer regeneration. Current conditions are much warmer and drier, and now favor the more aggressive and drought hardy brush species. The report concludes that if we want to re-establish the pre-fire forest conditions, active management is needed to control the brush species to limit moisture competition with the conifers. The point is that ecosystems are also evolving with larger scale factors. Thus, the viewpoint that "pristine" environments at some point in time represent the desired conditions is also a static perspective.

Key Policy Implications

It may be ironic that we describe forests within a context of disturbance, followed by "recovery" through succession to mature forest. In my ongoing evolution of thought on this matter, I am beginning to think that it is just as reasonable to view disturbance as the "recovery." In any case, terms like protection and recovery reinforce the thought processes that have created and maintained a static view of forests and reinforce the view that protection means preventing change. There is a very strong and legitimate ongoing scientific debate around this issue. There is a lot of research that is pointing the way to a paradigm shift. However, the process to collect and synthesize this research and to force meaningful dialogue has not yet occurred. Creating the scientific foundation for this change is critical and strong leadership is needed. Both the Department and Board will need to work with OSU College of Forestry to help create the conditions for building the necessary scientific foundation.

From a policy perspective, the Board of Forestry has a unique responsibility to seek cost-effective resource protection solutions. Trying to emulate the "historic range of natural conditions" on private forestlands is no longer possible or likely desirable given their roles. Thus, an alternative way to view protection is to, consistent with the applicable land management objectives, emulate key functions and processes, or subsets of key functions and processes, as is determined to be necessary to adequately maintain fish habitat and water quality. With this in mind, vegetation can be retained more efficiently if retention emphasizes specific locations where disturbance will occur and where interaction with the vegetation and disturbance events will do the most good for habitat values. Retention should also have in mind production of trees with adequate size based upon the type of disturbance interaction, likely functions and depletion rates. We probably have or will soon have the technical tools to better retain vegetation with these objectives in mind. Both active and passive approaches are legitimate methods in the private forestland setting and some processes may be more efficiently maintained through active management or from the more "engineered perspective." However, these approaches are much more complex than the current forest practice rules. Since we do not know yet what is "adequate" or what will be effective in the longer-term we should seek out forest managers willing to apply different approaches and apply research or monitoring requirements.

Listed below are additional conclusions and specific recommendations.

1. We should work with OSU College of Forestry and others to create and implement a process to build the scientific foundation necessary to support policy and technical changes that improve consistency of forest practices and forest management with the concepts of dynamic forest ecosystems and "primary purpose". Tools are also needed to: (a) better analyze short- and long-term risks; and (b) better analyze, at different scales, how well the different forest ownerships integrate to provide necessary resource protection.

2. It is important to recognize that considerable intellectual and scientific "horsepower" will be needed to think out of the box and avoid falling back into the more comfortable approach of "protection means preventing change."

3. The different roles that federal, state and private lands should play in "overall maintenance" of fish and wildlife when determining the degree that forest practices on private lands should contribute to the overall maintenance, or with maintenance of specific resource sites, should be better described in forest practice statutes.

4. To be successful in making changes to implementation of forest practices, we will need to consider the existing limitations of current overarching policies, especially the ESA, CWA and resultant water quality standards. In this context, protection means, "limit disturbance." The challenge of these limitations should not be underestimated. To begin to address these limitations, the "dynamic ecosystem" and "primary purpose of the land" concepts needs to be better promoted as state conservation policy and, especially, as federal policy.

5. Wildfire, the dominant "natural" change agent is not acceptable in wood production, urban and some multi-resource forests, i.e., managed forests. Managed forests do not have an analog for severe stand replacement fires or most other fire regimes. Managed forests also are by policy meeting a different purpose than emulation of natural conditions. There is no analog in nature for 50-year rotations and riparian buffers. Thus, managed forest cannot reasonably be expected under current policies to emulate all or even most natural conditions.

6. Practices on managed forests that do not emulate natural conditions or that result in changes to delivery of functions and processes cannot be considered failures because those are not the primary purposes for those forests. However, research is needed to document that the modified processes compatible in managed forests will appropriately maintain fish and wildlife. The Hinkle Creek Paired watershed study and its replications are critical in this effort. Hinkle Creek and other sites need to be used to experiment with different designs and approaches to riparian and aquatic ecosystem protection. At this point in time, investments in Hinkle Creek style research appear to be a better use of resources than arguing about incremental increases to riparian protection. Nonetheless, we need to be humble by acknowledging that managed forests are an adaptive experiment.

7. New incentive tools to encourage private landowners to actively manage riparian areas may be needed. Forest Practices Monitoring shows that the majority of landowners are not entering riparian areas along fish-use streams, under current rules. A new, disturbance-based approach to long term resource maintenance cannot be successful without landowners and operators actively engaged in it. To this end, "canned" site-specific prescriptions may be necessary to assist landowners to try alternative practices when site conditions are appropriate. These canned prescriptions could address such other factors as inner gorges, slope, unstable sites, floodplain and terrace configuration.

8. The existing water protection system is generally functioning well. Monitoring data indicate high levels of compliance and outcomes consistent with protection objectives. Nonetheless, the system is dominated by limiting disturbance in riparian areas. Thus, we fundamentally need to change viewing resource protection as trying to prevent disturbance. While there is logic for not accelerating some types of disturbance; e.g., the rate of landslides due to some forest practices, there is an equal logic that we need to be "causing" disturbance (landslides) in some locations, possibly by loading the sites with wood. Similarly, in most cases wind throw of buffers should not be viewed as a failure. Alternatively, retaining standing buffers may not always be the best approach. It may be better to allow felling or pulling trees into a ('transport") channel to mimic a disturbance pulse, while allowing enough disturbances to permit reforestation.

9. Applying resource protection based on the concept of a desired future condition for riparian vegetation as described dominantly by conifer basal area is probably an inadequate concept. Key processes need to be considered and maintained. Key processes will be different in different regions of the state. Upslope processes for delivery of wood and sediment are highly important in some regions. Moderate to large pulses that are a combination of downed wood and sediment are needed in many areas for both protection and restoration.

10. A broader range of desired conditions for stands and landscapes that can be applied on a site-specific basis appears highly desirable. As stated above, to implement such a system may require a range of "canned prescriptions" based upon stand type and existing conditions. Riparian foresters may be required to help landowners implement such a system. A mix of desired future conditions along with some form of PFC or other assessment may be useful at the site and watershed level to implement or develop site-specific prescriptions.

11. Approaches such as "stewardship agreements" may be useful tools to provide landowners a watershed framework for implementing a range of alternative riparian protection strategies.

12. Tools are developed that can allow us to prioritize locations that have a high probability of delivery of sediment and wood from upslope sources to areas with high fish habitat potential. These tools might allow a remix of trees currently allocated for retention along streams to be better allocated elsewhere.

13. While this paper provides a starting point for a technical and intellectual basis for making modifications to forest practice program implementation, it is just a start and this work requires critical evaluation and discussion.

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Dynamic vs. Static Management in a Fire-Influenced Landscape – The Northwest Forest Plan

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Three Laws That Most Changed Federal Lands Forest Management

The spate of environmental laws, passed in the 1970s, have combined to dramatically affect the management of forested lands in the United States – particularly those managed by the federal government. Three have been of particular import. These are the National Environmental Policy Act (which requires anticipating impacts of proposed land management actions), the National Forest Management Act or NFMA (which requires planning for the national forests), and the Endangered Species Act or ESA (which requires, as a first priority, protecting ecosystems providing habitat for species determined to threatened or endangered – i.e., T&E species).

The Rise of the Conflict Industry and Static Management

There were good reasons for the environmental legislation of the 1970s. Past actions, some by federal land management agencies, produced conditions considered by many as having unacceptable impacts on the land and waters and the fish and wildlife they supported. The laws were to correct those problems. Two decades plus of application have left behind a battlefield littered with economic, social, political, and environmental casualties. These struggles produced a "conflict industry" whose actions center on federal forestlands and have resulted in extensive application of static management (preservation) strategies. Acceptance of dynamic management to deal with problems emerging from static (preservationist) approaches to ecosystem maintenance of depends on enhanced public trust and informed acquiescence to dynamic management approaches.

The combined effect of these laws resulted in the predominant use of preservation strategies (static management) to protect the habitat of species considered rare, threatened, or endangered (T&E species) due to habitat dwindling in either amount or effectiveness. None of these laws prescribed actions required to achieve mandated objectives. However, preservation of the *status quo* has seemed the most logical, and perhaps mandatory, course of action because of the following factors.

1.) If habitat for a T&E species is considered a critical factor in survival, preservation is logical (certainly in the short term) and is, sometimes, legally required by judicial edict.

2.) Habitat preservation is generally favored by environmental activists to protect T&E species due to clarity and simplicity of the approach. In addition, many environmental activists and biologists in federal agencies are distrustful of the intent and promises of agencies whose actions in the past contributed to current conditions. This distrust is most evident when commercially valuable trees are to be taken in management actions to improve "forest health."

3.) Outlining boundaries on maps of areas set-aside from active management is straightforward and easy to understand. Such approaches have the best chance of surviving legal challenges and judicial review. These approaches are commonly enhanced by application of the "precautionary principle" – i.e., setting aside more habitat than is justified by the facts to allow margin for error. Such approaches, relative to more complex management schemes, are easier to institute, monitor, and enforce. Moreover, faith is required in the skill and integrity of those carrying out more sophisticated management plans whose efficacy is unproven.

4.) "Outlining preserves on maps approaches" are the most simple to execute and monitor and for management and regulatory agencies to comprehend and enforce. Such are even more attractive when management and regulatory agencies are short on experienced personnel, resources, and time – and faced with ever more species to consider for listing and producing recovery plans for those that are so identified. Conversely, complex management plans are more expensive to develop, difficult to defend in court, and time consuming to monitor and enforce.

Emerging Problems With Reliance on Static Management

However, problems with static management are emerging as more species are declared as T&E. Recovery plans, commonly based on static habitat management, have significant and accumulating political, social, and economic consequences.

Two problems with preservationist approaches are evident. First is the "creeping area increases in preserve" syndrome wherein each new reserve decreases the land for management to produce goods and services. Simultaneously, the effect on lands open to management is magnified with each preserve as access is reduced, often disproportionately to the amount of lands placed in preserves.

Second, change is ongoing within preserves – some slowly (e.g., community succession) and some rapidly (e.g., stand-replacing fire, blow down, or insect and disease outbreaks). One of the oldest concepts in ecology is plant succession whereby vegetative states change over time – particularly in the structure and composition of forested communities. These changes are inevitably dramatic at stand and landscape levels, as naturally occurring stochastic events (stand-replacing fire, blow down, and mortality from disease and insects) cause sometimes rapid, often dramatic, changes in forest conditions. Fire-influenced landscapes are particularly prone to dramatic and frequent alterations.

Management Approaches Related to Agency Culture

Determining management approaches to prevent the loss of species and protect biodiversity is confounded by agency cultures. The land management agencies – the U.S. Forest Service (USFS) and the Bureau of Land Management (BLM) – have legal, budgetary, and cultural biases toward "multiple use management" and their personnel understand that ecosystems are dynamic. In fact, they rely on manipulating that dynamism to produce desired, albeit transitory, outcomes from management actions including wood production, varied wildlife habitats, aesthetic effects, grazing, regulation of water flows, and recreational opportunities.

Consequently, land management agencies more willingly accept risk in the short term to offset long-term risk from dynamic change from plant growth and stochastic events. Constituencies for these agencies have developed among those that profit, monetarily or otherwise, from the results of dynamic management approaches.

Conversely, regulatory agencies (the U.S. Fish and Wildlife Service or USFWS and the National Marine Fisheries Service or NMFS), in dealing with T&E species, are less sensitive to the dynamic nature of ecosystems and are inclined to take a preservationist approach with a shorter-term focus. Agency constituencies have evolved from those that value the outcomes of such an approach – a landscape with lessening visible impacts of human actions and fish and wildlife species protected so long as the *status quo* persists. Consequently, regulatory agencies concentrate on minimizing short-term risk while ignoring or downplaying long-term risks from succession or stochastic events.

The Judges Weigh In and Reinforce Static Management

Reliance on static management has been reinforced by decisions of federal judges relative to recovery plans for T&E species that favor habitat preservation over active management. Most judges have no background relative to ecological processes and the dynamic nature of ecosystems. They, however, quickly grasp the "fail safe" and "precautionary principle" aspects of preservationist strategies.

"Success" in planning for federal lands (particularly in terms of T&E species) is defined by a judge's approval, or likely approval, of a recovery plan. The Equal Access to Justice Act has made it easier, less risky, and more financially feasible to challenge decisions of land management agencies. Suits against federal land managers relative to habitats of T&E species have become more successful as judges have gradually abandoned the longstanding principle of deferring to agency experts in technical matters.

The Inherent Paradox in Maintaining Habitat Conditions

The fires of 2000 and 2002 are forcing consideration of the inherent paradox in attempting to maintain habitat conditions (or other ecosystem components) over the long term. Consider these contradictory statements simultaneously presented in arguments over management approaches.

1.) To maintain desired ecosystem states it is necessary to maintain such areas in preserves within which management is prohibited.

2.) Because ecosystems are dynamic, it is necessary to manage components in order to maintain desired conditions over the long term.

Alternatively, in order to maintain any desired habitat condition we must routinely change the evolving condition and understand that habitat conditions will exist in different places at different times over the long run. This has been called the "shifting mosaic" approach.

Desired conditions will occur in different places within the landscape in question at different times as stands proceed through developmental stages. However, earlier successional stages have comparatively brief time spans of existence relative to late-successional stages. Earlier stages are more common and easier to produce and regulate in terms of time, size, condition, and arrangement than are late-successional stages. Extant late-successional forest (LSF) stands are, mostly, survivors of past harvesting (for whatever reasons) and stochastic natural events – e.g., fire, wind, weather, and insect and disease outbreaks.

Long-term Management Results Depend on Adaptability

Achieving desired results from long-term management implies ability to practice "adaptive management" in which each action is considered as an experiment. New actions (and new experiments) are formulated on the knowledge and perspective gained from previous actions.

Adaptive management requires flexibility and social/political willingness to allow managers to proceed in such fashion. Current laws, accumulating case law, agency cultures, and pitched conflict between societal extremes that care about forest management issues presently precludes – for divergent reasons – broad-scale application of adaptive management.

How About a No-Management Alternative?

Conversely, why not consider maintaining most, or all, federal lands in a "natural" or "wild" state subject only to stochastic events? The only dynamic effect missing would be that of human management action.

The Environmental Impact Statement that would precede adoption of such a proposal would be interesting indeed. Such would reveal the economic/ecological/social consequences of such a land-use allocation. Would the probable consequences be acceptable? For such a scheme to succeed in maintaining biodiversity, vast landscapes – perhaps reaching beyond the one-third of the nation's land currently in federal ownership – would likely have to be "preserved" over hundreds of years as "mother nature" sorted things out.

Static versus Adaptive Management – The Northwest Forest Plan

The evolving struggle over static versus dynamic management to maintain biodiversity in fire-influenced forests can be seen in the continuing saga over management of federally-owned forested lands in the Pacific Northwest. The question is over how to assure adequate LSFs to satisfy the objectives of the Endangered Species Act... "to provide a means whereby the ecosystems upon which threatened species and endangered species may be conserved, (and) to provide a program for the conservation of endangered species and threatened species...." The overriding social/political issue has centered, for the past 20-30 years, on the consequences of ongoing diminution and coincidental fragmentation of LSFs.

It's the Ecosystem, Stupid

Though the issue would likely have surfaced on aesthetic grounds, the ESA forced federal agencies, land management and regulatory, to determine how much LSF to preserve, maintain, attempt to restore – and where. All were forced to recognize that, paraphrasing the rhetoric of the 1990 Presidential campaign, "It's the ecosystem stupid!" It has been since the passage of the ESA in 1973 – 29 years ago!

The Trigger to Action –The Northern Spotted Owl

By 1990, the northern spotted owl or NSO (*Strix occidentalis caurina*) was associated with LSFs in the Pacific Northwest, largely west of the crest of the Cascades, and determined to be in population decline. This decline was associated with loss of primary habitat as LSFs were being rapidly depleted and fragmented by logging and stochastic events. In retrospect, listing of species associated with LSFs as T&E species was inevitable. It was obvious to ecologists that many species specifically adapted to LSFs were almost certain to have been in coincidental decline.

The Forest Service Planning Regulations – The "Diversity Clause"

The regulations promulgated by the USFS, under the auspices of the NFMA, recognized the agency's responsibility to be concerned with species viability and contained a clause that would come to bear even before the ESA. It required that all native and desirable non-native vertebrates be maintained in viable numbers and well distributed across the planning area(s). That regulation and the ESA were to be potent forces for dramatic change in federal forest management. It was only a matter of time until one, and then another, and then another, species would receive special management consideration.

The Forest Service and the Spotted Owl – If At First You Don't Succeed

Anticipating that the USFWS would determine the NSO to be threatened, the USFS attempted, several times, to develop a plan that would assure the viability, in a well-distributed state, of the sub-species on national forests. Each failed as the costs – economic, social, and political – proved too much of a political "hot potato." Ironically, as cutting and fragmentation of LSFs continued, each new proposal was more devastating to projected timber harvests as management options diminished. Elected and appointed officials began to scramble to avoid the inevitable political uproar – at least until the next election was history.

The Interagency Scientific Committee (ISC)

The agency heads of the USFS, BLM, USFWS, and the National Park Service turned to a select group of wildlife biologists (the Interagency Scientific Committee or ISC) to develop a plan to assure survival of the NSO and its habitats. The scientists knew that there was a rapidly exacerbating problem of retaining species associated with LSFs. However, instructions to deal solely with the question of the NSO remained unchanged.

The BLM Director Jumps Ship

The ISC delivered a strategy (Thomas et al. 1990) and the agencies, initially, set out to comply. Then, BLM Director Cyrus Jamison, with the blessing of higher officials, withdrew BLM's lands in western Oregon from the agreement. Responding to that challenge, a federal judge, in response to a challenge from the environmental community, shut down all cutting of timber in LSFs on federal lands within the range of the NSO.

Enter "The God Squad"

The BLM Director, with the support of Secretary of Interior Manual Lujan (who declared that the ESA was "too tough"), appealed to the Endangered Species Committee (the "God Squad"). That Committee was authorized by the ESA to allow species to decline to probable extinction if the social/economic consequences of actions required for their preservation were deemed too extreme.

Jamison sought permission to proceed with 44 timber sales involving LSFs under a plan called "the Jamison Strategy." In a politically embarrassing "split the baby" decision, the Committee (all of whom were high level political appointees of the party in power) cleared a handful of the sales in question and, as a *quid pro quo*, required BLM to, thereafter, follow the ISC strategy. To avoid the political consequences of accepting the ISC Strategy, the sales were never cut and the cessation of cutting of LSFs on federal lands continued within the range of the NSO continued. Obviously, the matter was deferred until after the presidential election of 1992.

And The Judge Asks – "How About Those Other Species?"

The federal judge (William Dyer) involved, in his decision, asked a prescient question. He noted that the ISC report mentioned 32 species that might be dependent on LSFs and required analysis of the effect of the withdrawal of BLM lands from the ISC strategy on their survival. The USFS appointed a team of scientists (the Scientific Analysis Team or SAT) to comply. The SAT asked for a broadened mandate, which was granted, to assess the effect on all plant and animal species that might be closely associated with LSFs.

They concluded (Thomas et al. 1993) that there were at least 312 plants, 149 invertebrates, 112 stocks of anadromous fish, 4 resident fish, and 90 terrestrial vertebrates that were so associated. The controversy was not over the welfare of the northern spotted owl. It was not about all the species associated with LSFs. It was, in the end analysis, all about the LSF. It always had been.

Northern Spotted Owls and the Presidential Campaign of 1992

This management impasse was an issue in the Presidential election of 1992 with Republican President George H. W. Bush and third party candidate H. Ross Perot taking a "jobs vs. owls" position and promising alterations in laws and regulations after the election. The Democrat, Governor William Clinton, took no position but promised a solution shortly after taking office. Clinton won and soon thereafter convened the Forest Summit in Portland, Oregon.

The Forest Ecosystem Management Assessment Team - FEMAT

At conference close, President Clinton announced formation of another select committee of scientists and other specialists (the Forest Ecosystem Management Assessment Team or FEMAT) to develop and evaluate – including ecological, social, and economic factors – management alternatives for his consideration. By this time, various runs of salmon (bringing the NMFS into the game) and the marbled murrelet (*Brachyramphus marmoratus*) had been added to the threatened species list and were to receive elevated attention in this latest assessment and planning drill.

Analyses conducted during the FEMAT's activities indicated that over 1,000 species of plants and animals were likely strongly associated with LSFs. This outcome mirrored, but expanded, the thrust of the SAT report. It was the ecosystem after all. The NSO, the marbled murrelet, and anadromous fish were only the tip of the T&E species "iceberg" (SAT 1993, FEMAT 1993).

The President Picks FEMAT's Option 9 – And the Fun Begins

President Clinton selected "Option 9" from 10 alternatives presented by FEMAT. That option was based (as was the ISC report) on a mixture of preserving LSFs within larger areas (Late Successional Reserves or LSRs) designated for development of mature and LSF stands over time. There were some 45 LSRs designated that ranged in size from approximately 136,000 to 8,000 acres (averaging 66,000 acres).

Option 9 Places Emphasis on Dynamic Management

Thinning of younger stands within LSRs was to speed tree growth in stands less than 80 years in age. LSRs in fire-influenced landscapes, east of the crest of the Cascades and in southern Oregon and Northern California, were to be managed to reduce stand density and clean up fuels (dead wood) that were accumulating to decrease likelihood of stand-replacing fire. As stands harboring NSOs in those areas had (in large part) resulted from a combination of "high grade" logging and protection from fire, it was hypothesized that managing such stands were a key to retaining them as habitat.

LSF stands lying west of the Cascades with a return interval for stand-replacing fires exceeding several hundred years were less vulnerable to large-scale stand replacing fires and represented the heart of NSO habitats. Therefore, such stands were reserved from management manipulation in the short term. Buffers of trees and other vegetation along streams were established to maintain habitat for anadromous fish species using the precautionary principle.

These buffers were to be adjusted appropriately (likely by a reduction of two-thirds or more) following watershed assessments that provided site-specific information. The adjusted buffers were, then, to be managed to meet management to produce and retain desired conditions and reduce liability to losses from stochastic events.

In addition, 10 "adaptive management areas" (AMAs) were established to allow management experiments to test other approaches to maintaining LSF associated species. These AMAs totaled 1,306,300 acres, ranged from 83,900 to 399,500 acres, and averaged 130,630 acres in size. LSF stands outside of LSRs were subject to harvest. Eighty acres of older forest was to be retained around active northern spotted owl nests to provide nest sites as surrounding forests grew up in 60-100 years.

LSRs were located recognizing the inevitability of stand-replacing fire and massive blow downs over several centuries.

They were thought to be large enough to absorb consequences of most fire events and blow downs and maintain some semblance of functions for which they were designed. They were spaced to be within dispersal distance of NSOs from two or more adjacent LSRs.

Fires that threatened LSRs were to be aggressively fought and given highest priority for attack. Clearly, LSRs in fire-influenced areas were considered more susceptible to stand-replacing fire and were to be aggressively managed to reduce such risks. LSRs were to be managed to contain as much LSF as possible recognizing that such conditions would occur in different locations at different times in different arrangements over centuries. Obviously, such a strategy relied on initial protection of extant late-successional forest stands.

Option 9 Morphs Into the Northwest Forest Plan

The FEMAT was disbanded upon delivery of its report. Another multi-agency team was assigned to develop the required Environmental Impact Statement (U.S. Department of Agriculture and U.S, Department of Interior 1994a) and Record of Decision (U.S. Department of Agriculture and U.S Department of Interior 1994b). In that process, dramatic changes "morphed" Option 9 into a form closely resembling Option 1 as presented by FEMAT. Some of the FEMAT referred to Option 1 as "the green dream" – i.e., the most environmentally conservative of the 10 options developed. This revised version of Option 9 was called the Northwest Forest Plan (NWFP) described by U.S. Department of Agriculture and U.S. Department of Interior (1994b).

Most of the changes made were deemed advisable to enhance chances that the final plan would survive court review and to satisfy concerns of regulatory agencies. Such legal challenges were considered inevitable from both environmentalists and the timber industry. Such challenges did occur and Judge William Dwyer upheld the legality of the NWFP but indicated that it barely made the grade from the environmental viewpoint.

The NWFP – A Plan Is What You Actually Do

Then, when the NWFP was put into action, the changes made from FEMAT's Option 9 combined with consistent conservatism in execution resulted in failure to execute the plan as written and produce the timber volumes projected. The NWFP was expected to yield about 1.1 billion board feet of timber per year when fully implemented. In practice, timber production peaked in 1997 at 889 million board feet and declined to 308 million board feet offered for sale in 2001. In addition, then, due to procedural and judicial delays, less than 40 percent of what was offered for sale was actually cut.

The NWFP – What Didn't Happen

What had been designed to be a dynamic, long-term management plan (both Option 9 and, to a lesser extent, the NWFP) became, in effect, a plan closer in its execution to a preservationist rather than the dynamic management approach called for. Some departures from the NWFP include:

1) There was little or no active management carried out to reduce fire danger in LSRs in identified fire-influenced landscapes.

2) There was little or no thinning within LSRs.

3) Few watershed assessments were completed and default buffers remained in place and unmanaged. That, in turn, exacerbated access problems and fire danger – particularly in LSRs in fire-influenced landscapes. A temporary application of the precautionary principle became permanent.

4) AMAs were managed no differently, thwarting acquisition of information to feed into adaptive management and reducing the amount of wood products expected.

5) The adoption of a "search and manage" strategy (i.e., before a timber sale is instituted in a LSF stand a search for sensitive wildlife species is conducted and, if such are found, adjustments are made) precluded most cutting in LSF stands released for cutting. This also created problems in dealing with fuel treatments in LSRs in fire-influenced landscapes. Searches for species associated with LSFs would be expected to reveal the presence of associated species making it unlikely that such stands would be cut. Certainly, significant costs were incurred making such timber sales less economically viable.

Would Following the NWFP Have Saved the Forest From Fire in 2002?

Admittedly, even if Option 9 had been instituted, the overall changes within federal forestlands over the past 10 years would have influenced only a fraction of the landscape. However, those actions may have had an influence on the fires of 2002 in some cases. Certainly, the timber yields anticipated would have come closer to being met.

The *Post Mortem* Concerning the Fires of 2002 – It Won't Be Gentle

It is probable that the inevitable, intense, high-visibility, politically charged, post-mortems on the causes, results, and reactions to big fire years of 2000 and, especially, 2002 will be both revealing and a catalyst to examine and contrast dynamic vs. static forest management. Such will provide a platform for renewed, dramatic, intense, and better-informed debate over the future management of federal forestlands – particularly in fire-influenced landscapes.

As there have been significant impacts from the wildfires of 2002 to some LSRs – particularly those in fire-influenced landscapes – with a yet-to-be-determined diminution of the likelihood of success in preserving the northern spotted owl and other LSF associated species resulting from static management approaches – a full assessment is certain.

Will Static Management Be Found Wanting?

These reviews will likely reveal that near static management approaches are inadequate (Everett et al., 1994) for purposes of retaining and producing LSF conditions in fire-influenced landscapes. Remember, the approach followed was not that developed by the FEMAT nor that finally adopted as the NWFP. Dynamic management was prescribed and, then, was not aggressively pursued for political, economic, and legal reasons.

Business As Usual Proves Politically Intolerable

It was inevitable that this impasse would prove politically intolerable and beg a political response. President George W. Bush, on August 22, 2002, in a speech delivered in western Oregon as the largest wildfires in the state's recorded history still burned, announced a change in policy related to management of federal forestlands. While details were lacking (and the devil does lie in the details), the revised policy includes a call for more active management and less tolerance for delay in instituting actions.

The fiscal costs will be very high (an estimate from the USFS for one area in Oregon ran to $1,685 per acre when thinning was limited to trees less than 21 inches in diameter breast high and there was a market for material removed as fuel. Clearly, given costs, actions to reduce chances of stand-replacing fire at large scale will have to be carefully targeted.

This debate over what to do about "forest health" is peaking at a time when the nation's economy is sagging with an accelerating war on terrorism underway and a pre-emptive attack on Iraq looming. The political heat generated will reflect that of the wildfires that forced the issue. Talk is cheap. Details are lacking. Nothing is certain. However, the issue, finally, is "on the table" and in a big way. All of that makes what is said at this conference of more significance than it would have been otherwise.

Riders Guarantee Political Backlash

As Chief of the USFS in 1994, it fell to me to carry out the now infamous "salvage rider" which was passed overwhelmingly by Congress, without hearings, and signed by the President in spite my objections. The USFS was pushed hard by political overseers to meet the salvage targets and, then, was made a scapegoat, when the political winds shifted and the resurrected environmental community flexed its political muscle. I hope that this will not be repeated this time around.

Is There Something Wrong With the Law(s)? Maybe So

If the requirements of laws and regulations must be periodically overridden by "emergency" exemptions, it might be suspected there is something amiss. An analysis that goes beyond the current "predicament analysis" seems indicated.

These recurring dilemmas indicate a need to update, revise, and coordinate environmental laws and regulations in dealing with short- versus long-term risks and static versus dynamic management. Surely, it should not take more than two such experiences to learn that lesson.

Enough Band-Aids – The Patient Needs Surgery

The system that governs the planning and management of the public lands is, or should be, recognized as a "snafu" decades in the making. Perhaps, given the time required to execute an appropriate study of the problem and reconcile the underlying legislation, one more "quick fix" can be justified.

Over the long run, the accumulation of "quick fixes" is poor public policy and an evasion of political responsibility to address ever more sorely needed changes. Until then, there will be periodic need for just one more "quick fix." Each such will trigger a political uproar and produce additional erosion of the credibility of land management and regulatory agencies. They deserve better – and so does the public.

An ancient Chinese curse says, "May you live in interesting times." Well, for those in, or interested in, the "federal forest business" these are certainly the most interesting of times. Maybe we should be used to it by now.

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2/6/04 Public Forum Handout

PACIFIC RIVERS COUNCIL

protect the best, restore the rest

THE NEED FOR STRONG EQC OVERSIGHT OF FOREST PRACTICES RULEMAKING AND FOR WATERSHED-SPECIFIC RULES IN BASINS IMPAIRED BY PRIVATE FORESTRY

Testimony to the Environmental Quality Commission

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A significant proportion of impaired streams in Oregon are associated with private forest lands. Despite recent improvements in federal lands management, private forestlands play an important role in the recovery of salmon, steelhead and native trout -- especially given the extent to which the lower reaches of many stream systems have likely been converted permanently to non-forest uses.

Under Oregon law, the standards established in rules promulgated by the Board of Forestry under the Forest Practices Act are the foundation of all water quality implementation plans for private forestry. OAR 600 *et. seq.* and ORS 527.610 *et. seq.* In fact, persons complying with these rules cannot be prosecuted for water quality standards violations, even if in fact such violations are being caused. Theoretically, this kind of "shield law" makes excellent public policy in a number of respects, from regulatory streamlining economies to regulatory certainty and convenience for landowners. However, it does not make sense unless there is strong evidence that compliance with the state's minimum rules package does not – with a high degree of certainty – allow water quality to be degraded or maintained below that required to meet the state's numeric or narrative criteria, to meet antidegradation requirements and to fully protect beneficial uses.

For about six years now, the Oregon Board of Forestry has been deliberating over how to meet its obligations under the Oregon Plan for Salmon and Watersheds to ensure that nonfederal forest management is consistent with attainment of water quality standards and with the conservation and recovery of at-risk wild fisheries. To this end, PRC participated on the Forest Practices Advisory Committee to the Board. We were unable to endorse the majority recommendations of this Committee to the Board in September of 2000 because we did not find them to provide reasonable assurance that water quality standards would be met nor would they ensure that harvest pursuant to state standards is not likely to take protected species in violation of the Endangered Species Act.

Over the next several months, the Board of Forestry will be making critical decisions about the statewide stream protection rules proposals that will

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emerge for public review. At this juncture, the proposals under consideration are far less likely to protect clean water and fish than even those under consideration in 2000 – and they fall far short of meeting the recommendation of Oregon's Independent Multidisciplinary Science Team. Most notably, there is no analysis that indicates these proposals are adequate to meet water quality standards, particularly on smaller streams.

To the contrary, existing data and TMDL information indicates that they are not. Existing data make it clear that unless additional measures are implemented, continued implementation of the state's inadequate default rules will result in persistence of temperature problems and impairment of recovery toward meeting shade and temperature targets in basins where nonfederal forest lands are a major land use.

PRC feels strongly that it is the duty of the EQC to ensure that there is a strong analytical basis for the state's forest practice rules. To our knowledge, DEQ is not proposing to provide or even to request that the Department of Forestry provide such analysis.

Specifically, we urge the Environmental Quality Commission to take an active interest in the forest practices rules amendments currently under consideration by the Board of Forestry. If current proposals are not significantly strengthened, the EQC will have strong grounds to petition the Board of Forestry for watershed specific rules in basins where private forestry is a significant cause of the impairment that TMDL targets have been developed to address. ORS 527.765 provides for mandatory Board of Forestry review of the best management practices of the forest practice rules pursuant to rulemaking petitions to change these practices brought by any interested person or agenc. The Board of Forestry cannot dismiss a petition by the EQC "without concurrence of the commission, unless the board commences rulemaking." New rules must be adopted within 2 years unless EQC agrees to additional time. If the EQC identifies significant damage that is occurring to beneficial uses, the board must act "as quickly as practicable." 527.765(3). If the Board does not act within 2 years the "BMP shield law" lapses, and enforcement against operators violating water quality standards will be allowed. ORS 527.770.

The reasons for Pacific Rivers' Council's request to the EQC are briefly explained in more detail below. We would be pleased to answer any questions Commission members may have at any time.

I. The current stream protection rules are not demonstrably adequate to meet current water quality targets set as Load Allocations for shade, which targets are designed to meet water quality standards for temperature under the state's Total Maximum Daily Load program.

A significant proportion of the streams known to be impaired in Oregon are on private forestlands. For example, in the Nehalem basin, about 57% of stream miles impaired for temperature are on private lands. On the Siletz, the proportion is 65% for temperature, 32% for sediment and 48% for habitat modification. In the Coquille Basin, 49% of temperature-impaired miles are on private forestlands and on the Coos it's up to 70%. (from DEQ data, March, 2002).

Many effects from forest practices, such as sedimentation, large wood depletion, hydrologic change and decreases in stream shading, are cumulative within watersheds. As with temperature, because the effects of stream heating are cumulative within watersheds, sources in the upper watershed – where most lands in forest management are located, must be addressed if standards are to be attained.

The current Oregon forest practice regulations and State Forester approvals authorize logging operations that degrade water quality and salmon habitat. The state's own shade study and three federal agencies support the contention that the current stream protection rules do not provide adequate assurance that stream shade targets will be met in the Tualatin and in other basins.

As recently as February 2001, NMFS, FWS and EPA jointly concluded that: "The evidence is. . overwhelming that forest practices on private lands in Oregon contribute to widespread stream temperature problems and degraded salmonid habitat conditions" and that a "substantial body of scientific literature demonstrat[es] that Oregon forest practices likely adversely affect water quality and threatened species of salmonids . . . ."[1]

These concerns have been specifically raised numerous times by EPA in its letters approving TMDL load allocations for shade, but because of the agency's limited authority to formally "approve" implementation plans, these concerns have been brushed aside by the designated management agency for forestry, the Oregon Department of Forestry. For example, in July 2001, with regard to Tillamook Bay, the agency stated "Available data demonstrate that forest management under the Oregon Forest Practices Act reduces shade significantly below the levels necessary to achieve the load allocations [for temperature.]" [2]

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[1] EPA, FWS, NMFS, 2001. Letter from Dan Opalski, Director, EPA Oregon Operations Office, Environmental Protection Agency; Kemper McMaster, State Supervisor, USFWS and Michael Tehan, Oregon Branch, Habitat Conservation Division, NMFS to Dick Pedersen, Manager, Watershed Management, Oregon Department of Environmental Quality and Ted Lorensen, Forest Practices Program Director, Department of Forestry f the State of Oregon (Feb. 28, 2001) (3 pages) (transmitting 28 pages of comments on the state's draft temperature sufficiency analysis entitled "Review of the December 2001 Draft Sufficiency Analysis: Stream Temperature")

[2] EPA, 2001 (a). Letter from Randall F. Smith, Director, Office of Water, Region 10, to Stephanie Hallock, Director, ODEQ, Re: Approval of Temperature and Bacteria TMDLs for the Tillamook Bay Watershed (July 31, 2001) (citing shade study fundings that OFPA rules allow management that reduces shade significantly below the levels necessary to achieve load allocations and stating expectations that the Forest Practices Rules and BMPs will be revised and improved to meet TMDLs)

As a more recent example, EPA stated in August of 2003:

> "The preponderance of monitoring, assessment, and research efforts demonstrates that Oregon's existing forest practice rules will not adequately protect water quality or recover fisheries. The December 2000 DEQ/Oregon Department of Forestry (ODF) Temperature Sufficiency Analysis found that there are water quality impairments due to forest management activities even with Forest Practice Act (FPA) rules and BMPs in place. An October 2002 DEQ/ODF Temperature Sufficiency Analysis indicates that for some medium and small streams, current riparian management area prescriptions for western Oregon may result in short-term temperature increases. In addition, data from the DEQ/ODF CWA Section 319 shade study demonstrates that harvest allowed under FPA in RMAs [riparian management areas] can significantly reduce shade below the levels necessary to achieve the North Coast Subbasins temperature TMDL load allocations."[3]

These problems also have been repeatedly flagged during review of Oregon's Coastal Zone Management Program. In January 2003 NOAA Fisheries and the Environmental Protection Agency informed the lead Oregon agencies for coastal zone management (the Department of Land Conservation and Development and the Oregon Department of Environmental Quality) that Oregon's Forest Practice program still needs strengthening to attain water quality goals and meet CZMA requirements. This communication reiterated the deficiencies raised in the 1998 program review:

> These areas include protection of medium, small, and non-fish bearing streams, including intermittent streams; protection of areas at high risk for landslides; the ability of forest practices to address cumulative impacts of forestry activities; road density and maintenance, particularly so-called "legacy" roads; and the adequacy of stream buffers for the application of certain chemicals.

The January 10, 2003 comments specifically find that these concerns have not been fully addressed and that the state's current Forest Practices Act program will not attain water quality targets (TMDLs). The agencies recommended that basin specific rules be developed immediately to address water quality limited basins under the state's basin-specific rules provisions at OAR 629-635-0120.

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[3] EPA, 2003. Letter from Randall F. Smith, Director, Office of Water, Region 10, to Stephanie Hallock, Director, ODEQ, Re: Approval of Temperature and Bacteria TMDLs for the North Coast Subbasins (August 20, 2003) (reiterating hope that watershed specific practices will be created to ensure OFPA rules meet TMDL targets)

Key Problem -- proposed vegetation retention (conifer basal area) targets for medium and small type Fs have not been demonstrated to be adequate to meet water quality goals for shade, or to provide other riparian functions

We are focused on what is currently an unanswered question: Will FPA rule changes currently under consideration be adequate to assure compliance with state water temperature standards and achievement of the goals of the Oregon Plan?

At present there are minor rules changes being proposed by the ODF that purport to increase the sufficiency of the rules to meet water quality goals, including temperature. However, there has been no attempt to conduct rigorous analysis of these proposals with respect to specific TMDL shade targets in the Tualatin or any basin where such targets exist. When queried on this issue by the state's own IMST, ODF staff has responded that such analysis should be relegated to post hoc monitoring of its rules, instead of being done in support of rules proposals. *See e.g.* IMST meeting of September 30, 2003, Response by Jim Paul, ODF to question posed by Dr. Stan Gregory of the IMST.

Thus, ODF continues to avoid directly addressing the question of whether its rules are TMDL-adequate – something a basin-specific rulemaking could not do . The "sufficiency analysis" that has been conducted was not structured to evaluate the specific magnitude or type of rule change necessary to meet those objectives. Such an assessment would be possible using available models and a more carefully designed and implemented data collection program. However, the analysis presented thus far primarily serves only support the conclusion that the current rules are not adequate.

A cursory analysis comparing the shade study data on post-harvest shade with the TMDL targets that have been set in numerous basins indicate they are not adequate. Further, the data underlying the sufficiency analysis also indicate the approximate magnitude of the improvement in FPA rules that may be needed to meet water quality standards. For example, ODF/ODEQ found that stream shading levels along small fish-bearing streams subjected to harvest under FPA rules were significantly lower than those along similar, but unharvested streams. The underlying data suggest that median basal area values for the riparian trees left along the harvested streams were more than 2.5 times the minimum allowed under current rules. This means that the small stream sites in the study showed significant reductions in shading (and presumably increases in stream temperature) even though they were harvested less aggressively than allowed by current rules. It also suggests that increasing the FPA vegetation retention requirement along these streams by a factor significantly more than 2.5 would be needed to protect small fish-bearing streams against significant shade reductions and, presumably, increases in stream temperatures. The proposed increases do not purport to increase vegetation retention to this degree.

II. The Department is over-relying on voluntary measures which is not appropriate in light of EQCs mandatory duties with respect to water quality oversight under the Clean Water Act

It is EQC's duty to ensure that programs it deems through its rules to be adequate to meet water quality standards actually are adequate. Thus far in the forest practices arena, it appears that you have abdicated this duty.

Numerous key measures that should be mandatory if the are to have certainty of compliance are being proposed as voluntary. For example, no harvest within the first half of the riparian management area should be regulatory – doubling the size of no-cuts on large streams to 50 feet, to 35 feet on mediums and 25 on smalls. The increase in the no-cut area is extremely important given the fact that on some sites it is possible to meet minimum retention targets within the first 20 feet, leaving the rest of the riparian area open to clearcut harvest.

There is also a voluntary proposal to treat medium and large Type N streams the same as Type F streams. The idea is good, and is necessary to have any kind of reasonable assurance that water quality standards will be met on some nonfishbearing stream to which water quality standards nonetheless apply, but this simply will not happen unless there is a rule change. (*See e.g.* IMST 99-1; NMFS Oregon Proposal 1998; Forests and Fish Report EIS 2000; Spence et. al. 1996).

In addition, the proposal to set a 60% basal area removal cap should be higher and should be a rule change. If implemented, this measure could better protect higher quality riparian conditions by restricting riparian harvest to 40% of existing conifer basal area, reducing allowable degradation of currently robust riparian forests and providing potentially greater restrictions on shade depletion, removal of large wood sources and increasing the ability of riparian stands to regulate sediment sources from clearcuts and roads. Under the current rules, uniform harvest down to a minimum floor is allowed on all sites. Large tree retention measures have likewise been downgraded to from standards to elective measures.

All of these measures were important pieces of the FPAC riparian package and key dealmakers for the two environmental and fishing caucus members that supported it – support that has since evaporated. This should not be relegated to a voluntary measure that is unlikely to be accompanied by effective incentives.

III. IMST Consistency Should be the Floor for Stream Protection Rules

The IMST's recommendations constitute a sufficient basis upon which to base minimum regulatory changes. In order to be fully consistent with the Team's 1999 recommendations, the rules must provide equivalent riparian protection to all perennial streams.[4] The team found current Conifer Retention Targets inadequate, calling for more certainty that large trees will be retained through large tree retention and higher basal areas requirements:

[4] "Within existing RMAs, the width is adequate for recruitment of large wood but the density of large conifers is not, especially on small streams." (IMST at 32) (Note, however, that to extent that current widths do not include the entire floodplain, they are not adequate, as per IMST at 31).

> "During harvest, disproportionately removing the larger diameters from the RMA should not be allowed. The size class distribution and density of conifer-dominated riparian forest should eventually reflect that of an older forest (160 years and greater)." (IMST Report Addendum 1, 11/3/99 and IMST at 44-45).

In contrast, the current targets are loosely based on the goals to attain 140-year old forest characteristics halfway through the next rotation and to not include large-tree safeguard.

The team specifically recommended that "minimum retention on small and medium streams should be at least what is now required on large fish-bearing streams (IMST at 45) (i.e. 100 ft2/acre – current proposal is 85 ft2/acre, using the Coast Range as an example). The Team further also recommended that at least the same protection should be provide to nonfish bearing perennial streams as for those that bear fish. We note that even the large-stream retention targets allow harvest down to well under a third to a quarter of the conifer basal area that is characteristic of truly mature riparian forests.

ODF's current proposals clearly fall short of IMST recommendations in at least the following 7 ways:

> (1)They do not treat non-fish bearing streams the same as fish-bearing streams when determining buffer-width protection, nor do they provide a 50-foot buffer on a portion of the non-perennial network. (Recommendation 3, page 43.) Nonfish streams would not receive commensurate protection and none of the non-perennial network receives any significant riparian protection under any rule change or voluntary measure currently being considered.
>
> (2) They do no provide increased protection for 100-year floodplains and islands. (Recommendation 4). The 50-year CMZ proposal would be voluntary and does not ensure that the full floodplain will be protected.
>
> (3) They do not increase basal area and tree-retention requirements for medium and small streams regardless of fish presence. (Recommendation 5).
>
> (4) They do not provide enhanced certainty of protection for core areas. (Recommendation 7).
>
> (5) They do not retain trees on "high risk slopes" and in likely debris torrent tracks to increase the likelihood that large wood will be transported to streams when landslides and debris torrents occur. (Recommendation 13).
>
> (6) There is no method proposed for evaluating the effectiveness of management practices on landslide-prone slopes (Recommendation 14).
>
> (7) They do not state the goal of "emulation of the historic range and distribution of

conditions at the landscape level." (Recommendation 1).

Oregon cannot continue to tout its independent science team to gain credibility for its state-led recovery efforts if it does not actually heed the team's advice.

IV. Salmon- and water quality-sufficient forest practices reform was intended as part of the Oregon Plan for Salmon and Watersheds since 1997, but this has not occurred

There is a long history of discussion over the adequacy of the state's rules to protect the needs of salmon, including water temperature, associated with the listing of Oregon's coastal coho salmon. As part of the listing process, NMFS (also known as NOAA Fisheries) assessed the inadequacy of existing regulatory mechanisms, as required under ESA. The agency found Oregon's regulation of private forest practices to be inadequate, stating that:

> The Oregon Forest Practices Act (OFPA), while modified in 1995 and improved over the previous OFPA, does not have implementing rules that adequately protect coho salmon habitat. In particular, the current OFPA does not provide adequate protection for the production and introduction of large woody debris (LWD) to medium, small and non-fish bearing streams. Small non-fish bearing streams are vitally important to the quality of downstream habitats. These streams carry water, sediment, nutrients, and LWD from upper portions of the watershed. The quality of downstream habitats is determined, in part, by the timing and amount of organic and inorganic materials provided by these small streams (Chamberlin *et al.* in Meehan, 1991). Given the existing depleted condition of most riparian forests on non-Federal lands, the time needed to attain mature forest conditions, the lack of adequate protection for non-riparian LWD sources in landslide-prone areas and small headwater streams (which account for about half the wood found naturally in stream channels) (Burnett and Reeves, 1997, *citing* Van Sickle and Gregory, 1990; McDade *et al.*, 1990; and McGreary, 1994), and current rotation schedules (approximately 50 years), there is a low probability that adequate LWD recruitment could be achieved under the current requirements of the OFPA. Also, the OFPA does not adequately consider and manage timber harvest and road construction on sensitive, unstable slopes subject to mass wasting, nor does it address cumulative effects.[5]

In an attempt to avoid an ESA listing of Oregon coastal coho salmon, Oregon Governor John Kitzhaber developed the Oregon Coastal Salmon Restoration Initiative. In April 1997, the Governor entered into a Memorandum of Agreement ("MOA") between Oregon and NMFS, which stated that "NMFS will work with Oregon and the Department of Forestry over the next six months to develop adjustments NMFS believes are required in Oregon forest practices to provide a high probability of protecting and restoring aquatic habitat on Oregon forest lands which are important for Oregon coastal coho." MOA, § 7(f)(1). The MOA further provided that "Oregon shall make every effort to ensure that the Board of Forestry, or the Legislature consider

[5] 62 Fed. Reg. at 24,596.

the proposals promptly, and make a decision on the proposed changes in a timely manner and shall make any necessary changes no later than June 1, 1999." MOA, § 7(f)(3). In May 1997, NMFS withdrew its proposal to list Oregon coast coho salmon as threatened, concluding that the species would not become endangered during a two-year time frame allowed for Oregon to adopt improved habitat measures. While NMFS expressly found that the current forest practice rules do not "adequately protect coho salmon habitat,"[6] it relied on Oregon's promise to adopt new rules that would provide such protection:

> Under the April 1997 MOA between NMFS and the Governor of Oregon . . ., NMFS will propose to Oregon additional forest practices modifications necessary to provide adequate habitat conditions for coho. If these or other comparable protections are not adopted within 2 years, NMFS will act promptly to change the ESA status of this ESU to whatever extent may be warranted.

Id. at 24,607-08.

In accordance with its agreement with Oregon, NMFS recommended changes to Oregon's regulation of forest practices in February 1998.[7] Specifically, NMFS recommended riparian buffers on all streams with buffers in the coast range of 150-200 feet on fish-use streams, 100-135 feet on perennial nonfish-use streams, and 50-100 feet on intermittent nonfish-use streams. NMFS also recommended prohibiting forest practices on landslide-prone locations with a high or medium potential for delivery to streams. With respect to cumulative effects, NMFS endorsed short-term "precautionary management - i.e., the application of conservative measures to avoid individually small effects that may add to an already adverse circumstance or cumulate over time and eventually reduce salmon survival. In the longer-term, cumulative effects should be addressed as part of effective watershed analysis . . . ."[8] Oregon did not implement NMFS' proposal.

In January 1999 after the coho salmon listing, Governor Kitzhaber issued Executive Order No. 99-01 modifying the framework for implementing what had become known as the Oregon Plan for Salmon and Watersheds in light of the coho listing. The Executive Order reaffirmed the role of the Independent Multidisciplinary Science Team ("IMST"), which had been established by the Oregon Legislature to provide independent scientific oversight of the Oregon Plan for Salmon and Watersheds.[9] With respect to Oregon's forest practice rules, the IMST concluded that "current rules for riparian protection, large wood management, sedimentation, and fish passage are not adequate to reserve depressed stocks of wild salmonids."[10]

The Executive Order directed the Board of Forestry to "determine, with the assistance of an advisory committee, to what extent changes to forest practices are needed to meet state water quality standards and to protect and restore salmonids." More specifically, the Executive Order

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[6] 62 Fed. Reg. at 24,607-08, at 24,596,

[7] NMFS, A Draft Proposal Concerning Oregon Forest Practices at 67 (Feb. 17, 1998).

[8] Id. at 64, 57 and 91.

[9] Oregon Senate Bill 924 (1997 Or. Laws, ch. 7); Executive Order No. 99-01, at 1(k).

[10] IMST, Recovery of Wild Salmonids in Western Oregon Forests: Oregon Forest Practices Rules & the Measures in the Oregon Plan for Salmon & Watersheds, Technical Report 1999-1, at 2 (1999).

directed that: "the advisory committee will make recommendations to the Board at both site and watershed scales on threats to salmonid habitat relating to sediment, water temperature, freshwater habitat needs, roads and fish passage. Based on the advisory committee's recommendations and other scientific information, the Board will make every effort to make its determinations by June 1999." [11]

The Board convened the Forest Practices Advisory Committee on Salmon and Watersheds ("FPAC") to recommend changes in ODF's regulation of forest practices. The FPAC committee made modest recommendations to improve some aspects of forest practices on private lands in Oregon. These recommendations did not purport to stop the State Forester from authorizing logging operations that take coho or salmon under the ESA nor did it claim to fully address water quality standards. The FPAC's final report candidly admits that: "[t]he effort did not attempt to specifically address sufficiency for particular federal laws or regulations, such as the federal Endangered Species Act or Clean Water Act."[12]

The Board of Forestry has not yet revised its forest practice regulations to fully protect listed coho salmon or meet water quality standards. The modest regulatory changes recommended by the FPAC committee have not been adopted, and some of these recommendations are not being carried forward to the Board or have been changed to voluntary measures.

CONCLUSION: EQC involvement is needed in ODF rulemaking; EQC should pursue watershed-specific rules in TMDL basins significantly impaired by forestry.

Ever since the 1994 forest practices rules, EPA and the NOAA Fisheries have repeatedly called for additional management measures to strengthen Oregon's forest practices with respect to several areas critical to water quality protection, including harvest in high risk, landslide prone areas, riparian protection on medium small and non-fish bearing streams, including intermittent streams and the control of cumulative effects. Existing data make it clear that unless additional measures are implemented, continued implementation of the state's inadequate default rules will result in persistence of temperature problems and impairment of recovery toward meeting shade and temperature targets in basins where nonfederal forest lands are a major land use

Current default rules are one-size-fits-all buffers that apply generally to broadly-defined ecoregions, without regard to existing levels of cumulative watershed effects and water quality impairment. Yet proposed rules do not increase the overall size of these buffers – including the no-cut, and provide very little or no protection for small streams.

At this juncture, there has been no movement toward the development of basin-specific rules for forestry-impaired water bodies subject to TMDLs in any Oregon basin. Nor, we believe, are there pending policy changes that would fully address the IMST's recommendations or the rules deficiencies identified in the state's temperature sufficiency research and numerous other sources.

[11] Executive Order No. 99-01, at 3(c).

[12] Report of the Ad Hoc FPAC on Salmon & Watersheds to the Oregon Board of Forestry at 2 (Aug. 2000).

We believe that the best course of action would be for the EQC to petition the Board of Forestry pursuant to the process outlined in ORS 527.765, which provides for mandatory Board of Forestry review of the best management practices of the forest practice rules pursuant to rulemaking petitions to change these practices brought by any interested person or agency under the state APA at ORS 183.390. "[T]he petition must allege with reasonable specificity that nonpoint source discharges of pollutants resulting from forest operations being conducted in accordance with the best management practices are a significant contributor to violations of such standards." ORS 527.765(3)(a). The Board must dismiss a petition or commence rulemaking within 90 days of the filing of the petition, but it cannot dismiss a petition by the EQC "without concurrence of the commission, unless the board commences rulemaking. 527.765(3)(d). Rules must be adopted within 2 years unless EQC agrees to additional time. 527.765(3)(f), and if the EQC identifies significant damage that is occurring to beneficial uses, the board must act "as quickly as practicable." (g). If the Board does not act within 2 years the "BMP shield law" lapses, and enforcement against operators violating water quality standards will be allowed. ORS 527.770.

Ideally, the Commission itself would initiate a process – perhaps with cost-sharing from stakeholders – that includes an independently conducted, rigorous analysis based on the TMDL temperature targets and underlying models which would provide the basis for the specific rules provisions proposed.

2/5-6/04 EQC Meeting Item J Handout

STATUS REPORT
IMPLEMENTATION OF SUFFICIENCY ANALYSIS RECOMMENDATIONS

ISSUE: What is the current status of response to recommendations included in the "Sufficiency Analysis: A Statewide Evaluation of Forest Practices Act Effectiveness in Protecting Water Quality"?

BACKGROUND: The Department of Forestry and Department of Environmental Quality agreed through an April 1998 Memorandum of Understanding to jointly evaluate the effectiveness of the Forest Practices Act to protect water quality. The analysis focused on temperature, sedimentation, aquatic habitat modification, and bio-criteria. It was agreed that other water quality parameters are generally not attributable to forest management practices and that an evaluation of parameters beyond those specified was not warranted at the time the analysis was conducted.

Several limitations were identified in the ability to arrive at definitive conclusions. The FPA goals and objectives, as well as some of the state water quality standards and criteria are qualitative in nature. Conclusions regarding the effectiveness of the rules in meeting the goals and objectives were qualitative as well. Available data relevant to those quantitative water quality standards (i.e. temperature and turbidity) was inadequate to draw specific and comprehensive conclusions about the adequacy of current practices. Given those limitations, the authors made a series of recommendations, some of which did not indicate a need for rule revisions.

As the Board of Forestry considers whether these recommendations should be rules or not, the statutory requirements ORS 527.714 (5) become a consideration. ORS 527.714 (5) clearly states the board may adopt a rule only after making finding that there is monitoring or research evidence that documents that degradation of resources is likely if forest practices continue to be conducted under existing regulations.

The sufficiency analysis states:
"There are at least two general points of view regarding scientific uncertainty. One is to assert that since it cannot be determined with certainty that a set of practices *is* achieving a given water quality standard, a conservative approach should be taken and the rules changed to provide a higher level of protection in case a significant risk does, in fact, exist.

Another view is to assert that since it cannot be determined with certainty that a set of practices *is not* achieving a given water quality standard, there is no reason for a change in practices until further monitoring and/or research can prove that a significant risk does, in fact, exist. Both points of view are valid when scientific findings are uncertain, and values and beliefs play a role in how these points of views utilize limited scientific information."

The requirements of ORS 527.714 direct the Board's deliberations very clearly towards the point of view that rules not be changed unless findings can be made that practices **are *not*** achieving a given water quality standard.

Notwithstanding the ORS 527.714 requirements, as discussed below, progress toward rulemaking is being made on the "core" recommendations related to riparian protection. Recommendations related to roads and yarding have mostly already been implemented.

RECOMMENDATIONS AND STATUS OF ACTION

Recommendation #1: The RMA basal area retention standards should be revised, where appropriate, to be consistent with achieving characteristics of mature forest conditions in a timely manner; and to ensure that RMAs are providing desirable amounts of large wood and shade over space and time.

Increases through rule in basal area retention standards have been proposed for medium and small type F streams in western Oregon. The Board of Forestry approved draft rule language in October 2003.

The proposal will substantially increase basal area retained along these streams. For example, for the Interior and West Cascade Geo-regions for Type 2 or 3 harvests the basal areas for medium fish-bearing streams will increase from 140 to 190 square feet and for small fish-bearing streams the basal area will increase from 40 to 100 square feet.

This language will proceed to the formal rule making process upon completion of the Board's consideration of all rule concepts. The department will not recommend increases or revisions for eastern Oregon due to lack of data supporting finding that indicate the current standards are inadequate. The department intends to propose that the BOF specifically direct monitoring towards ascertaining the adequacy of current eastside *basal area retention standards. This action is tentatively planned for the March 2004 Board of Forestry meeting.*

Recommendation #2: Revise current practices so desirable amounts of large wood are available along small stream channels that can deliver debris torrents to Type F streams. Ensure that adequate shade is maintained or rapidly recovered for riparian areas along small perennial Type N streams with the potential to impact downstream Type F waters.

Statutory authority to designate in-unit "green tree" retention along debris torrent prone streams was added to the Forest Practices Act by legislative action. The Board of Forestry approved draft rule language providing for the directed retention of "green trees" along debris torrent prone streams in September 2003. This language will proceed to the formal rule making process upon completion of the Board's consideration of all rule concepts.

The Department will present draft rule language to the Board of Forestry related to retaining additional vegetation along, up to 500 feet, of some small perennial Type N streams above fish use streams at the April 2004 Board of Forestry meeting.

Recommendation #3: Provide additional large wood to streams by actively placing the wood in areas where it will provide the greatest benefits to salmonids.

Voluntary active placement has been negatively impacted by federal agency actions that now require federal removal/fill permits for in stream restoration projects. Continuing federal objections to the existing provision in the forest practice rules allowing removal of some basal area otherwise required to be retained in exchange for placement of large wood in streams during active operations has also reduced interest in active placement. Options are being considered, and alternative language may be developed prior to the April 2004 Board of Forestry meeting.

Recommendation #4: Reduce the delivery of fine sediment to streams by installing cross drains to keep drainage waters from eroding slopes. This will allow filtering of sediments and infiltration of drainage water into undisturbed forest soils. Cross drains should not be confused with stream crossing culverts. Cross drains take water from the road surface and ditch and route it under/across the road, discharging the water downslope from the road.

Revised rule language adopted in 2002 addressing drainage on new and reconstructed roads (OAR 629-625-0330) and authorizing the directed placement of additional cross drainage structures on existing active roads prior to hauling (OAR 629-625-600 (9)). Existing "Tech Note" revised to reflect revised language. Rule language is attached.

Recommendation #5: Develop specific standards for roads that will be actively used during the wet season. This would include a requirement for durable surfacing of roads in locations where fine sediment can enter streams. This would also include ceasing to haul if roads have not been constructed with effective surface materials, drainage systems, or other alternatives (paving, increased numbers of cross drains, sediment barriers, settling basins, etc.) that minimizes delivery of sediment into streams.

New rule adopted in 2002. (OAR 629-625-0700 Wet Weather Road Use) Rule language is attached.

Recommendation #6: Develop specific guidance describing how roads in critical locations would be reviewed to reduce road length, and determining when, despite the relocation, the road location would pose unacceptable risk to resources and not be approved.

Critical road location policy approved by the Board of Forestry. "Tech Note" developed and training provided.

Recommendation #7: Construct stream crossings that adequately pass large wood and gravel downstream, and provide other means for passage of large wood and sediment at those crossings that restrict passage. The transport mechanisms for large wood and gravel should include both stream storm flows and channelized debris flows. This would reduce the risk of debris backing up behind the structure, potentially resulting in catastrophic sediment delivery caused by washouts.

No specific action to date. However, design criteria adopted after the 1994 rule review has generally improved culvert and arch pipe installations in terms of wood and sediment passage. Research is required to develop methodology for further implementation of this recommendation.

Recommendation #8: Develop specific steep-slope, ground-based, yarding practices, or add a prior approval requirement for ground skidding in high-erosion hazard locations.

This was accomplished with revised rule language adopted in 2002. (OAR 629-630-0150) Prior approval was not added as a requirement which is fortuitously consistent with HB 3264, passed in 2003. HB 3264 eliminated the authority to require prior approval. A copy of OAR 629-630-0150 is attached.

Recommendation #9: Manage locations most prone to landslides (high-risk sites) with techniques that minimize impacts to soil and water resources. To achieve this objective, best management practices to protect landslide-prone terrain currently in guidance should be incorporated into the forest practice rules, while developing a better case history for evaluating the effectiveness of those practices. These standard practices are designed to minimize ground alteration/disturbance on high-risk sites from logging practices.

In addition to OAR 629-630-0150 Ground-Based Harvesting on Steep or Erosion Prone Slopes, OAR 629-630-0500 Harvesting on High Landslide Hazard Locations (4)-(6) added the referenced guidance to administrative rule in 2002. Copy of the rule is attached.

Recommendation #10: Provide for riparian functions along stream reaches above impassable stream crossing structures that have a high probability of recolonization by salmonids once the structure is replaced/improved. If an upstream reach has the capacity to be a fish-bearing stream, but is currently a non-fish-bearing stream because a stream crossing structure cannot pass fish, the forest practices rules should be amended so the upstream reach is classified as a fish-bearing stream.

The Department will present draft rule language to implement this recommendation to the Board of Forestry at the April 2004 Board of Forestry meeting.

Recommendation #11: Facilitate the identification, prioritization, and restoration of existing culverts that currently do not pass fish. Culvert replacement should be accelerated above what is currently being done, specifically for family forestland owners who often do not have adequate resources to address this issue in a timely manner.

Training package developed in cooperation with Oregon State University and available for use. Initial offering not well attended. Need to develop venue for reaching more of the target audience.

Recommendation #12: Provide a more effective and efficient means of classifying streams for "fish use." Revise the forest practice rule definition of Type F and Type N streams using a physical habitat approach to classify fish-use and non-use streams.

The Department plans to present draft rule language to the Board of Forestry at the April 2004 Board of Forestry meeting. The Washington Department of Natural Resources has just completed developing a method to accomplish this recommendation and we will be reviewing their methodology over the next month.

629-625-0330
Drainage
(1) The purpose of this rule is to provide a drainage system on new and reconstructed roads that minimizes alteration of stream channels and the risk of sediment delivery to waters of the state. Drainage structures should be located based on the priority listed below. When there is a conflict between the requirements of sections (2) through (6) of this rule, the lowest numbered section takes precedence, and the later-numbered and conflicting section shall not be implemented.
(2) Operators shall not concentrate road drainage water into headwalls, slide areas, high landslide hazard locations, or steep erodible fillslopes.
(3) Operators shall not divert water from stream channels into roadside ditches.
(4) Operators shall install dips, water bars, or cross drainage culverts above and away from stream crossings so that road drainage water may be filtered before entering waters of the state.
(5) Operators shall provide drainage when roads cross or expose springs, seeps, or wet areas.
(6) Operators shall provide a drainage system using grade reversals, surface sloping, ditches, culverts and/or waterbars as necessary to minimize development of gully erosion of the road prism or slopes below the road.

629-625-0600
Road Maintenance
(9) Where needed to protect water quality, as directed by the State Forester, operators shall place additional cross drainage structures on existing active roads within their ownership prior to hauling to meet the requirements of OAR 629-625-0330.

629-625-0700
Wet Weather Road Use
(1) The purpose of this rule is to reduce delivery of fine sediment to streams caused by the use of forest roads during wet periods that may adversely affect downstream water quality in Type F or Type D streams.
(2) Operators shall use durable surfacing or other effective measures that resist deep rutting or development of a layer of mud on top of the road surface on road segments that drain directly to streams on active roads that will be used for log hauling during wet periods.
(3) Operators shall cease active road use where the surface is deeply rutted or covered by a layer of mud and where runoff from that road segment is causing a visible increase in the turbidity of Type F or Type D streams as measured above and below the effects of the road.

629-630-0150
Ground-Based Harvesting on Steep or Erosion-Prone Slopes
(1) The purpose of this rule is to reduce the potential for erosion from steep or erosion-prone slopes to enter waters of the state.
(2) Slopes over 60 percent are subject to the requirements of Sections (4) through (9) of this rule.
(3) Slopes over 40 percent where soils consist of decomposed granite-type materials, or other highly erodible materials as determined by the State Forester, are considered erosion-prone and subject to the requirements of Sections (4) through (9) of this rule.
(4) Methods that avoid development of compacted or excavated trails are the preferred alternative for operating on steep or erosion-prone slopes. If the operation will result in excavated or compacted skid trails, operators shall apply sections (5) through (9) of this rule.
(5) If skid trails are located on steep or erosion-prone slopes, operators shall locate them at least 100 feet from any stream channels.
(6) Operators shall locate skid trails where water can drain off the skid trail and onto undisturbed soils.

(7) Skid trails shall not be located straight up and down steep on erosion prone slopes for a distance exceeding 100 feet unless effective drainage and sediment filtration can be achieved.
(8) Operators shall install effective cross ditches on all skid roads located on steep or erosion-prone slopes.
(9) Operators shall limit the amount of ground with disturbed soils on steep or erosion-prone slopes as described in Sections (2) and (3) of this rule to no more than ten percent of the steep or erosion-prone slopes within the operation area.

629-630-0500
Harvesting On High Landslide Hazard Locations
(1) The purpose of this rule is to prevent timber harvesting-related serious ground disturbance and drainage alterations on all high landslide hazard locations, and to reference additional requirements when there is public safety exposure below the high landslide hazard location.
(2) Operators and the State Forester shall share responsibility to identify high landslide hazard locations and to determine if there is public safety exposure from shallow, rapidly moving landslides using methods described in OAR 629-623-0100 through 0300. If there is public safety exposure, then the practices described in OAR 629-623-0400 through 0800 shall also apply.
(3) Operators shall not construct skid roads on high landslide hazard locations.
(4) Operators shall not operate ground-based equipment on high landslide hazard locations.
(5) Operators shall prevent deep or extensive ground disturbance on high landslide hazard locations during log felling and yarding operations.
(6) Operators concerned about the application of these standards to a specific operation may consult with the State Forester to obtain an evaluation of their harvesting plan and its likelihood of compliance with the standards.

HINKLE Creek

PAIRED WATERSHED STUDY & RESEARCH DEMONSTRATION AREA

What is Hinkle Creek?

Hinkle Creek is a working forest.

Located northeast of Roseburg, Oregon, Hinkle Creek supports a stand of 55-year old harvest regenerated Douglas-fir. The watershed is owned by Roseburg Forest Products, whose long-term objective is to produce high quality wood products in perpetuity.

Hinkle Creek is also the site of a new, state-of-the-art paired watershed study to investigate the effects of contemporary forest practices on water quality, fisheries, and aquatic habitat at the scale of a complete watershed. It is the first paired watershed study initiated in Oregon in over 30 years and it will be the first ever paired watershed study located completely on private forestland.

Hinkle Creek is the location of a demonstration area where the public can come and observe modern intensive forest management. It is also a place where watersheds, water quality, and fisheries area being studied. Thus, it is a place to see how well these two seemingly mutually exclusive activities get along.

Cutthroat trout.

The Science

Judy Li with one of her aquatic invertebrates.

The Hinkle Creek study site consists of two similar sized forested watersheds, the North Fork and the South Fork of Hinkle Creek. The North Fork has been set aside and will be the control watershed. The South Fork will be the treatment watershed.

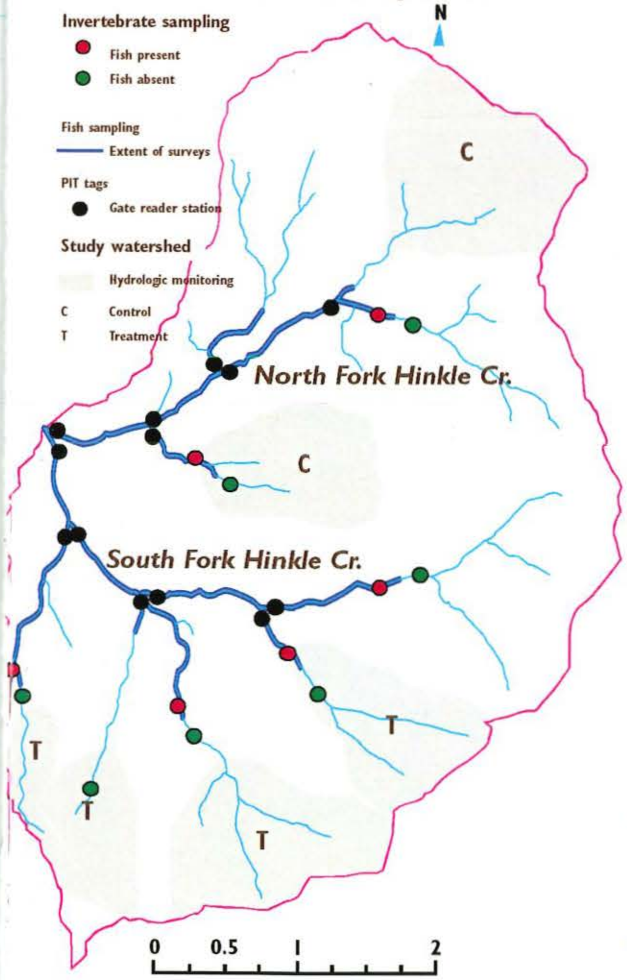
Six headwater watersheds have been designated as study watersheds. Two study watersheds in the North Fork basin will remain untreated throughout the study. Four study watersheds in the South Fork basin will be harvested in compliance with forest practice rules using high-lift, skyline-yarding equipment from existing roads. Stream discharge, water quality, as well as population data of aquatic invertebrates and amphibians will be measured in all of the study watersheds.

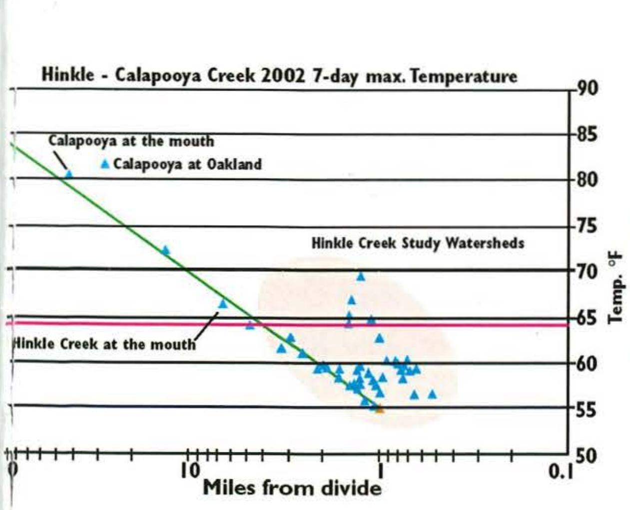
In addition, stream discharge and water quality of the North and South Forks will be measured at the confluence. Fisheries, aquatic invertebrate, and amphibian population data will be collected in the main stem of each watershed.

The Hinkle Creek, Paired Watershed Study will last 10 years.

Doug Bateman and Arne Skaugset illustrate PIT tag technology using a mobile antenna.

Hinkle Creek Study Area



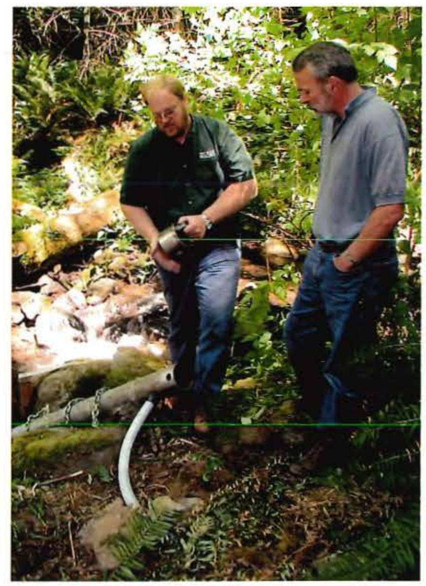


Scientific Infrastructure

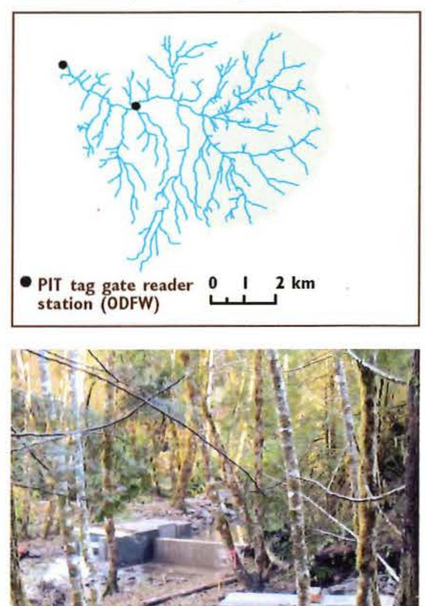
Approximately $500,000 of contributed funds and $250,000 of in-kind support have gone into Hinkle Creek to date.

Infrastructure includes:

- fish traps at the confluence on the North and South Forks,
- USGS gauging stations at the same locations,
- 600 (approximately) tagged resident cutthroat trout in the study watersheds,
- 13 antenna installed to track the movement of the tagged fish,
- Over 45 thermistors to track stream temperature in the watersheds
- 2003 will be the third summer that stream temperature and fisheries data have been collected.

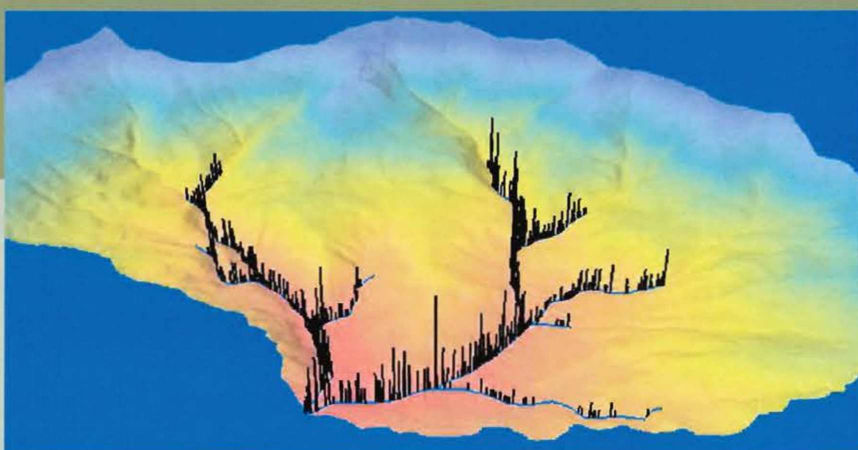


Jon House (USGS) describes a stream gauging installation to John Seward (ODF).



PIT tag insertion in trout.

Fish traps on the N and S Forks of Hinkle Creek at their confluence.



Distribution of resident cutthroat trout during the summer of 2002 in the Hinkle Creek study watershed.

Watersheds Research Cooperative (WRC)

The Hinkle Creek Paired Watershed Study and Research Demonstration Area is funded through the Watersheds Research Cooperative in the College of Forestry at Oregon State University. The WRC is an umbrella cooperative for environmental research associated with intensive forest management on private industrial forestland. Hinkle Creek is the primary project of the WRC at this time. Current cooperators include: Roseburg Forest Products; Oregon Forest Industries Council; Oregon Department of Forestry; Douglas County; Oregon Department of Fish & Wildlife.

Membership in the WRC requires a minimum contribution or a similar value of in-kind support. Representatives of the members of the WRC sit on an advisory committee that shapes cooperative goals and establishes research priorities. For further information regarding membership in the WRC contact: **Arne Skaugset, c/o Department of Forest Engineering, 215 Peavy Hall, Corvallis, OR 97331, phone: 541-737-3283, email: Arne.Skaugset@oregonstate.edu.**

Collaborators

The Hinkle Creek Paired Watershed Study is alive and well today because of a diverse group of people, personalities, companies, organizations, and agencies. These people and groups have given money, in-kind support, hard work, administrative support, time, positive thoughts, and good karma. The people and groups that Hinkle Creek owes its existence to include: Roseburg Forest Products; Douglas County; Oregon Watershed Enhancement Board; Forest Engineering Department and Forest Science Department, College of Forestry, Oregon State University; Oregon Forest Industries Council; Oregon Department of Forestry; Oregon Department of Fish & Wildlife; Umpqua Fisheries Enhancement Derby; USGS-FRESC, Department of Fisheries and Wildlife; College of Agricultural Sciences, Oregon State University; Resource Management Services; Douglas Timber Operators.

Design & layout by Forestry Communications Group, College of Forestry, Oregon State University

Attachment A

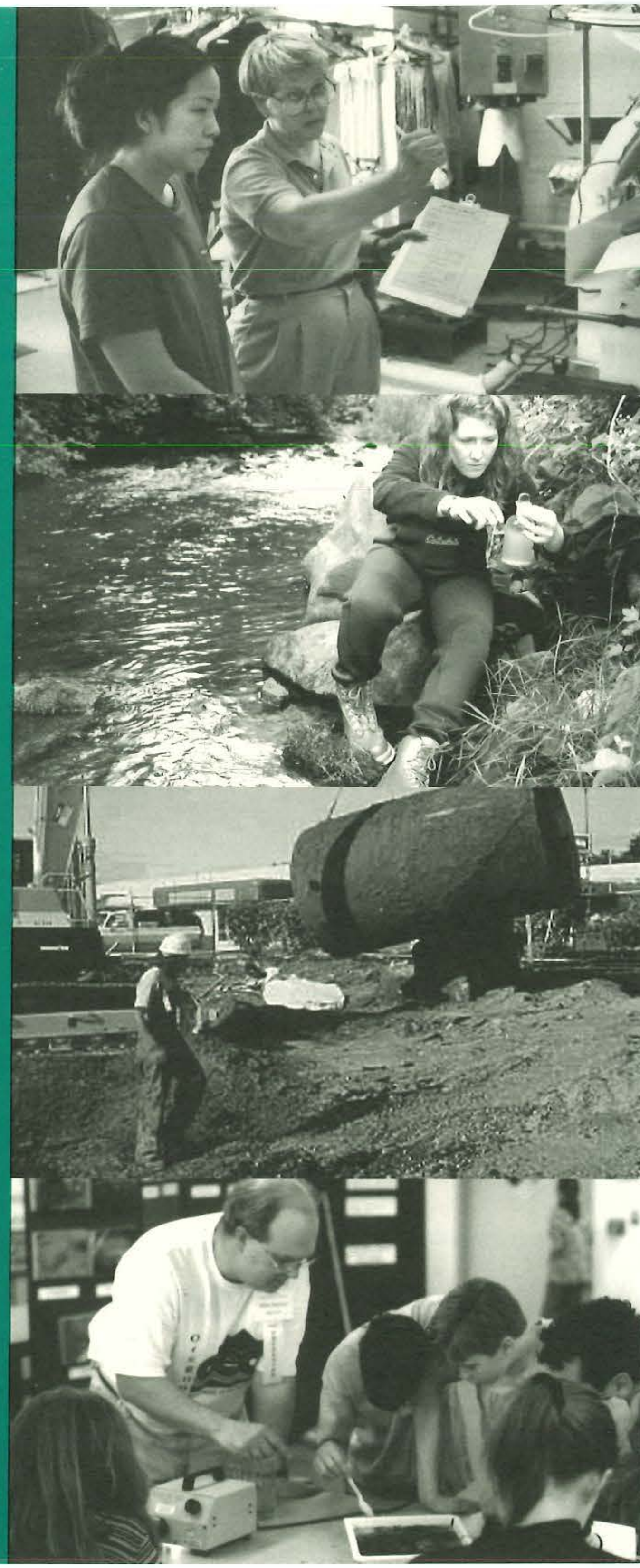
Oregon Department of Environmental Quality

Strategic Directions

2002

DEQ

State of Oregon
Department of Environmental Quality



March 2002

Dear Oregonians:

Over the years, Oregon's ethic of environmental responsibility has led to groundbreaking legislation and significant gains in protecting public health and Oregon's environment. The Oregon Department of Environmental Quality (DEQ) has helped achieve these gains by regulating pollution from the largest and most obvious sources. Regulations have been successful; Oregon's air, land and water are cleaner and safer today than before regulation.

In the 21st century, however, the challenges we face are more complex. We are feeling the cumulative effects of human activity. Increased population and traffic mean more toxic air pollutants from cars and trucks. Protecting water quality for beneficial uses — including native salmon — now must include control of pollution from urban runoff, agricultural and forest practices, and other sources that traditionally have not been regulated. To respond to these challenges, we need creative thinking, good management and involvement by all Oregonians.

During challenging times, government must provide leadership and clear direction to ensure that important work gets done in a cost-effective manner. This means we must set priorities and measure performance. DEQ has developed these Strategic Directions to sharpen our focus on the priority actions needed to protect public health and the environment. For the next few years, DEQ will focus on four priorities:

- Deliver Excellence in Performance and Product
- Protect Oregon's Water
- Protect Human Health and the Environment from Toxics
- Involve Oregonians in Solving Environmental Problems

This document presents the key actions that we are taking for each of these priorities and includes checkpoints we will use to measure performance. Strategic Directions are by definition dynamic, and we will review our progress periodically. I look forward to working with you as we continue Oregon's proud environmental legacy.

Sincerely,

Stephanie Hallock

Stephanie Hallock
DEQ Director

DEQ's mission is to be a leader in restoring, maintaining and enhancing the quality of Oregon's air, water and land.

Beginning of DEQ

Oregon's history of environmental regulation began in 1938, when the Oregon State Sanitary Authority was formed in response to a successful citizen initiative known as the "Water Purification and Prevention of Pollution Bill." In 1969, the Authority became the Oregon Department of Environmental Quality (DEQ), an independent state agency.

DEQ Overview

DEQ monitors and assesses environmental conditions, establishes policies and rules, issues permits, cleans up contamination, enforces environmental laws, and educates businesses and citizens to encourage pollution prevention. DEQ's team of scientists, engineers, technicians, managers and support staff is highly committed to restoring and protecting public health and Oregon's environment.

The Oregon Environmental Quality Commission, a five-member Governor-appointed board, issues orders, judges appeals of fines, adopts rules and appoints the agency director. The Commission also participates in the development of DEQ's Strategic Directions.

In 1993, DEQ moved most of its staff into field offices in order to better understand problems facing Oregon communities and provide more local service. Today, DEQ operates a laboratory, 18 offices around the state, and eight Vehicle Inspection Stations in the Portland area and Medford. Headquarters programs include air, land and water quality, and management services. These divisions develop environmental policy and provide administrative support. Regional offices implement environmental protection programs, working with local communities and businesses to solve environmental problems. DEQ's laboratory provides monitoring and analytical support for the entire agency.

Accomplishments

In 1980, only 30% of Oregonians lived in clean air areas. Today, 100% of Oregonians live where the air meets national health standards. In Oregon, 64% of rivers monitored by DEQ are improving in water quality and only 1% are declining. Since 1991, citizens have properly disposed of more than three million pounds of household hazardous waste through DEQ-sponsored statewide collection events. These successes were achieved through the collective efforts of DEQ, communities, businesses and citizens.

Although we are proud of what Oregonians have achieved, significant environmental concerns remain. For example, more than 13,000 miles of Oregon rivers fail to meet clean water standards. More people are recycling; however, per capita waste generation continues to rise. Continued population growth makes it a challenge to keep our water, air and land clean.

DEQ's Vision

DEQ's vision is to work cooperatively with all Oregonians for a healthy, sustainable environment. DEQ promotes the following cultural values: Environmental Results, Customer Service, Partnership, Excellence and Integrity, Employee Growth, Teamwork, Diversity.

DEQ's Strategic Directions define DEQ's priority work. Checkpoints established for each priority ensure that we deliver results. These checkpoints will complement Oregon Benchmark performance measurement.

State of Oregon
Department of Environmental Quality

Priority 1
Deliver Excellence in Performance and Product

DEQ recognizes that even well-managed agencies must continue to improve. We are committed to managing and motivating employees to perform professionally in their daily work as well as fostering collaboration internally across program lines.

Whether you are receiving a compliance inspection or technical assistance with a permit, DEQ is dedicated to providing high-quality service. Protecting public health and the environment requires a commitment to science and to effective regulation; however, we recognize that how we do our work is equally important. The key actions that follow outline DEQ's efforts for delivering excellence in all that we do.

Key Action: Make it easier to do business with DEQ

DEQ interacts with many customers – the public, members of the regulated community, tribes, government agencies and other organizations. As an agency, we are striving to improve customer service and streamline our regulatory process. Efforts are already underway to make improvements to programs that affect small businesses and individuals. In 2002, DEQ will conduct a survey of customers to help us identify other service improvement opportunities.

Key Action: Reinforce effective management

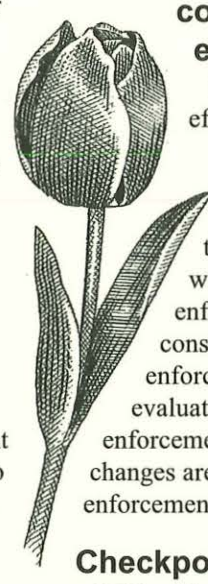
The range and complexity of issues facing DEQ are diverse and have grown over time. Managing DEQ's budget, with its large number of dedicated funds, demands constant attention in order to provide accountability to the Legislature and all Oregonians. We have improved our operating budget process; our programs now have more information for managing within budget forecasts.

We also recognize that effective staff and management are keys to success. Over the next year, we will be assessing our performance evaluation methods to ensure that our employees are getting the support they need to work effectively.

Key Action: Emphasize cross-program environmental problem solving.

DEQ implements laws and regulations developed and funded along program lines to protect the air, water and land. However, many environmental problems require the attention of more than one DEQ program. For example, abandoned mines and contaminated sediments affect both water and land. To address a need for greater collaboration among programs, DEQ has identified and is implementing actions that focus on improving cross-program problem solving.

Key Action: Ensure understandable and equitable compliance and enforcement



DEQ is committed to having an effective compliance and enforcement program that is understandable, encourages compliance, is equitable, and appropriately reflects the severity of the violation. DEQ will assess and modify compliance and enforcement procedures to ensure consistent, understandable and timely enforcement actions. DEQ will also evaluate current rules governing enforcement activities to determine whether changes are needed to ensure equity in enforcement.

Checkpoints

DEQ will carefully monitor efforts that promote performance excellence by asking the following questions:

- Are our customers satisfied with the service DEQ provides?
- Is DEQ operating within its budget?
- Do DEQ employees receive the direction and feedback they need to be effective?
- Is cross-program coordination improving?
- Are DEQ enforcement actions equitable, consistent, understandable and timely?

State of Oregon
Department of
Environmental
Quality

Priority 2

Protect Oregon's Water

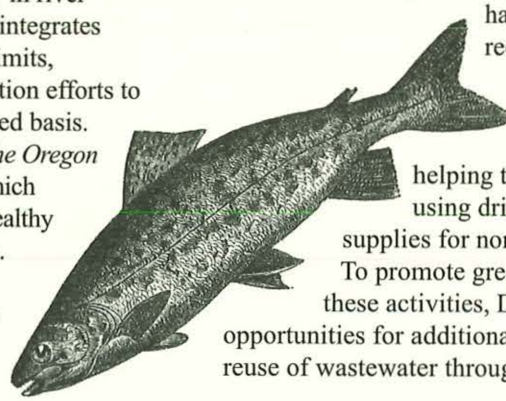
Water's many beneficial uses include drinking water, support of industrial processes, agricultural and recreational activities, healthy ecosystems and wildlife habitat. DEQ is committed to doing its part to ensure that Oregon's rivers, lakes, streams and groundwater are clean enough to support these uses.

Historically, water pollution control has been directed at industrial and municipal wastewater. This traditional permitting approach has helped but has not effectively addressed the impacts of other known sources of pollution. Addressing multiple sources of pollution on a watershed basis offers a more integrated and efficient approach to manage expected impacts from water pollution. To improve and maintain water quality, DEQ is implementing the following key actions.

Key Action: Implement a comprehensive watershed approach

DEQ's primary initiative to protect Oregon's water quality takes a watershed approach by focusing our efforts geographically in river basins. Under this approach, DEQ integrates water quality data, pollution load limits, permitting and groundwater protection efforts to manage water quality on a watershed basis.

This approach is consistent with *The Oregon Plan for Salmon and Watersheds,* which brings agencies together to restore healthy aquatic habitats on a watershed basis. The *Oregon Plan* encourages incentives and education to motivate voluntary actions that go beyond regulation. DEQ is committed to success of the *Oregon Plan*.



One of DEQ's tools to improve impaired waterbodies is to develop pollution load limits known as Total Maximum Daily Loads (TMDLs). TMDLs define the amount of each pollutant a waterway can receive and still maintain water quality standards. TMDLs take into account pollution from all sources, including industrial and sewage treatment facilities, runoff from farms, forests and urban areas, and natural sources. DEQ is developing TMDLs for all impaired waterbodies in the state by 2007. As of December 2001, the US Environmental Protection Agency had approved 263 TMDLs completed by DEQ.

DEQ is also shifting water quality permit renewal to a watershed basis, simultaneously working to minimize a backlog of permits watershed by watershed.

Key Action: Develop a strategy to encourage broader reuse of wastewater

The direct release of treated wastewater into surface water is a common water quality management practice. This wastewater, while technically clean, often contains nutrient and temperature levels that exceed natural water conditions. As an alternative, many treatment plants have developed strategies to "reuse" treated water to irrigate or to restore wetland habitats. This reclamation of wastewater has many potential benefits, including helping to offset the need for using drinking water supplies for non-drinking purposes.

To promote greater investment in these activities, DEQ will foster opportunities for additional reclamation and reuse of wastewater throughout the state.

Checkpoints

DEQ has developed the Oregon Water Quality Index to evaluate improvements in water quality over time. The index integrates eight distinct criteria into a single number expressing water quality. Data points from routine monitoring are used to determine the water quality rating. This index is DEQ's primary indicator of trends in water quality.

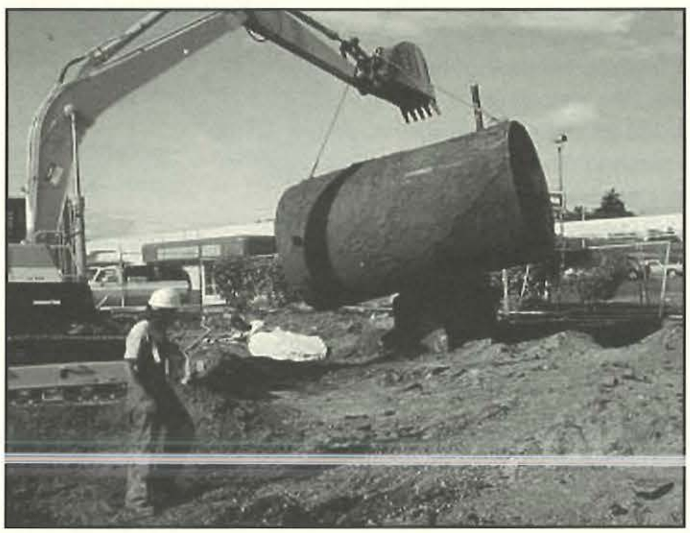
In addition, we will be evaluating performance results by asking the following questions:

- Are we meeting our schedule for reducing permit backlogs and completing TMDLs?
- Are plans being implemented as developed to meet TMDL specifications?
- Has wastewater reuse increased?

State of Oregon
Department of Environmental Quality

Priority 3

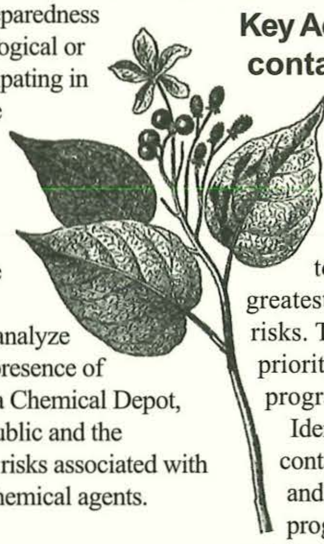
Protect Human Health and the Environment from Toxics



Human exposure to toxic chemicals is of increasing concern in Oregon. On a daily basis, Oregonians are exposed to toxics through many sources such as chemical emissions from cars, trucks and industrial plants, or through the food chain where persistent toxics can accumulate. Additionally, the threat of terrorism has elevated the importance of DEQ's preparedness to handle any potential chemical crisis efficiently and effectively. The key actions that follow are DEQ's short-term priority activities for protecting human health and the environment from toxics.

Key Action: Prepare for and minimize the danger posed by catastrophic release of dangerous chemicals

In response to the Sept. 11, 2001 terrorist attacks, Oregon is developing a state preparedness plan to ensure readiness for biological or chemical attacks. DEQ is participating in the development of this statewide plan. In addition, DEQ's Emergency Response Team works to expand the agency's range of preparedness.



Other related activities include our efforts to ensure DEQ's laboratory is prepared to safely analyze unidentified substances for the presence of chemical agents. At the Umatilla Chemical Depot, DEQ works to ensure that the public and the environment are protected from risks associated with the storage and destruction of chemical agents.

Key Action: Develop and implement a strategy to reduce toxic releases to air, water and land

DEQ has a number of initiatives underway to reduce toxics. For example, in Air Quality we are developing a program to reduce exposure to toxic air pollution. We intend to develop community-based air toxics reduction plans built on a foundation of monitoring and technical analysis. The plans will include regulatory and non-regulatory strategies to help achieve emission reductions in communities at greatest risk. This effort will also include strategies for reduction of toxic emissions from groups of pollution sources such as diesel engines.

DEQ will continue to seek new ways to help Oregonians reduce the use of toxic chemicals and the amount of hazardous waste generated. We will look at ways to better inform Oregonians about what toxics are and how they can be reduced. And, we will work with stakeholders to find cost-effective, comprehensive solutions to reducing toxic pollutants that pose the greatest hazard and have the longest lasting impact on the environment and human health. This effort will focus initially on mercury.

Key Action: Reduce risks from toxic contaminants already in our environment

Toxic pollution from sources such as contaminated sediments and abandoned mines represents a long-term environmental concern. DEQ is working to identify abandoned mines that pose the greatest potential environmental and health risks. These "highest risk" mines will be a priority to enter DEQ's Environmental Cleanup program.

Identifying the causes of and cleaning up contaminated sediments can be complex, costly and technologically challenging. A cross-program DEQ group has identified integrated and streamlined strategies to address contaminated sediments cleanup and source control.

Checkpoints

DEQ will monitor the progress and success of measures for each key action by answering the following questions:

- Are we prepared to appropriately respond to chemical attacks?
- Have we reduced risk through elimination of chemical agents at the Umatilla Army Depot?
- Are we reducing the use of toxic chemicals and the generation of hazardous waste?
- Have we identified and prioritized abandoned mines that pose the greatest risk?
- Have we started cleanup at high-priority abandoned mine sites?
- Have cross-program approaches been implemented, resulting in integrated and streamlined contaminated sediments cleanup and source control?

Priority 4

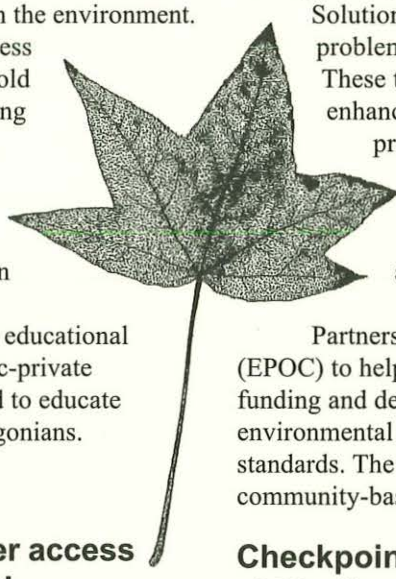
Involve Oregonians in Solving Environmental Problems

State of Oregon
Department of Environmental Quality

In the 21st century, responsibility for environmental protection needs to expand beyond traditional "command-and-control" regulatory approaches. This older approach has been successful but has not addressed pollution from non-regulated sources. Cumulatively, pollution impacts from non-industrial sources account for the largest percentage of pollution in Oregon. For this reason, the greatest future environmental benefits will come from engaging individuals and small businesses as environmental stewards. To promote greater citizen involvement in solving environmental problems, DEQ will implement the following key actions.

Key Action: Encourage personal actions by Oregonians to protect the environment

DEQ will educate Oregonians on additional ways to reduce their impact on the environment. Simple actions such as using less fertilizer, disposing of household hazardous waste properly, riding a bike, and keeping your car well-tuned all add up. DEQ will survey Oregonians to identify where changes in individual actions will result in the most gains in local environmental protection. An educational campaign that leverages public-private partnerships will be developed to educate and provide incentives to Oregonians.



Key Action: Provide Oregonians with better access to information on local environmental conditions and issues

DEQ is working to increase the quality and quantity of environmental information available to Oregonians. Specifically, we are committed to making environmental monitoring data about pollution levels in geographic areas more accessible. DEQ will expand and improve methods for accessing this information, such as using location-based tools on our Web site.

DEQ will strive to improve the electronic infrastructure and links among programs within the agency and with other state, federal and tribal agencies. Improving connections between information systems will allow for easier access to data from different sources.

We will conduct a thorough evaluation of our information sytems to develop a more comprehensive, agency-wide information management strategy.

Key Action: Support communities in solving local problems

DEQ participates on state agency Community Solutions Teams (CSTs) for collaborative problem solving with local communities. These teams work with communities to enhance livability by coordinating and promoting economic, environmental, land use, transportation and affordable housing goals and projects.

DEQ also formed Environmental Partnerships for Oregon Communities (EPOC) to help small rural communities pursue funding and develop projects that improve environmental protection and meet regulatory standards. The goal of both efforts is to support community-based problem solving.

Checkpoints

DEQ will monitor the progress and success of measures for each key action by answering the following questions:

- Are Oregonians more aware of actions they can take to protect the environment, and have they modified their actions?
- How are Oregonians asking for information, and are they getting the information they want and need?
- Are CST and EPOC efforts helping DEQ assist communities to solve local problems?

For More Information

While this document sets forth DEQ's priorities, it does not reflect all of the work we do. If you would like more specific information, visit DEQ's Web site at *www.deq.state.or.us,* call 1-800-452-4011 toll-free in Oregon, or contact one of the following:

Strategic Planning (general inquiry): Dawn Farr, 503-229-6935
farr.dawn@deq.state.or.us

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aldrich.greg@deq.state.or.us

Water Quality: Karen Tarnow, 503-229-5988
tarnow.karen.e@deq.state.or.us

Land Quality: Dave Rozell, 503-229-5918
rozell.dave@deq.state.or.us

Management Services: Holly Schroeder, 503-229-6785
schroeder.holly@deq.state.or.us

DEQ Laboratory: Mary Abrams, 503-229-5983, ext.225
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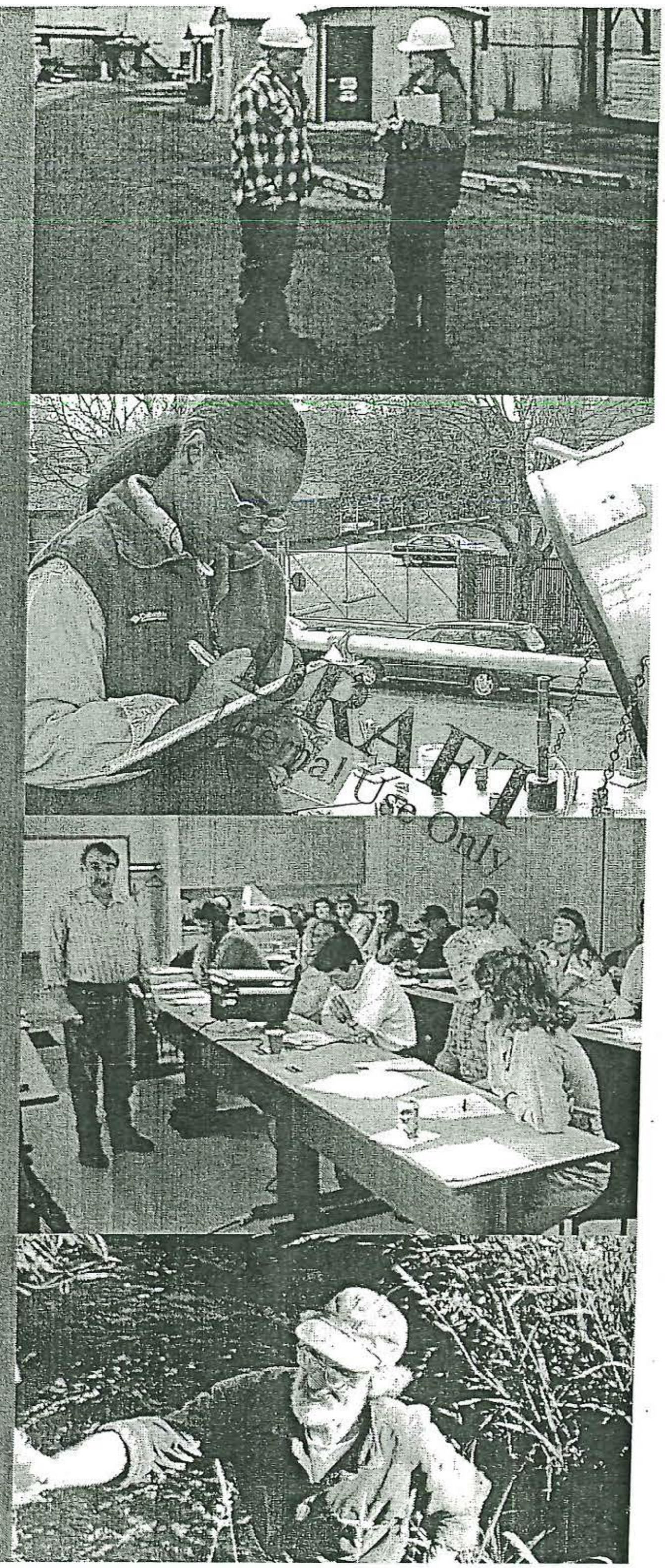
Oregon Department of Environmental Quality

Strategic Directions

Update 2004



DEQ

State of Oregon
Department of Environmental Quality

December 2004

EQC Commissioner Deidre Malarkey (right) makes a point to Commission Chair Mark Reeve (arms folded), Director Stephanie Hallock and accompanying DEQ staff during a morning tour of a pond restoration project on the Upper John Day River Basin.

The Oregon Department of Environmental quality (DEQ) has been protecting the health of our citizens and our environment since 1969. We are proud of our accomplishments, but today we face new challenges to our environment and our economy. Oregon is experiencing severe budget shortfalls and a high unemployment rate. Our citizens are demanding accountability and value from government. At the same time, Oregonians want a healthy, safe, and sustainable environment. We all recognize that Oregon's beauty and natural resources are essential to our quality of life.

As DEQ updates these Strategic Directions from 2002, we realize that delivering excellence is more important than ever if citizens are to believe in government; water has become an even more valuable and precious resource; protecting Oregonians from toxics is even more complex and challenging than we anticipated; and we understand even more fully that it will take all of us working together to solve not only our environmental problems but to be sure we have economically healthy and vibrant communities.

So, our Strategic Directions remain the same but we have adjusted our Key Actions and Performance Measures to reflect the Oregon of today and ensure that we continue to lead in providing a healthy, sustainable Oregon of tomorrow.

Stephanie Hallock

Stephanie Hallock
Director

DEQ's Vision

DEQ's vision is to work cooperatively with all Oregonians for a healthy, sustainable environment. DEQ promotes the following cultural values: Environmental Results, Customer Service, Partnership, Excellence Integrity, Employee Growth, Teamwork, Diversity.

Priority 1

Deliver Excellence in Performance and Product

Taking the time to explain the results of vehicle emission tests to customers is a top priority for DEQ's Vehicle Inspection Program.

DEQ recognizes that even well-managed agencies must continue to improve. We are committed to motivating employees to perform professionally in their daily work as well as fostering collaboration internally across program lines.

Whether you are receiving a compliance inspection or technical assistance, DEQ is dedicated to providing high-quality service. Protecting public health and the environment requires a commitment to science and to effective regulation; however, we recognize that how we do our work is equally important. The key actions that follow outline DEQ's efforts for delivering excellence in all that we do.

In 2003, DEQ delivered excellence in performance and product by providing customer service training throughout the agency and for other agencies; by revamping our employee performance management system to better define work and performance expectations; by more rigorous executive scrutiny of proposed rules; and by initiating a complete overhaul of our enforcement rules , to be completed in 2004.

Key Action: Provide A Work Climate That Supports Excellence

Effective, motivated DEQ employees are the key to success in delivering excellent service and high-quality work. In 2003, DEQ implemented a new Employee Performance Management System to achieve greater collaboration, increase trust, clearly define performance expectations, and improve morale and job satisfaction. Currently, we are evaluating our hiring and employee development processes to make sure we retain a workforce of leaders with the best technical credentials and customer service skills. We continually look for ideas to improve service to each other and to our external customers, to have more efficient processes, to ensure fiscal and performance accountability, and to provide a safe and desirable work environment. We believe that employees who feel valued and appreciated will in turn value others and produce high quality work.

Key Action: Deliver Outstanding Customer Service

DEQ interacts with many customers – the publi members of the regulated community, tribes, government agencies, and non-governmental organizations. Every two years we work with a neutral third party to conduct a customer satisfaction survey of permitted sources. In addition, we regularly monitor our Web site and program services to identify strategies for improving customer service and achieving environmental results. We rigorously review and invite comment on the impact of our rules and policies, particularly as rules and policies relate to small communities, small businesses and individual Oregonians. We make it a priority to streamline our regulatory processes, improve delivery of our programs, and make information more accessible. We are committed to creative thinking and to using a variety of strategies and tools to achieve ·ironmental results when working with different ·.nents of the regulated community.

Key Action: Address All Types of Pollution Sources When Solving Environmental Problems.

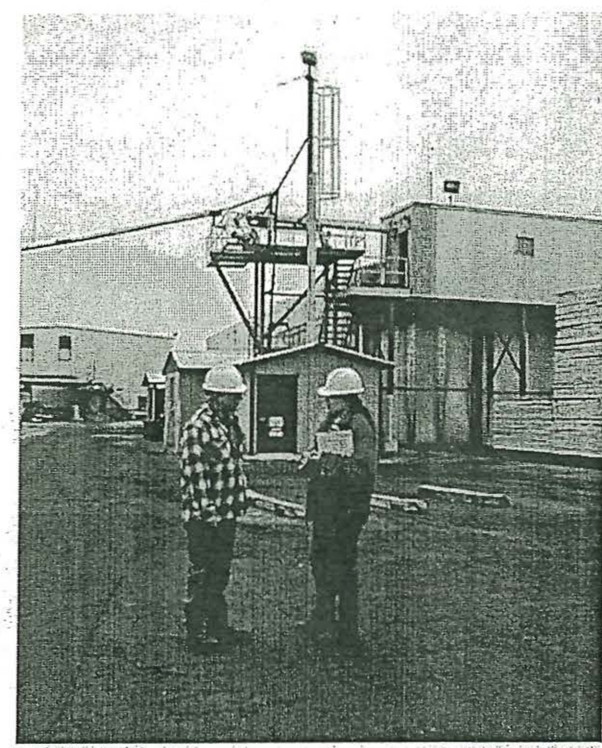
Much of DEQ's funding and enabling legislation is dedicated to specific activities that protect or restore the air, the water, or the land as individual program areas. We recognize, however, that boundaries between the air, water, and land often do not exist when protecting the environment and people's health. For example, chemicals leaching from abandoned mines and contamination in sediments affect both water and land; toxic pollutants released to the air can come to rest on land or in the water. To achieve long-term, sustainable solutions to environmental problems, we must look at all sources of pollution within a geographic area and take a coordinated approach to addressing those problems. We are issuing water quality permits collectively for one sub-basin, and we have formed geographically-focused teams to address air, water and land issues in the Lower Willamette and the Yaquina Bay areas. We are also locating our laboratory with the public health ·atory to help provide comprehensive science a.. information about health and environmental impacts.

Key Action: Ensure understandable and equitable compliance and enforcement

DEQ is committed to having an effective compliance and enforcement program that is understandable, encourages compliance, is equitable, and appropriately reflects the severity of the violation. In 2003, with the assistance of an advisory committee, DEQ completed a comprehensive review and revision of our enforcement rules. We will now focus on providing training and internal guidance to ensure consistent application of the rules, and we will be modifying procedures to clearly communicate requirements to the regulated community and improve the timeliness of our actions. We will continue to evaluate which tools work most effectively to achieve compliance and protection of the environment; in some situations technical assistance gets results, while in others a formal enforcement action and penalty may be warranted.

Proposed Checkpoints.

- Does DEQ provide a work climate that supports excellence in employee performance?
- Is customer service improving at DEQ?
- Are we solving additional environmental problems by collaborating among programs, agencies and communities?
- Are DEQ enforcement actions equitable, consistent, understandable and timely?



A DEQ inspector talks to the General Manager of a permitted lumber mill in Eastern Oregon. Sixty percent of water and 70% of air quality permitted sources rate DEQ's performance as meeting or exceeding expectations based on a survey administered in 2002.

Priority 2
Protect Oregon's Water

Water's many beneficial uses include drinking water, support of industrial processes, agricultural and recreational activities, healthy ecosystems and wildlife habitat. DEQ is committed to doing its part to ensure that Oregon's oceans, rivers, lakes, streams and groundwater are clean enough to support these uses.

Historically, water pollution control has been directed at permitted industrial and municipal wastewater point sources. This traditional permitting approach has helped but has not effectively addressed the impacts of other known sources of pollution. Addressing multiple sources of pollution on a watershed basis offers a more integrated and efficient approach to manage expected impacts. To improve and maintain water quality, DEQ is implementing the following key actions.

In 2003, DEQ protected Oregon's water by completing Total Maximum Daily Loads (TMDLs) ahead of the schedule established by court order; by reducing permit backlogs by forming a Blue Ribbon Committee to revamp the entire wastewater permitting program; and by developing ways to encourage broader reuse of wastewater.

Key Action: Address Multiple Environmental Impacts on Watersheds

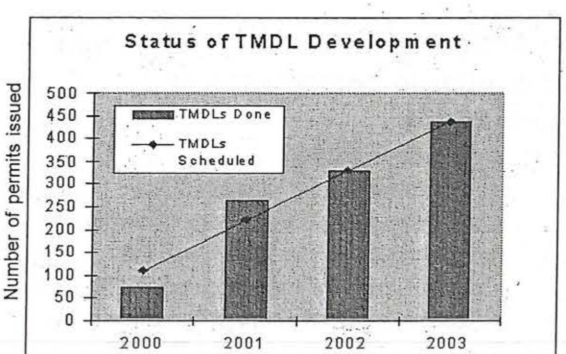
DEQ integrates water quality data, pollution limits, permitting and groundwater protection by focusing our efforts geographically in river basins as part of *The Oregon Plan for Salmon and Watersheds.* The *Oregon Plan* encourages incentives and education to motivate voluntary actions that go beyond regulation to restore healthy aquatic habitats on a watershed basis.

By 2010, DEQ will establish pollutant limits known as Total Maximum Daily Loads (TMDLs) throughout the state to define the amount of pollution a waterway can receive and still maintain water quality standards. TMDLs take into account pollution from many sources, including industrial and sewage treatment facilities, runoff from farms, forests and urban areas, and natural conditions.

DEQ's goal is to have comprehensive watershed plans which include not only TMDLs but also strategies for healthy watersheds through activities such as cleanup of hazardous waste sites, removal of underground tanks, protection of groundwater, and minimizing airborne pollution. Incentives, as well as regulation, are needed to encourage action to protect and improve Oregon's water quality. Watershed plans can include technical assistance and education programs to provide individuals and businesses with every day practices to help protect Oregon's water. DEQ will also market increased use of the state revolving loan fund to help landowners and communities reduce pollution from other sources such as septic systems and urban runoff.

Key Action: Clean Up The Willamette River System

DEQ is already actively working to reduce pollution in the Willamette Basin through regulation of permitted sources, clean up of the Portland Harbor



DEQ is on schedule to complete required TMDLs by 2010.

superfund site, and clean up of abandoned mines. In spring of 2004, total maximum daily loads (TMDLs) will be established to protect and improve water quality in nine subbasins of the Willamette River system and the V   nette mainstem.

DEQ is also taking the lead in providing a comprehensive assessment of all the work being done to protect water quality and habitat throughout the Willamette Basin, and identify what still needs to be done. The assessment will include work being done by agencies at all levels of government, watershed councils, and non-governmental organizations who all play key roles in protecting and improving water quality and habitat in the Willamette Basin. This assessment will cover the entire basin from the headwaters to confluence with the Columbia River, and will include a variety of "success stories" as well as identification of gaps where more work is needed. We anticipate that the assessment and gaps identified will lead to specific action items and possibly legislative proposals or funding requests to the 2005 legislature. For example, DEQ has already identified the importance of making sure the TMDLs for the Willamette Basin are implemented when they are completed in the spring of 2004.

Key Action: Issue Timely And Environmentally Protective Permits

Permits that regulate discharges and set requirements for compliance are essential to im   ving and protecting Oregon's water quality. For many years, DEQ has struggled to keep up with the workload in wastewater permitting and compliance. In 2003, we established a Blue Ribbon Advisory Committee to conduct a comprehensive review of the program and make recommendations that will minimize future permit backlogs and stabilize funding. While the Committee is doing its work, DEQ has re-directed resources for one year from other water quality activities to reduce the permit backlog, particularly from major dischargers. By the end of 2004, DEQ will have reduced the permit backlog and will be implementing the Committee's recommendations to improve long-term permitting performance.

A stream sample is taken on Prairie Creek as part of the Lower Grande Ronde and Wallowa River TMDL.

Key Action: Encourage Broader Reuse Of Wastewater

The direct release of treated wastewater into surface water is a common water quality management practice. This wastewater, while technically clean, often contains nutrient and temperature levels that exceed natural water conditions. As an alternative, many treatment plants have developed strategies to "reuse" treated water to irrigate or to restore wetland habitats. This reclamation of wastewater has many potential benefits, including helping to offset the need for using drinking water supplies for non-drinking purposes. To increase the reuse of wastewater, DEQ will work with others to implement new legislation, address public health concerns, provide information on new technologies, and develop incentives.

Proposed Checkpoints.

- Are we meeting our schedule for completing TMDLs?
- Are watershed plans being developed and implemented?
- Are we meeting our schedule for reducing the permit backlog?
- Has wastewater reuse increased?
- What progress has been made in assessing current and implementing new protective measures in the Willamette?
- What progress is being made cleaning up Portland Harbor and properties along Portland Harbor?

Priority 3

Protect Human Health and the Environment from Toxics

DEQ expects to take occupancy of the new labatory in Hillsboro sometime in mid 2006.

Human exposure to toxic chemicals is of increasing concern in Oregon. On a daily basis, Oregonians are exposed to toxics through many sources such as chemical emissions from cars, trucks and industrial plants, or through the food chain where persistent toxics can accumulate. Additionally, the threat of terrorism has elevated the importance of DEQ's preparedness to handle any potential chemical crisis efficiently and effectively. The key actions that follow are DEQ's priority activities for protecting human health and the environment from toxics.

In 2003, DEQ increased protection of human health and the environment from toxics by being part of the state team to increase emergency preparedness; by receiving legislative approval to fund a laboratory with capability to effectively and safely analyze unknown chemical substance; and by removing 35 pounds of mercury from the environent.

Key Action: Prepare For and Minimize Danger From a Catastrophic Release of Harmful Chemicals

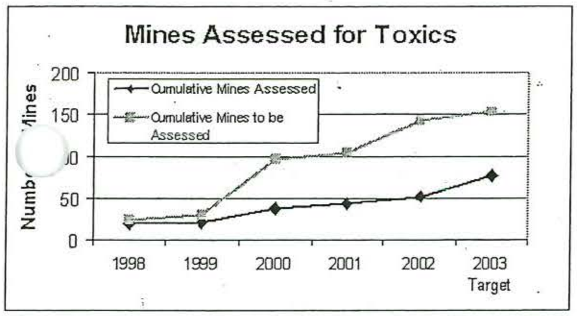
Citizens expect all levels of government to be prepared to respond in the event of a biological or chemical attack or catastrophic event.

In 2004, incineration of chemical weapons will begin at the Umatilla Army Depot. DEQ, along with Oregon Emergency Management and local first responders, is responsible for protecting public health and the environment during this process. In addition, DEQ's Emergency Response Team is part of the overall statewide preparedness network established to plan for and respond to many different types of emergencies, such as a credible terrorist threat, a grounded sea-going tanker, or a tanker truck spill.

DEQ's laboratory works with the Public Health laboratory to support the FBI and local first responders to safely analyze unidentified substances for the presence of chemical or biological agents. In 2003, the legislature gave approval for a new, state-of-the-art laboratory facility combining both the DEQ and public health lab functions to provide maximum efficiency and effectiveness in protecting our citizens and our environment. We expect the new facility to be ready by 2007.

Key Action: Reduce And Prevent Toxic Releases to Air, Water and Land

In 2003, the EQC adopted a new air toxics program to help achieve emission reductions in communities at greatest risk. We also began an aggressive "clean diesel" initiative to reduce toxic emissions from diesel engines. In 2004, we will assemble a scientific body to help set goals for reducing air toxics, and we will pursue voluntary measures to reduce toxic emissions in the Portland area. We are developing a long-term plan for reducing persistent toxics in the environment that recognizes the need to develop a monitoring and data management infrastructure for toxics. In addition, we will be updating both our water quality standards for toxics and the total maximum daily loads



DEQ continues to assess abandoned mines for toxics contamination and risks to human health.

(TMDLs) for streams that are polluted by toxics.

DEQ will continue to seek new ways to help Oregonians reduce the use of toxic chemicals and the amount of hazardous waste generated. We will look at ways to better inform Oregonians about toxics and how they can be reduced. One way we will continue this is through enhancing our efforts to reduce mercury. Our mercury reduction efforts removed 35 pounds of mercury from the environment in 2002 and we plan to remove more in 2003. And, we will work with stakeholders to find cost-effective, comprehensive solutions to reducing toxic pollutants that pose the greatest hazard and have the longest lasting impact on the environment and human health.

Key Action: Clean Up and Reduce Risks From Toxic Contaminants A ady In Our Environment

Toxic pollution from sources such as contaminated sediments and abandoned mines represents a long-term environmental concern. Clean up can be complex, costly, and involve many partners working together. One of DEQ's priority clean up efforts is the Portland Harbor, listed by EPA on the national Superfund priority list. Throughout the state, DEQ has identified several abandoned and/ or inactive mines that pose environmental and health risks, and is working on strategies to fund clean up, with multiple parties.

Returning contaminated properties to productive use is part of Oregon's economic recovery plan. DEQ will continue to prioritize cleanup efforts to ensure productive reuse of previously contaminated industrial lands known as "Brownfields." In 2003, DEQ helped host the largest EPA national "Brownfields" conference ever in Portland, with over 4,000 attendees. At the conference, Oregon was acknowledged for our continued leadership in this important effort to clean up the environment while supporting economic development.

Proposed Checkpoints.

- How have we increased our ability to appropriately respond to toxic releases, chemical threats and terrorism?
- How much have we reduced risk through overseeing the elimination of chemical agents at the Umatilla Army Depot?
- How are we doing implementing our plan to reduce and prevent toxics in the environment?
- Have we identified, prioritized and initiated cleanup on abandoned mines that pose the greatest risk?
- Are we cleaning up "legacy" properties to meet environmental and economic demand?
- What progress has been made in reducing risk from diesel engine emissions?

Governor Kulongoski discusses the McCormick & Baxter Superfund site with Director Hallock and DEQ Project Manager Steve Campbell. DEQ is the lead agency under EPA oversight and to date has recovered over 2,000 gallons of creosote and removed over 33,000 tons of highly contaminated soil and debris in an effort to protect public health and restore the 43 acre site located in the Portland Harbor.

Priority 4

Involve Oregonians in Solving Environmental Problems

Responsibility for environmental protection needs to expand beyond traditional "command-and-control" regulatory approaches. This older approach has been successful but has not addressed pollution from non-regulated sources. Cumulatively, non-traditional permitted sources account for the largest percentage of pollution in Oregon. For this reason, the greatest future environmental benefits will come from engaging individuals and small businesses as environmental stewards. To promote greater citizen involvement in solving environmental problems and support economically healthy communities, DEQ will implement the following key actions.

In 2003, DEQ found ways to involve Oregonians in solving environmental problems by creating better Web-based tools to access environmental information such as the Consumer Corner; by launching a quarterly e-mail newsletter, DEQ Focus, which all Oregonians can sign up for on DEQ's Web site; and by encouraging Oregonians to participate in Household Hazardous Waste Collection events across the state. Since the program began in 1991, more than 39,000 Oregonians have participated in 158 one-day household hazardous waste collection events in 84 communities around the state.

Key Action: Encourage Personal Actions by Oregonians to Protect The Environment

DEQ will provide information to Oregonians on additional ways to reduce their impact on the environment. Simple actions such as using less fertilizer, disposing of household hazardous waste properly, riding a bike, and keeping our cars well-tuned all add up. DEQ will develop partnerships with private non-profit organizations, private sector businesses, other government agencies, and interest groups to raise public awareness and do projects that benefit public health and the environment. Traditionally, Oregonians want to "do the right thing" for the environment if given the opportunity. DEQ will partner with others to seek and provide those opportunities, particularly in emerging areas like electronics recycling where consumers and businesses can help. DEQ will also partner with others to develop incentives for individuals to reduce pollution.

Key Action: Provide Oregonians With Better Access to Electronic Information on Local Environmental Conditions and Issues

DEQ's goal is for any Oregonian to look on the Internet and find out about any environmental topic in their neighborhood or elsewhere in the state. Now that DEQ has linked its own databases, it is improving Internet tools that allow searching for information by interacting with maps.

Through a partnership with Washington, Idaho and Region 10 EPA, DEQ will begin a project to introduce a new Internet feature that will allow easy access to regional environmental information. Ultimately, this system will enable some online analysis of environmental data.

A new e-mail service making it easier for people to automatically get updates and news on their specific interest topics will be implemented in 2004 and will reduce paper and postage costs.

Over the next 2 years, DEQ will develop, plan and complete the first phase of a new center for environmental science and information. This center will become part of the new DEQ and Public Health Laboratory.

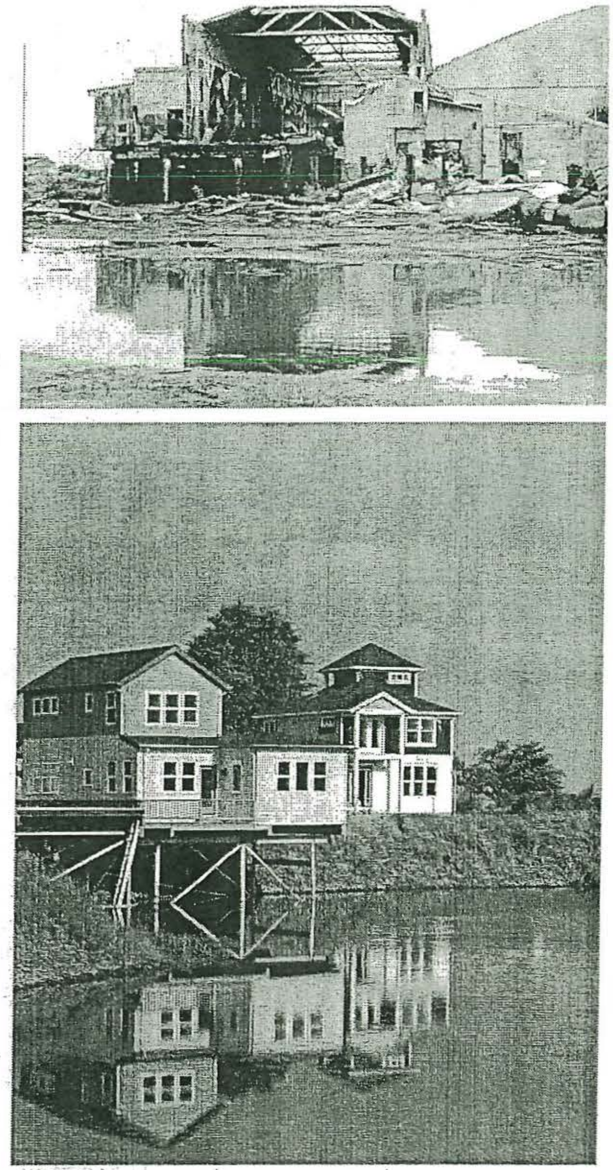
Key Action: Support Communities In Solving Environmental and Economic Problems

DEQ's vision is to work cooperatively with all Oregonians for a healthy, sustainable environment. We actively work with local partners throughout the state to identify economic opportunities, remove barriers, and streamline processes to move community projects forward. The goal of this effort is to enhance services that make it easier for businesses to locate and thrive in Oregon, and to help communities anticipate and solve problems to support sustainable development. DEQ is also part of the Community Development Forum where state and local officials work collaboratively to develop legislative agendas and budgets that support community and economic development.

DEQ continues to be committed to locating staff in or near the communities we serve in support of community based problem solving.

Proposed Checkpoints

- How have we worked with our partners to help Oregonians protect the environment?
- Are Oregonians generating and disposing of less waste, and recycling more?
- What steps has DEQ taken to improve public awareness and access to existing DEQ information?
- How is DEQ partnering with communities to sustainably solve environmental and economic problems?



Top: Astoria Plywood operated from the early 1950's and declared bankruptcy in 1991 leaving behind approximately 6,000 cubic yards of contaminated soil and sediment, 4,500 gallons of oil & diesel contaminated groundwater, partially demolished buildings and over 50 capacitors contaminated with polychlorinated biphenyls (PCBs).

Bottom: After extensive cleanup and remediation actions by DEQ, the site was purchased by the City of Astoria and development of the Astoria Mill Pond Village, a mixed commercial-residential community began in 1999. DEQ continues to monitor the site to ensure public health and safety.

For More Information

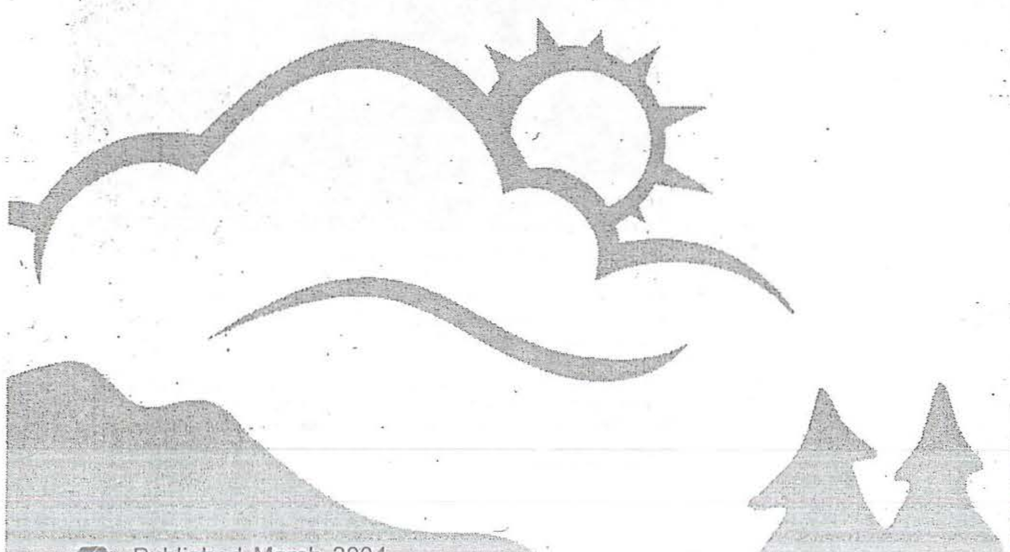
- DEQ's *Annual Executive Measures Report* provides more detailed information on DEQ's performance and accomplishments for 2003. http://www.deq.state.or.us/about/PerformanceMeasures/APMProgressReport.pdf

- Sign up for DEQ Focus, a quarterly newsletter highlighting DEQ's environmental successes. http://www.deq.state.or.us/pubs/deqfocus/

- Learn more about the Environmental Quality Commission and view agendas for upcoming meetings. http://www.deq.state.or.us/about/eqc/eqc.htm

- Learn about rule revisions regarding enforcement procedures and assessment of civil penalties for environmental violations. http://www.deq.state.or.us/programs/enforcement/division12/

- Visit DEQ's *Consumer Corner* to get answers to your questions about septic systems, heating oil tanks, asbestos, mercury reduction and more. DEQ's Consumer Corner will help you understand the most common household activities DEQ regulates to protect your health and the environment and let you know how to protect yourself as a consumer. http://www.deq.state.or.us/programs/consumercorner/



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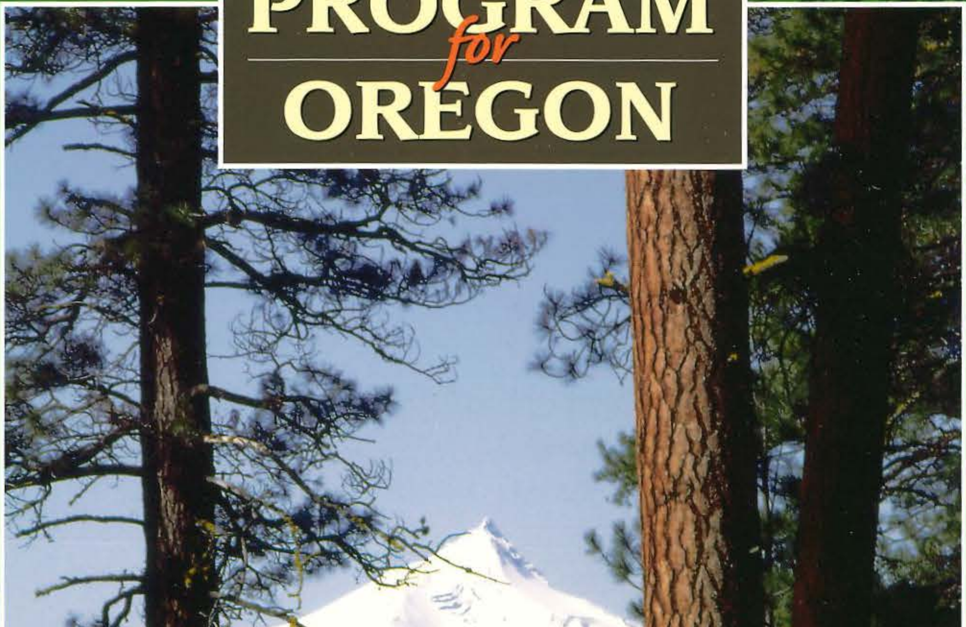
FORESTRY PROGRAM *for* OREGON



Oregon Board of Forestry

2003

FORESTRY PROGRAM *for* OREGON

2003

Published by
the Oregon
Board of Forestry

Howard Sohn
Chair, Oregon Board of Forestry

Marvin Brown
State Forester

Cover photo: Metolius River, central Oregon. Photo by Mike McMurray

The Board of Forestry extends its thanks to the many people who helped guide and develop this edition of the *Forestry Program for Oregon.*

The Oregon Board of Forestry meeting at Department of Forestry headquarters in Salem in the 1960s.

Photo by Rod Nichols, ODF

The Oregon Board of Forestry meeting in Sutherlin, Oregon in July 2003.

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Photo by Tom Fields, DFPA

Photo by Nancy Hirsch, ODF

Photo by Mike McMurray

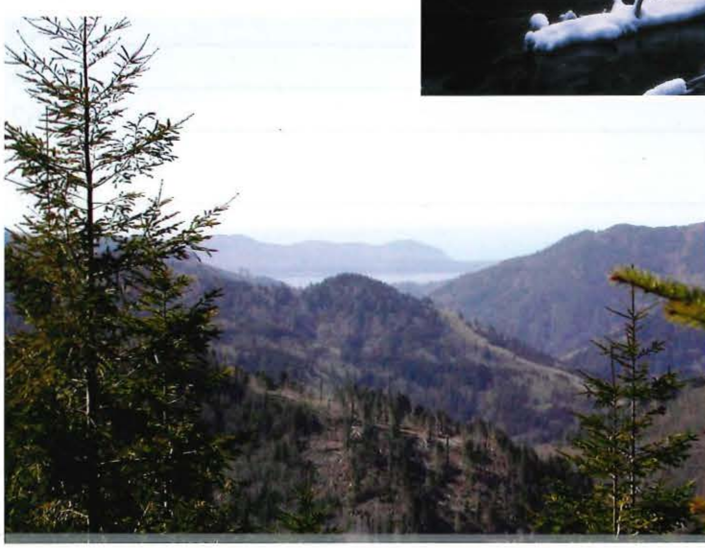


Photo by Robert Gustavson, ODF

Welcome to the 2003 Forestry Program for Oregon

Oregon is justly renowned for the magnificence of its forests—some of the most beautiful and productive in the world. Forests have shaped Oregon's history since presettlement times, and they continue to define the state's economy, society, and culture. Oregon's forestlands contribute greatly to our state's environmental, economic, and social well-being.

The *Forestry Program for Oregon* is the strategic plan established by the Oregon Board of Forestry. It sets forth the board's mission and vision for Oregon's forests and the values and strategies that will guide the board's decisions over the next eight years. This edition of the *Forestry Program for Oregon* also introduces a new framework for discovering, discussing, and assessing the sustainability of Oregon's forests.

Three sectors

It is sometimes assumed that the benefits from the forest cannot equally achieve environmental, economic, and social goals—that what is gained in one sector is necessarily lost in another. The Board of Forestry believes, on the contrary, that sustainable forest management can and must succeed in all three sectors. To be truly sustainable, forest management must be economically viable, environmentally robust, and socially acceptable.

If environmental values are not protected, forest health and productivity will suffer. If economic values are not honored, society cannot afford to protect the environment or provide social benefits from forests. If social values are not accommodated, the license to manage forests for any purpose will be lost. Acknowledging this interdependence among values is key to supporting sustainability. The Board of Forestry recognizes that integrating the environmental, economic, and social sectors is critical to Oregon's future.

In this fifth edition of the *Forestry Program for Oregon*, the Board of Forestry is expressing its conviction that Oregon's forests can and do support the state's economic well-being and strengthen its social fabric. At the same time, they represent a range of forest ownerships, owner objectives, and natural ecosystems that are sustainable across the landscape and through time.

What is sustainable forest management?

"Sustainable forest management" means forest resources across the landscape are used, developed, and protected at a rate and in a manner that enables people to meet their current environmental, economic, and social needs, and also provides that future generations can meet their own needs [based on ORS 184.421].

On a statewide basis, sustainable forest management will provide:

- Healthy and diverse forest ecosystems that produce abundant timber and other forest products;
- Habitat to support healthy populations of native plants and animals;
- Productive soil, clean water, clean air, open space, and recreational opportunities; and
- Healthy communities that contribute to a healthy state economy.

Three principles

This *Forestry Program for Oregon* sets forth the Board of Forestry's strategic vision for Oregon's forests for the next eight years. This vision is based on three principles:

- Widely recognized international criteria and indicators serve as a useful framework for discovering, discussing, and assessing the sustainability of Oregon's forests.

- Sustainability requires maintaining a diversity of forestland ownerships and management objectives across the landscape and through time.
- Cooperative, non-regulatory methods are strongly preferred in achieving public benefits on private lands.

A language for discussion and measurement

To fulfill the first principle, the board has decided to use an internationally recognized framework for assessing sustainability of forests. This framework was crafted by 12 nations with forests like ours. These nations recognized the need to keep forests sustainable in all three sectors—economic, environmental, and social. They developed a system that establishes criteria for organizing discussions about sustainability, and indicators for measuring progress. The international framework does not establish targets or goals. It is simply a "language for discussion and measurement" in which citizens and experts alike may have an ongoing conversation, come to a common understanding of forest sustainability, and work together to determine their own goals. The Board of Forestry has adapted this system to Oregon's particular circumstances.

The Board of Forestry believes using this framework will help make sustainable forest management demonstrable and measurable, and it will enable Oregon's citizens to discuss forest management and policy in a common language. By choosing the international criteria and adapting them to Oregon's needs, the board has made Oregon the first state in the nation to embrace this "language for discussion and measurement" of forest sustainability. Within this framework, the board hopes to encourage all forest landowners, forest managers, and citizens to learn this language, and to work together to achieve sustainability of our forests in all three sectors.

A healthy diversity

To fulfill the second principle, this *Forestry Program for Oregon* supports the diversity of ownerships that now characterizes Oregon's forestlands. Oregon's forests are held by a rich variety of owners—federal, tribal, state, and local governments, as well as private industrial owners and family forest landowners. The board believes that the optimum mix of economic, environmental, and social benefits can be achieved only through a diversity of owners managing for a variety of objectives and values (See sidebar p. 3).[1] These varied benefits are the product of different actions in different places at different times. The ownerships complement one another precisely because not every acre of forest is managed in the same way for the same thing. The board believes that, like ecosystem diversity, ownership diversity enhances forest sustainability. It gives Oregon a strong foundation for assessing whether our forests are in total being managed sustainably.

Emphasizing incentives over regulations

Private forest landowners are regulated in many ways. These lands already provide many public benefits, such as sustaining watershed health, keeping the land in forest cover, and contributing to the vibrancy of rural communities. To fulfill the third principle, this *Forestry Program for Oregon* supports cooperation and incentives as the preferred tools for promoting desired public benefits on private lands. This document, therefore, should not be viewed as a recipe for future government regulations.

Framing the future

The *2003 Forestry Program for Oregon* expresses the Board of Forestry's vision of how Oregon's private and public forest landowners can work with the rest of Oregon's citizens to ensure that our forests are managed for the best mix of economic, environmental, and social benefits, as defined by Oregonians themselves. This document is therefore a work in progress, a framework for shaping the future of Oregon's forests over the next eight years. It is a conversation with Oregonians, a conversation that will, we hope, lead to a more unified vision of forest sustainability and a more united effort to achieve it.

[1] Based on presentations by Dr. Hal Salwasser, Dean of the College of Forestry, Oregon State University.

Managing diverse forests for different purposes: A pathway to sustainable forestry

Oregon's forests are diverse, and so are the objectives of forest landowners. To promote sustainable forest management, we first focus on sustaining our forestland base, and then take advantage of different management strategies for different forest types, ownerships, and locations.

Forest management strategies can be grouped into four broad categories:

Wood production

Much of the world's wood will come from this forest use.

Goal: Most efficient wood/fiber production

Challenges:

- Increase wood yield up to two times over natural rates
- Reduce environmental footprint
- Improve product quality
- Produce high return on investment
- Maintain social license to operate

Multiple-resource

Most of the world's accessible forest will be in integrated management.

Goal: Meet various landowner objectives

Challenges:

- Optimize joint production of products and benefits
- Sustain desired diversity of environmental, economic, community conditions and results; i.e., risk, forest health, vitality, productivity
- Produce multiple benefits at reasonable costs

Reserve

Parks, reserves, wilderness, special areas for natural, cultural values.

Challenges:

- Manage people to reduce impacts
- Manage forests to restore "naturalness"
- Manage ecosystems to be resilient to natural disturbances, such as wildfire, and resistant to invasive species, pollution, other human-caused disturbances

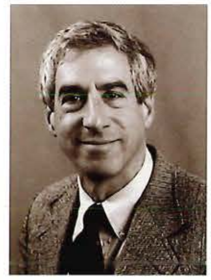
Residential value emphasis

Urban and community forests, forested rural residential areas, wildland/urban interface areas.

Challenges:

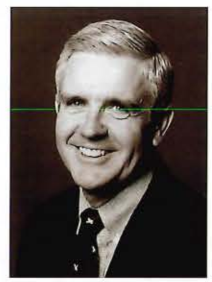
- Connect people with forest resources
- Maintain pleasant neighborhoods
- Conserve resources
- Minimize sprawl
- Safety to life and property, risk reduction
- Maintain and enhance wildlife habitats

Oregon Board of Forestry



Howard Sohn
Chair

Marvin Brown
State Forester/
Board Secretary



Larry Giustina

Chris Heffernan

Bill Hutchison

Sam Johnson

Diane Snyder

Brad Witt

Photo by Nancy Hirsch, ODF

"The West is beginning to understand itself in a new way, as a region with its own cultural identity, an identity strongly shared by the landforms that define the territory and give shape to its communities. The love of the land that brought so many people to the West and keeps them there is common ground on which westerners can articulate and enact a commitment to a shared agenda of living well in a well-loved place."

—Daniel Kemmis, *This Sovereign Land*, p. 115

The 2003 Forestry Program for Oregon:
A conversation about the future of Oregon's forests

Introduction

Oregon *is* a "well-loved place"—in large part because of its forests. Oregonians have always loved our forests and we continue to love them, for many reasons. With nearly 45 percent of Oregon's land base covered by forests, working forests—those on which we have depended to provide our economic well-being—historically have defined Oregon's environmental, economic, and cultural landscape (Figure 1).

However, as the state becomes more populated and its economic and cultural base changes, many people's connection to a working forest landscape grows weaker. Oregon's citizens have always expected their well-loved forests to provide values such as clean water and scenic beauty along with economic values. All these values are as important today as ever. But, in particular, the economic contributions of Oregon's forests are vital to our continued ability to live well in a well-loved place.

The challenge facing the Oregon Board of Forestry is not only to help all Oregonians see and appreciate what our forests have been, but also to involve them in developing and implementing a vision of what these forests

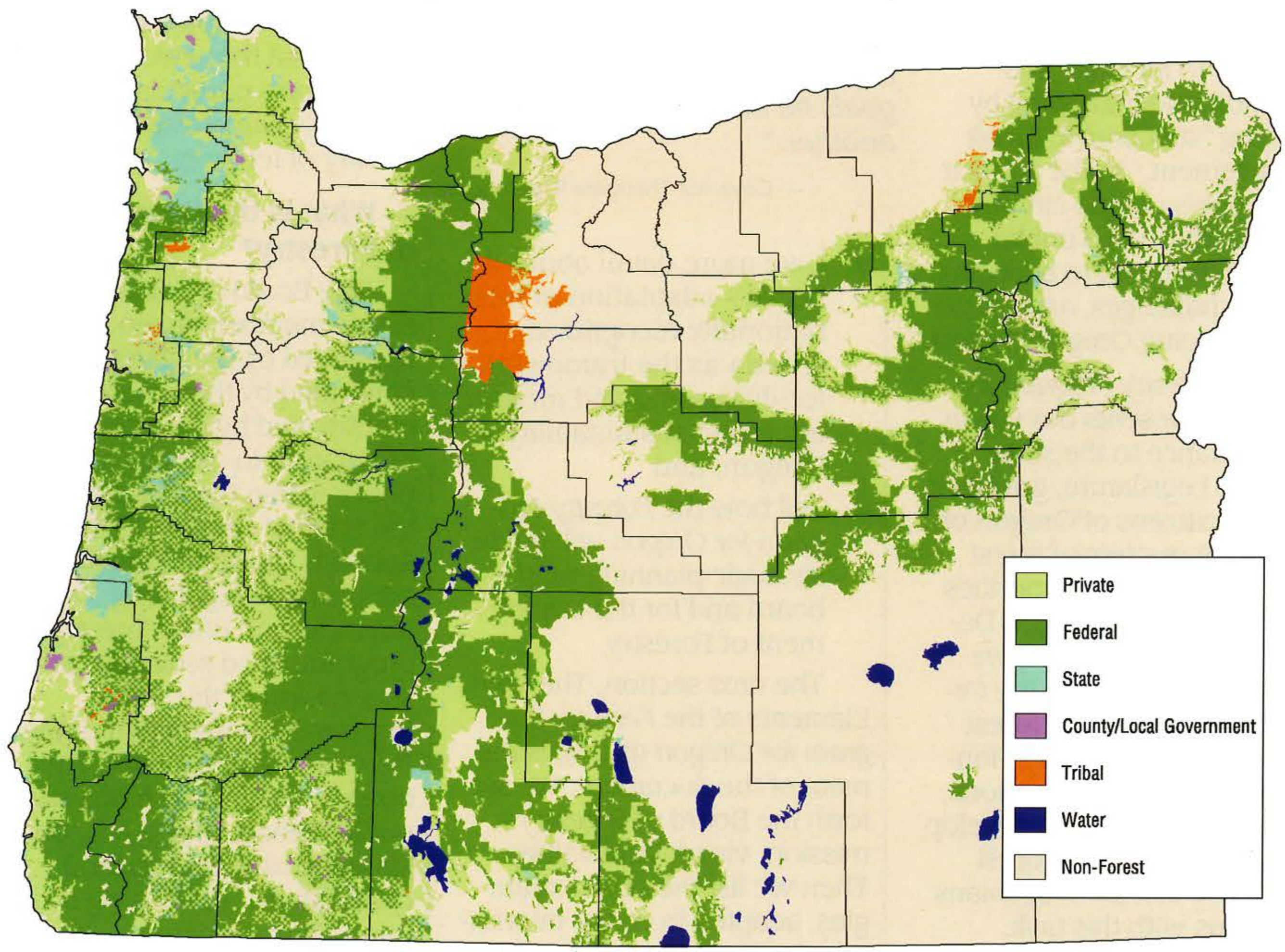


Figure 1. Forestland ownership in Oregon.

can be. The future will depend on the choices we make today.

Recent polling tells us Oregonians want forests to provide clean water and air, fish and wildlife habitat, wood products, jobs, revenues, and recreation. They want all the benefits and values forests contribute to our quality of life. They want forest management that produces these benefits in an integrated way, now and for the future.

Until now we have lacked a common language in which to discover, discuss, and come to a common understanding about forest sustainability and the actions required to achieve it. With the *2003 Forestry Program for Oregon*, we hope to increase this common understanding by defining "sustainable forest management," in the context of Oregon's unique circumstances, through a public process designed to address the needs, challenges, and opportunities facing Oregon's forests.

The *Forestry Program for Oregon* represents our vision and guidance to the state forester, Legislature, governor, and the citizens of Oregon on important matters of forest policy. It guides our priorities and those of the Oregon Department of Forestry as we work with the public, the Oregon Legislature, the forest landowner community, nongovernmental organizations, and other agencies to develop and carry out sound forest policy. We ask all Oregonians to help us with this task.

What's in this edition of the *Forestry Program for Oregon*?

In our "welcome" statement (p. 1), we introduced you to the main concepts of this edition of the *Forestry Program for Oregon*. In this section, we

- Explain the Oregon Board of Forestry's role in overseeing state forest policy;
- Tell how the *Forestry Program for Oregon* has evolved in response to changing knowledge and values about forests;
- Give more detail about the board's adaptation of internationally recognized criteria as the framework for discussing and measuring forest sustainability in Oregon; and
- Tell how the *Forestry Program for Oregon* will guide strategic planning for the board and for the Department of Forestry.

"The concept of sustainability will enable Oregon to achieve greater economic prosperity, more vital communities, and a healthier environment. We should not and cannot afford to let these three goals be in conflict with one another."

— Governor Theodore R. Kulongoski

The next section, The Key Elements of the *Forestry Program for Oregon* (p. 11), is the meat of the document. We set forth the Board of Forestry's mission, vision, and values. Then we list the seven strategies, adapted from the international criteria, for achieving long-term sustainability of Oregon's forests. Under each strategy are listed the actions that will be needed to achieve the board's desired vision for the future of forests in Oregon. Some of these actions are deemed urgent enough to be called key actions; these are highlighted in the list.

Next, we provide detailed background information on each of the strategies (beginning on p. 19). Following the conclusion (p. 67) is a list of selected references for further study (p. 69). The appendix (p. 73) compares the seven strategies with the seven international criteria and explains how the Board of Forestry adapted the international framework to meet Oregon's particular needs. Finally, we provide a glossary of terms (p. 75).

What is the Oregon Board of Forestry?

The Board of Forestry is a seven-member citizen board appointed by the governor and confirmed by the senate. It is empowered by the Oregon Legislature to oversee all forest policy within the jurisdiction of the State of Oregon. The board appoints the state forester, adopts rules regulating forest practices and other forestry programs, and provides general supervision of the state forester's management of the Department of Forestry. The board's leadership helps shape public debate and policy on state, private, and federal ownerships, addressing sustainable management of Oregon's 28 million acres of forests. Issues such as environmental incentives and regulations, management of state-owned forests, federal forest management, assistance to private forest landowners, and wildland fire prevention and suppression are common topics discussed and acted upon at the board's meetings.

The Board of Forestry is charged by law to represent the public interest. No more than three members of the board may receive any significant portion of their income from the forest products industry. At least one member must reside in each of the three major forest regions of the state. The term of office is four years, and no member of the board can serve more than two consecutive full terms.

The evolving *Forestry Program for Oregon*

Since the first version was published in 1977, the *Forestry Program for Oregon* has played an important role in shaping the Board of Forestry's strategic vision. Through each edition, the Board has tried to establish and further refine a pathway to ensure that the values we enjoy from our forests are sustained over time.

Forestry in Oregon has evolved significantly over time as each generation decides what set of values it wishes to emphasize and what pathway it will follow. Over the past 150 years, this emphasis has changed from unmanaged forest exploitation, to forest conservation, to managed forests as a source of wood for the post-World War II housing boom, to wilderness and environmental protection, to today's interest in sustainable forestry.

In the same way, the *Forestry Program for Oregon* has changed over time to incorporate new scientific information and to reflect changing public concerns. Still, the *Forestry Program for Oregon* has always been centered on the theme of sustainability. Early interest in a sustainable timber supply (1977 and 1982 editions) was followed by an interest in sustaining multiple values (1990), which evolved into an interest in identifying the cumulative effects of forest practices over time and across forest landscapes (1995).

Introducing a new framework

The *2003 Forestry Program for Oregon* introduces a framework for organizing the board's strategies and actions by means of an internationally recognized language of categories and measurements. This framework also lends itself to organizing research information about forests and to supporting a dialogue about how they may be managed sustainably. Using this framework, the Board will be better able to communicate how Oregon's forests can be managed sustainably to meet short- and long-term objectives for the environment, economy, communities, and the larger society through a diversity of owners who manage for a variety of objectives and values (Figure 2).

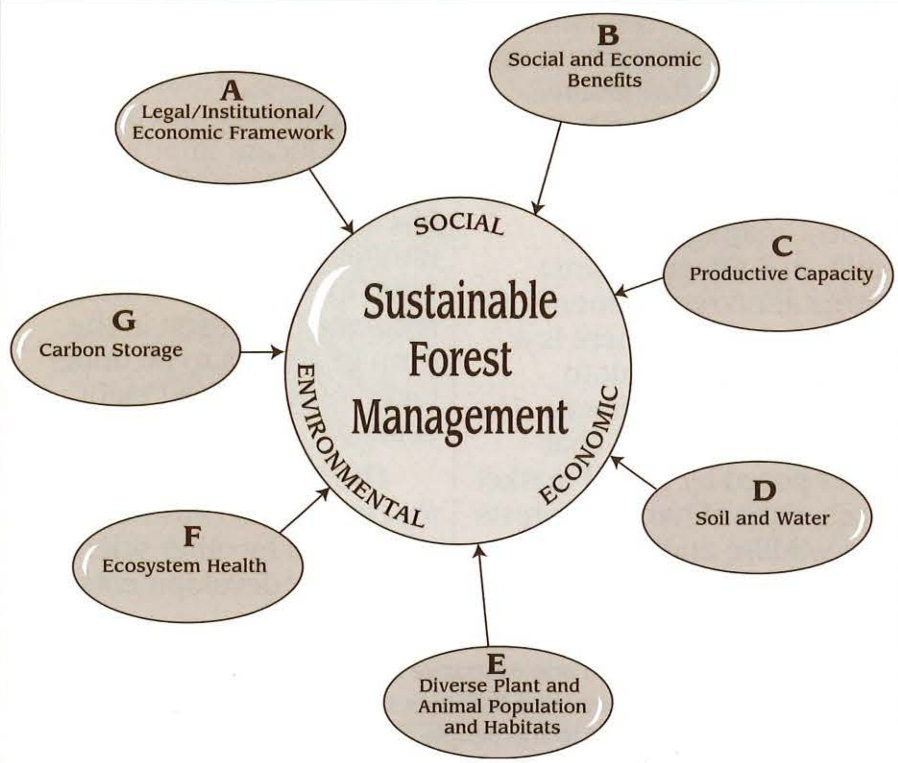


Figure 2. Internationally recognized framework adapted for organizing strategies A through G and actions to manage Oregon's forests sustainably.

Developing the *Forestry Program for Oregon*

The Board of Forestry adopted the criteria-and-indicators framework to better respond to legislative direction to assess and report on the cumulative effects of forest practices. In 2000, Oregon became the first state in the nation to publish a "first approximation report" to measure the status and trends of the state's forests against internationally recognized measures of conservation and sustainable forest management.

Oregon's First Approximation Report for Forest Sustainability provides a snapshot of Oregon's forests in light of these seven topics, and it provides a starting point for a conversation with Oregon's citizens about future forest sustainability. The report found much good news about Oregon's forests, including that they are among the best-managed in the world, that Oregon's strict reforestation requirements are effective, and that there is a growing commitment to restoration of watersheds. The report also identified challenges posed by global market forces, risks of harm to forests from wildfire and invasive species, business problems facing family forest landowners, and suburban-type development on forestlands.

The 2003 Oregon Forests Report continued the discussion that started with the First Approximation Report and identified "breakthrough" opportunities to continue or improve work toward sustainability of Oregon's forests. Following through on these opportunities could help accomplish genuine economic recovery for many Oregon communities, a stable return on Oregon's natural assets, and significant improvement in the health of Oregon's forests. Many of these opportunities have been incorporated into the *2003 Forestry Program for Oregon* in the form of actions to be undertaken over the next eight years.

> ***"We have talked about the importance of educating the public, but one piece we have left out is the education of policy-makers. Lawmakers come from different backgrounds. We want the quick answer because there are so many issues and so many problems to deal with."***
>
> — Representative Deborah Kafoury (D-Portland)

The 2003 Forestry Program for Oregon also has been influenced by other scientific and policy developments since 1995. These include new incentive concepts; the latest scientific findings on forest practices; policies and plans for state-managed forests under the Greatest Permanent Value Rule[2]; the Oregon Plan for Salmon and Watersheds; the Northwest Forest Plan for federal lands; administration of the federal Endangered Species Act, Clean Air Act, and Clean Water Act; growing concerns about wildfires and forest health; forest certification; and discussions about sustainability.

In March 2001, the Board of Forestry chose "the conservation and sustainable management of Oregon's forests" as the central theme, and chose the seven criteria for sustainability as the basis for strategies for the *2003 Forestry Program for Oregon*.[3] In October 2001, the board hosted a two-day symposium and workshop at Oregon State University to hear presentations on Oregon forest resource and economic and social trends and conditions, and to discuss potential policy changes with key opinion leaders. The public involvement process that began with the October 2001 meeting continued throughout 2002 and early 2003 through discussions at regular Board

[2] The board has adopted an administrative rule that defines "greatest permanent value" to mean healthy, productive, and sustainable forest ecosystems that over time and across the landscape provide a full range of social, economic, and environmental benefits to the people of Oregon (OAR 629, Division 35).

[3] These actions are consistent with ORS 184.423, which requires state agencies to promote efficient use of energy, water, and resources; partner with communities and businesses; reduce adverse impacts on native habitats and species and restore ecological processes; efficiently use and reuse resources and reduce contaminants released into the environment; and encourage local communities to become resilient and economically diverse.

of Forestry business meetings, other public meetings and forums hosted by the board, an interactive website, newsletters, television and print media, presentations by Department of Forestry staff, interactions with key stakeholders, and other methods. This process has resulted in a document that reflects the opinions of a wide range of scientific, public interest, and forest landowner groups and addresses current environmental, economic, and social needs, opportunities, and concerns.

The conversation continues

The Board of Forestry has adopted the *2003 Forestry Program for Oregon* based on its broad statutory authority. *The Forestry Program for Oregon* provides a coherent foundation for future board policy deliberation. It is neither a statute nor an administrative rule and, therefore, does not have, and is not intended to have, the effect of either a statute or an administrative rule on the board, the department, or forest landowners.

This *Forestry Program for Oregon* is not an end-product. It is the foundation for discussion and planning over the next several years. We would like this edition to be more widely read, understood, and used than past editions. We want it to show a clear connection between the board's strategies and actions, Department of Forestry programs, and the policies of other natural resource agencies with responsibilities that affect forestlands. Future board and department planning efforts will help complete these linkages.

During 2003, Board of Forestry members consulted Oregon's citizens for their ideas on revising the *Forestry Program for oregon.*

Photo by Rod Nichols, ODF

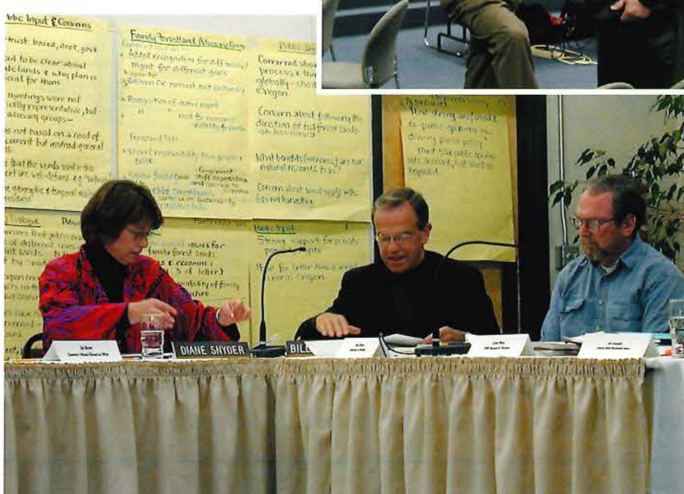


Photo by Rod Nichols, ODF

The *2003 Forestry Program for Oregon* as a guide for strategic planning

The *Forestry Program for Oregon* is the Board of Forestry's framework for strategic planning. The board will direct the Department of Forestry to complete a comprehensive, iterative strategic planning effort consistent with the actions listed in the *2003 Forestry Program for Oregon*. The Board of Forestry intends that its strategic plan and the department's strategic plan be fully integrated and that these plans also lead to better integration of Department of Forestry programs (Figure 3). This strategic planning effort is designed to help Oregonians achieve the "triple bottom line" of sustainable environmental, economic, and social performance.

Strategic planning strengthens the board's ability to be an effective policy-maker in partnership with all Oregonians. The primary purposes of our strategic planning are to:

- Clearly define and communicate (internally and externally) what the Board of Forestry is and what it does;
- Establish the board's fundamental guiding values and priorities;
- Direct the department in implementation of the Board of Forestry strategies and actions in the *Forestry Program for Oregon*;
- Focus resources and efforts on the most important issues and priorities that will promote and create the desired future;
- Measure and report performance (both successes and setbacks); and
- Provide an improvement cycle that allows both the board and the department to make informed changes when necessary.

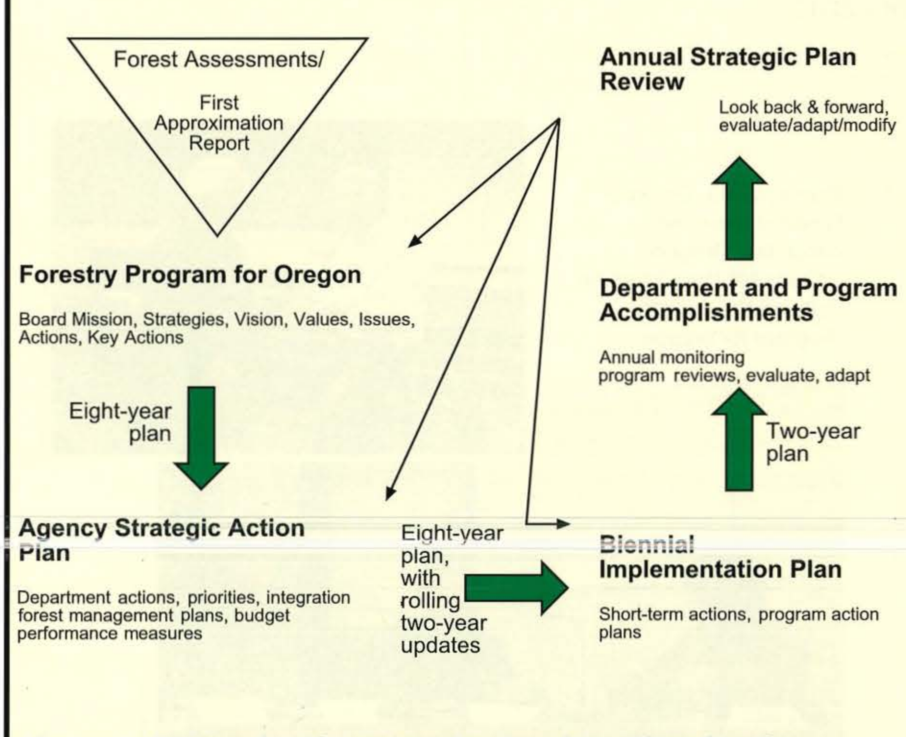


Figure 3. Process for the strategic planning effort for the Board of Forestry and the Department of Forestry.

The Key Elements of the *2003 Forestry Program for Oregon*

Photo by Dave K. Thompson, ODF

The 2003 Forestry Program for Oregon has seven key elements. The mission statement (see below) establishes the overall purpose of the Board of Forestry. Seven strategies (see p. 12) identify what the Board of Forestry wants to achieve over the next eight years. They provide the framework for establishing actions and for designing and implementing agency programs. The order in which the strategies are listed is not intended to indicate priority, nor is it intended that all strategies should be applied equally on every forest ownership. Instead, the strategies should be viewed from a statewide, landscape perspective, with different landowners making different contributions. It is also important that the seven strategies be viewed and understood collectively and not individually.

The vision statement (see p. 12) describes what the board wants to accomplish through its seven strategies, looking at a 20-year horizon. Values (see p. 12) identify the board's guiding philosophies related to forestry. Viewed together, the mission, strategies, vision, and values describe the future that the board will strive to achieve.

In light of the mission, strategies, vision, and values, the Board of Forestry has developed a set of actions (see p. 14) upon which it intends to focus its efforts. Finally, the background text for each strategy (beginning on p. 19) includes descriptions of issues relevant to that strategy. These descriptions discuss current problems, suggest opportunities for constructive action, and identify matters requiring public understanding and policy decisions. The actions form a pathway for achieving the board's desired future. The ongoing challenge for the board is to work both within and outside state government to implement these actions to make this desired future a reality.

The board understands that economic conditions, agency budgets, and other short-term factors may limit its ability to fully implement elements of the *Forestry Program for Oregon*. To address these potential constraints, the board has identified key actions within the longer lists of actions under each strategy. Key actions are actions that the Board of Forestry believes are high priorities for attention through agency implementation, budgeting, and coordination. Key actions will both guide new actions and help in prioritizing strategic downsizing in response to budget changes.

Oregon Board of Forestry Mission Statement

The Board of Forestry's mission is to lead Oregon in implementing policies and programs that promote environmentally, economically, and socially sustainable management of Oregon's 28 million acres of public and private forests.

Oregon Board of Forestry Strategies

Strategy A. Promote a sound legal system, effective and adequately funded government, leading-edge research, and sound economic policies.

Strategy B. Ensure that Oregon's forests provide diverse social and economic outputs and benefits valued by the public in a fair, balanced, and efficient manner.

Strategy C. Maintain and enhance the productive capacity of Oregon's forests to improve the economic well-being of Oregon's communities.

Strategy D. Protect, maintain, and enhance the soil and water resources of Oregon's forests.

Strategy E. Contribute to the conservation of diverse native plant and animal populations and their habitats in Oregon's forests.

Strategy F. Protect, maintain, and enhance the health of Oregon's forest ecosystems, watersheds, and airsheds within a context of natural disturbance and active management.

Strategy G. Enhance carbon storage in Oregon's forests and forest products.

Oregon Board of Forestry Vision Statements

If the *2003 Forestry Program for Oregon* is implemented successfully, Oregon will have:

1. Healthy forests providing a sustainable flow of environmental, economic, and social outputs and benefits.
2. Public and private landowners willingly making investments to create healthy forests.
3. Statewide forest resource policies that are coordinated among Oregon's natural resource agencies.
4. A Board of Forestry recognized as an impartial deliberative body operating openly and in the public interest.
5. Citizens who understand, accept, and support sustainable forestry and who make informed decisions that contribute to achievement of the vision of *2003 Forestry Program for Oregon.*
6. Adequate funding for the Department of Forestry to efficiently and cost-effectively accomplish the mission and strategies of the Board of Forestry, and department personnel policies that encourage and recognize employees, allowing them to meet their full potential in providing excellent public service.

Oregon Board of Forestry Value Statements

The Board of Forestry values:

1. **A global context.** We believe Oregon's forests are important to the global environment, economy, and society, and that forest managers, government agencies, interest groups, and all other Oregonians should consider the impact of their decisions at local, state, national, and international levels.
2. **The dynamic nature of Oregon's forests.** We recognize that Oregon's forests are diverse, dynamic, and resilient ecosystems at a landscape scale. A broad range of forest conditions exists naturally, and various forest values, in proper proportion, are mutually compatible over time.
3. **Active management.** We believe Oregon's forests should be actively managed to maintain forest health, to conserve native plant and animal species, and to produce the products and benefits people value. In this context, we define "active management" as the application of practices through planning and design, over time and across the landscape, to achieve site-specific forest resource goals. Active management uses an integrated, science-based approach that promotes the compatibility of most forest uses and resources over time and across the landscape.[4]

[4] Based on OAR 629-035-0000(1).

Value Statements (continued)

4. **Landowners and the public sharing responsibility for sustainable forests.** We believe forest sustainability depends on the contributions of both landowners and the public. We support the private landowner's right to practice forest management in an environmentally sound manner that is already regulated by Oregon's strong Forest Practices Act. The public must also play an active role by supporting incentives and other non-regulatory methods that encourage continued investment in Oregon's forests to maintain and enhance environmental, economic, and social benefits.
5. **Forests that contribute to quality of life.** We believe Oregon's forests play a significant role in providing for Oregon's quality of life, including products, jobs, recreation, tax revenues for purposes such as education and public safety, and a quality environment.
6. **Meeting current and future needs**. We believe forest resources should be used, developed, and protected at a rate and in a manner that enables people to meet their current environmental, economic, and social needs, and also provides that future generations can meet their own needs.
7. **Different landowners playing different roles.** We believe different land ownerships play different roles in achieving the full suite of environmental, economic, and social needs met by the forested landscape. Family forest landowners play unique and valuable roles in Oregon's forest landscape, but their continued existence is threatened by development, regulation, and economic challenges.
8. **Informed public participation.** We value broad-based, informed public participation and consensus-based decision-making whenever possible, utilizing the following working principles adopted by the Western Governors' Association[5]:
   - National Standards, Neighborhood Solutions—Assign responsibilities at the right level
   - Collaboration, Not Polarization—Use collaborative processes to break down barriers and find solutions
   - Reward Results, Not Programs—Move to a performance-based system
   - Science for Facts, Process for Priorities—Separate subjective choices from objective data gathering
   - Markets Before Mandates—Pursue economic incentives whenever appropriate
   - Change a Heart, Change a Nation—Environmental understanding is crucial
   - Recognize Benefits and Costs—Make sure all decisions affecting infrastructure, development, and environment are fully informed
   - Solutions Transcend Political Boundaries—Use appropriate geographic boundaries for environmental problems
9. **Continuous learning.** We are committed to continuous learning. The results of forest management policies and programs should be evaluated and appropriately adjusted based upon ongoing monitoring, assessment, and research.
10. **Healthy rural Oregon.** We believe a healthy rural Oregon, which relies on working landscapes, is vital to the quality of life enjoyed by all Oregonians.

[5] Western Governors' Association, 1999. In 2002, the Western Governors' Association renewed its commitment to the Enlibra principles to guide natural resource and environmental policy development and decision-making in the West. The doctrine is based upon the listed principles, each of which is dependent upon the others. The integration of these principles is critical to the interpretation and the success of the new doctrine. More information is available at the Association website.

Planned Oregon Board of Forestry Actions

The Board of Forestry believes the actions listed below will be needed for the board's strategies to be successful and to achieve the board's mission and vision, reflecting the board's values. Key actions are highlighted.

Strategy A. Promote a sound legal system, effective and adequately funded government, leading-edge research, and sound economic policies.

ACTIONS:

A.1. The board will continue to support an effective, science-based, and adaptive Oregon Forest Practices Act and a strong but flexible Land Use Planning Program as the cornerstones of forest resource protection on private lands in Oregon. (KEY ACTION)

A.2. The board will foster collaborative partnerships with federal natural resource regulatory and forestland management agencies. The board will actively support federal policies that are consistent with the board's strategies and actions and actively seek changes to federal policies that are inconsistent with the board's strategies and actions. (KEY ACTION)

A.3. The board will promote active, adaptive forest management and the outreach monitoring, assessments, research, and evaluations that support it as a continuous learning and improving process for all seven strategies. (KEY ACTION)

A.4. The board will promote congressionally approved experiments in Oregon and other states where local communities with mature, successful histories of collaboration are empowered to demonstrate their stewardship of federal forestlands and are held accountable for the results. Such experiments should be implemented under a framework of national management and monitoring standards (KEY ACTION)

A.5. When forest practice regulations are necessary, the board, consistent with state statutes, will work to minimize the adverse financial effects of regulations that may require private landowners to contribute forest resources to provide increased public benefits.[6]

A.6. The board will continue to support local land-use planning to stabilize the forestland base and encourage long-term investments in forestland.

A.7. The board will encourage the use of nonregulatory methods, such as landowner incentives, to achieve public-policy goals on private forestlands.

A.8. The board will promote collaboration, partnerships, dialogue, and consensus-building as preferred pathways to resolve natural resource conflicts.

A.9. The board will promote policies and programs that will reinvigorate rural areas by promoting active forest management, economic and community investment, urban/rural partnerships, and public education about the benefits that forests and rural areas provide all Oregonians.

A.10. When developing Oregon forest policies, the board will consider them in the context of the Oregon environment and economy, but also in the context of the global environment and the global economy.

Strategy B. Ensure that Oregon's forests provide diverse social and economic outputs and benefits valued by the public in a fair, balanced, and efficient manner.

ACTIONS:

B.1. The board will work with other organizations to create and maintain a favorable investment climate for environmentally sensitive, socially responsible, and globally competitive forest-based businesses throughout Oregon that will generate high quality, value-added products; high quality, stable employment; and increased export capacity. (KEY ACTION)

B.2. The board will promote the development of programs that enhance Oregon's

[6] ORS 527.714 establishes standards that must be met prior to the board's adopting forest practice regulations affecting private property.

Actions (continued)

forest industry competitiveness, industrial development, and both in-state and global recognition that Oregon forest products come from sustainably managed forests. (KEY ACTION)

B.3. The board will promote increased public dialogue about the challenges of satisfying increasing consumer demand for forest products, the need to keep private forestland in forest uses, the desire for healthy forests, and the need for greater rural economic and community resilience. (KEY ACTION)

B.4. The board will continue to assess the unique challenges and opportunities facing family forest landowners and promote policies that encourage continued retention of, and investment in, family-owned forestlands. (KEY ACTION)

B.5. The board will promote environmentally sound, active forest management policies that encourage long-term investments, sustainable timber supplies, recreation and cultural opportunities, special forest products, fish and wildlife habitat, clean air and water, renewable energy, other forest outputs and benefits, and high levels of employment and income.

B.6. The board will direct the Department of Forestry to analyze barriers to forest industry investment and to assess the ability of Oregon's forest–related industries to remain globally competitive and to sustain production of other desired environmental, economic, and social values from Oregon's forests.

B.7. The board will direct the Department of Forestry to conduct a study of economic contributions and trends of Oregon's forest recreation and non-wood products industries.

B.8. The board will promote new employment opportunities by encouraging an assessment of what and where wood could be removed from federal forests to improve forest health, consistent with other management objectives, and encouraging the development of the infrastructure needed to accomplish the desired future condition for these forests.

B.9. The board will develop and implement forest policies potentially affecting recognized Indian tribes in consultation with those affected tribes.

B.10. The board will support programs that maintain and protect archeological and cultural sites on forestlands.

B.11. The board will support programs that enhance urban and community forest values and that increase Oregonians' understanding of the important role urban and community forests play in providing environmental, economic, and social benefits.

B.12. The board will work with other organizations to revitalize the economy and social fabric of rural communities and ensure that the values they provide to all Oregonians are maintained and compensated. The board will consider the social effects on rural communities from current and proposed forest management policies and practices.

STRATEGY C. Maintain and enhance the productive capacity of Oregon's forests to improve the economic well-being of Oregon's communities.

ACTIONS:

C.1. The board will promote retention and improvement of the forestland base and long-term forest investments by landowners through Oregon's land-use and tax programs, regulations, forest products market development, and appropriate incentives. (KEY ACTION)

C.2. The board recognizes that different owners have different objectives for land ownership with different emphases on conservation, commodity production, multiple use, and residential values. The board will promote a policy framework that recognizes that the management of these different ownerships can provide a suite of benefits which collectively will meet Oregon's environmental, economic, and social needs.

C.3. The board will encourage the federal government land management agencies to achieve their statutory objectives by actively managing

Actions (continued)

federal forestlands, including the use of commercial timber harvests where appropriate.

C.4. The board will support proper management to protect and enhance the multiple values of Oregon's urban and community forests and forests in the wildland/urban interface.

C.5. The board will encourage forest landowners to manage their forests in a manner that ensures long-term wood volume growth in Oregon equals or exceeds rates of timber harvest and mortality across all ownerships.

C.6. The board will support continued assessments and research on the capability of Oregon's forests to produce timber, non-wood forest products, recreation, water, fish and wildlife habitat, and other forest values.

STRATEGY D. Protect, maintain, and enhance the soil and water resources of Oregon's forests.

ACTIONS:

D.1. The board will support and contribute to continuing statewide efforts under the Oregon Plan for Salmon and Watersheds to protect and enhance Oregon's native fish populations and water quality, while sustaining a healthy economy. (KEY ACTION)

D.2. The board will continue to use the Forest Practices Act as the primary means to protect soil productivity and water quality and also promote ongoing voluntary resource restoration and enhancement efforts by forest landowners through the Oregon Plan.

D.3. The board will promote understanding, acceptance, and support across all land uses for relevant indicators of water quality conditions based on beneficial uses, and the use of these indicators to develop stream protection policies that result in consistent application of state water quality standards across land uses.

D.4. The board will ensure that forest landowners comply with state non-point source water quality standards as their contribution to providing Oregonians with high quality drinking water.

D.5. The board will promote renewed, long-term watershed research to study the effectiveness of the most current forestry best management practices in providing protection for soil and water resources.

D.6. The board will promote continued research and monitoring on the condition of forest roads and the effectiveness of forestry best management practices for roads.

D.7. The board will promote the maintenance of forestland in forest uses and promote the establishment of new forests as key elements in promoting high quality water and protection of soil productivity.

D.8. The board will support adequate funding for appropriate regulation and incentive programs that serve to encourage the establishment and retention of forestland.

STRATEGY E. Contribute to the conservation of diverse native plant and animal populations and their habitats in Oregon's forests.

ACTIONS:

E.1. The board will collaborate with other state, federal, and tribal agencies; universities; conservation groups; and private landowners to promote the development of a comprehensive, science-based, coarse-scale statewide assessment that evaluates the characteristics, conditions, and trends of native vascular plant and vertebrate animal populations and habitats on all land uses and ownership classes. (KEY ACTION)

E.2. Following completion of the assessment, and within the broader context of continuing to meet Oregon's environmental, economic, and social needs, the board will collaborate with other agencies, universities, organizations, and landowners to promote development of a coordinated, statewide Oregon native plant and animal conservation policy addressing all land uses and ownership classes. This policy should be ratified by all of Oregon's natural resource boards and commissions, as well as the Oregon

Actions (continued)

Legislature, and acknowledged by federal natural resource agencies. The adopted policy should:

- **Recognize that the primary purpose of most private forestland is to grow and harvest commercial tree species.**
- **Clearly consider public expectations for the contributions of private landowners on all uses to achieve state goals and how, in light of the technical assessment results, those expectations can be met in a fair and equitable manner.**
- **Ensure that any additional contributions by private forest landowners are sought first through non-regulatory methods and only through regulation if the assessment shows a clear, compelling need, consistent with ORS 527.714. (KEY ACTION)**

E.3. The board will promote a variety of non-regulatory tools, such as landowner recognition, incentives, easements, exchanges, and technical assistance, to help implement the state native plant and animal habitat conservation policy. (KEY ACTION)

E.4. The board will support continued active management of Oregon's state forests through the use of structure-based management combined with ongoing science-based implementation monitoring and evaluation. (KEY ACTION)

E.5. The board will evaluate and develop Oregon forest policies in the context of the diverse roles and management objectives of the state's public and private forest landowners, along with other land uses, to sustain the state's natural heritage of native plant and animal species and communities.

E.6. The board will promote continued monitoring and evaluation of both the short-term and long-term effects of current forest practices on Oregon's biological resources

STRATEGY F. Protect, maintain, and enhance the health of Oregon's forest ecosystems, watersheds, and airsheds within a context of natural disturbance and active management.

ACTIONS:

F.1. The board will promote active fuels and vegetation management[7], along with aggressive wildfire suppression, as key tools to manage forest health on public and private forestlands. (KEY ACTION)

F.2. The board will promote forest landscape conditions that are resilient to natural disturbances, reducing the adverse environmental impacts and losses of forest resources to wildfire, insects, diseases and other agents in a cost-effective, environmentally, and socially acceptable manner.

F.3. The board will encourage state and federal agencies to closely monitor and aggressively act to prevent and mitigate the adverse effects of air pollution and invasive, non-native species on Oregon's forests.

F.4. The board will continue to promote smoke management programs that maintain and improve air quality while allowing sufficient opportunities for prescribed burning, fuel reduction, and forest health improvements.

F.5. It is the policy of the board that wildfire suppression actions in all of Oregon's forests reflect the following protection priorities: (1) human lives, (2) forest resources, (3) dwellings and other developments.

F.6. The board will promote shared public and landowner funding to maintain the most efficient level of fire protection and other forest health activities on non-federal forestland.

[7] In this context, "active fuels and vegetation management" may include a combination of prescribed fire, mechanical treatments, and both commercial and noncommercial tree removal.

Actions (continued)

STRATEGY G. Enhance carbon storage in Oregon's forests and forest products.

ACTIONS:

G.1. The board will encourage maintaining and increasing Oregon's forestland base and promoting urban forests to enhance carbon storage and reduce greenhouse gases.

G.2. The board will encourage development of tools to predict how forest management and wildfire affect carbon pools and calculate the amount of carbon stored in these pools.

G.3. The board will promote increased public and forest landowner understanding of the potential contributions of trees and forests in storing carbon.

G.4. The board will promote the development of forestry carbon-offset markets, and provide landowners information about the market rules for the sale or exchange of carbon offsets.

G.5. The board will promote the use and reuse of Oregon forest resources, avoiding the higher level of carbon dioxide emissions resulting from the manufacture of many wood product substitutes.

G.6. The board will work with forest landowners and encourage other organizations to work with wood products manufacturers and retailers to develop local markets for wood products from Oregon forests.

G.7. The board will encourage greater consumer awareness of the environmental advantages of using renewable and recyclable Oregon forest products.

Background on Strategy A:

Promote a sound legal system, effective and adequately funded government, leading-edge research, and sound economic policies

Do we have the basic institutional framework we need?

Achieving a win-win solution

The institutional framework in place outside the forest greatly affects what happens within it. The soundness and effectiveness of our laws, government processes, research institutions, and economic policies will determine our success or failure to define and achieve sustainability. If we fail to provide an adequate and appropriate institutional framework for the management of our forests, we will significantly reduce our ability to achieve any of the strategies proposed in this *Forestry Program for Oregon.*

Many of the existing forestry laws and institutions were created to address past management practices, provide for economic development, or address catastrophic events such as wildfire. These laws and institutions have evolved significantly over time. While Oregon has well-developed legal, institutional, and economic systems, some elements of our current framework with regard to forest policy and practice are inadequate. These shortcomings make it difficult to address larger landscape-scale forestry issues or issues that cross jurisdictional boundaries. Our laws, policies, and economic traditions have not always kept pace with scientific advancements, and many progressive efforts are underfunded. Because it has evolved to meet changing objectives over time, our institutional forestry framework contains internal contradictions. Perhaps most important, this framework is based largely on an ideal of maintaining static conditions in a dynamic environment.


Photo by Rod Nichols, ODF

The Board of Forestry meeting in Salem, Oregon, in September 2003

One of the greatest challenges facing the board in defining sustainable forest management for Oregon is the conflict over active management of forests, both public and private. This conflict began in the 1970s, with environmentalists expressing legitimate concerns over forest management practices and the future of sensitive species, and the forest industry, which had served as the foundation of the state's economy, equally concerned about increasing government regulation and a shrinking supply of logs for its mills.

This conflict has become a polarized debate, with most Oregonians, as well as more moderate elements from the environmental and forest industry organizations, caught in the middle.

Oregonians view this conflict as a major problem. Polling results show the public is frustrated with the stubborn posturing and endless bickering on both sides and wants better-integrated, politically sustainable solutions. Such solutions are being explored. Private companies are looking at market-based management systems like forest certification to document that their forests are well managed, or to regain credibility with the public, or both. Many private and nongovernmental interests are willing to work collaboratively with stakeholders to develop policy. However, other parties use litigation or civil disobedience to stop or delay activities that are planned and permitted.

This conflict raises a fundamental question: Is it possible to develop "win/win" solutions in the forest policy arena? We believe the Board of Forestry is positioning itself correctly to bring interested parties to the table to strengthen what is developing as a powerful new "center."

We would point to successes such as watershed councils, the Oregon Plan for Salmon and Watersheds, and other grassroots efforts in which participants favor ***and/and*** solutions (meeting environmental ***and*** economic ***and*** social goals) over ***either/or*** solutions.

The evolving "contract with rural America"[8]

Because rural economies in Oregon have been affected more than urban and suburban economies by changes in forest policies, the board has taken a special interest in the changing "contract with rural America." The rural policies of the United States date back to the colonization of undeveloped lands following the Declaration of Independence. More recently, rural policies have included the Homestead Act of 1862, the creation of land-grant universities and the Extension Service, intercontinental and interstate transportation systems (first with railroads, later with highways), the development of mineral, grazing, and timber resources on federal lands, and rural electrification in the mid-1900s. The development of dams and irrigation systems was also an important part of evolving rural policies.

Many of these policies had agricultural development as their goal—providing the country with abundant food. That policy evolved in the later part of the 1900s to supplying surplus food to a hungry world. Through the early 1960s, these policies stood as a well-defined and established "contract," with the federal government and urban residents being one party and rural America the other. This contract promoted agricultural and natural resource development and created longstanding expectations and investments.

With the beginning of the environmental movement in the 1960s, many of the goals and practices of the development of rural America were questioned. Traditional western rural policies, such as laws relating to water use and management of federal lands, were challenged politically and legally, and in some cases changed. The urbanization of the West created another set of challenges to traditional rural policies. Urban populations and new rural residents often embraced the environmental and social values of rural lands, but viewed traditional economic uses as harmful to their values and interests.

"We need a new social contract between rural and urban Oregon. The capacity to finance investment in the land is primarily in the urban areas; however, the most cost-effective place for the investment in ecological restoration is in the rural areas. We must invest in a manner that sustains local economies and social systems at the same time that we are recovering the ecological values that we care about."

— Sara Vickerman, West Coast director, Defenders of Wildlife

Ironically, those who object to economic uses of rural lands often have consumption habits that belie their convictions, such as owning large homes and driving big cars. This apparent mental disconnect between production and consumption of natural resources is evidence that the social contract between urban and rural America no longer exists.

As a result of these combined pressures, the management of federal forestlands has radically changed. Timber harvested on federal lands in Oregon came to 5.5 billion board feet in 1972 and 4.3 billion in 1989. Restrictions due to concerns over the northern spotted owl, marbled murrelet, and other old-growth-dependent species on federal lands led to the Northwest Forest Plan in 1993. As a result, in 1994 the federal harvest in Oregon dropped to 687 million board feet. The decreased federal harvest in Oregon stayed relatively stable until 1998. Then, because of lawsuits against the Forest Service and Bureau of Land Management for failing to adequately survey rare and uncommon species before harvesting, the volume offered under the Northwest Forest Plan was reduced to 173 million board feet in 2001.

As the contract with rural America has eroded, the traditional practices of both agriculture and forestry have

[8] Based on Stauber, 2001.

increasingly come under public disapproval. Tools and strategies that rural landowners and managers once took for granted have been prohibited or severely regulated, or have become economically out of reach. Rural Oregon is at risk of losing its middle class and becoming home only to the very rich and the very poor. The social fabric of many of the state's rural communities is not sustainable under such conditions.

To solve these ongoing federal land management conflicts and the challenges facing private forest landowners, we must develop a new rural policy and gain public agreement on its key benefits to society. These benefits might include promoting the survival of the rural middle class, reducing rural poverty, and sustaining and improving the quality of the natural environment.

What is the current legal and institutional framework for forest policy?

The United States Constitution and Oregon State Constitution and the statutes developed under them provide our legal and institutional foundation for forest management and regulation of forest practices. They establish the distribution of powers and authorities among federal, state, and local governments, each of which is involved in establishing forest policies. This section describes and gives examples of how federal, state, and local laws and institutions affect forest policy.

The state and federal constitutions permit governmental regulation for a wide range of public purposes. There are, of course, limits on the exercise of governmental power. One of the most important limits on land management regulation is the requirement that private property not be taken for public use without just compensation. There is considerable debate in academic circles and the courts over the meaning of this limitation and the circumstances in which regulation rises to the level of compensable "taking." This debate has very real significance in the forest practices regulatory arena.

Federal government

Congress

Congress affects forest policy through federal laws that set standards of performance and prescribe mechanisms of enforcement. Congress has broad authority to adopt regulatory programs. Key federal laws related to forest policy processes are the Endangered Species Act, the National Environmental Policy Act, and the Clean Water Act. Key federal laws related to federal land management policy are the National Forest Management Act and the Federal Land Policy and Management Act.

In most cases, Congress delegates to the federal agencies the authority to adopt rules to implement regulatory and land management policies and programs. The federal rulemaking process affecting Oregon forests takes place in Washington, D.C., where federal administrative law provides the context within which these rules are adopted.

In some cases, federal regulatory programs are delegated to the states; implementation of the federal Clean Water and Clean Air Acts are two examples. In addition, Congress affects forest policy through its spending power and allocation of funds to support federal and state programs. Examples include fire suppression, forest restoration, reforestation, and road maintenance budgets on federal lands and funding for stewardship incentives and for technical assistance programs for family forest landowners.

The executive branch

The executive branch has significant discretion under the various policies to direct federal agencies to adopt policies or take actions that best reflect the executive branch's viewpoint. The federal Northwest Forest Plan was developed by the Clinton Administration after the USDA Forest Service and USDI Bureau of Land Management were both successfully challenged in court for failing to comply with their governing federal statutes. Congress has also given the executive branch the power to protect certain lands through special designations such as National Monuments.

The judicial branch

The judicial branch provides significant oversight of federal policies and laws, because most of the major forest and environmental policies grant considerable opportunity for judicial review of proposed federal agency actions. Oversight can also be initiated by third-party lawsuits.

Tribal governments

The federal government maintains a trust relationship with tribal governments. This trust relationship affects the management of federal and tribal forestlands and of fisheries.

Research programs

The USDA Forest Service maintains a system of eight research stations that conduct basic forestry and forest products research. The Pacific Northwest Research Station headquartered in Portland, is one. The goal of this research is to expand our knowledge about biological, physical, ecological, social, and economic aspects of forests and forest management and make that information readily available to resource specialists, managers, scientists, and the public. This information is crucial to ongoing monitoring and assessment work and may provide the foundation for future legislative and policy development at both state and national levels.

Incentives

A number of nonregulatory federal incentive programs are in place to encourage sound forest management. These have traditionally taken the form of federal cost-share funding of management practices. These programs are typically administered by state agencies, including the Department of Forestry.

State government

Legislation

The first forest-related laws in Oregon were regulations adopted in 1911 to protect Oregon's forests from uncontrolled wildfire. Since that time, Oregon has adopted forest protection laws, including the 1941 Conservation Act, an early reforestation law (see Strategy F).

The Forest Practices Act

Oregon was the first state to enact a comprehensive forest practices law. The Oregon Forest Practices Act, adopted in 1971, regulates harvest practices and other forest operations to protect forest resources including timber, water, soil, and fish and wildlife habitat. A key purpose for which the law was enacted was to ensure that forest operations are conducted to meet state water quality standards adopted under the federal Clean Water Act and implemented by the Department of Environmental Quality. The Forest Practices Act promotes compliance through prevention and education, but it is also enforceable through both criminal and civil processes. Under either approach, operators are required to repair damage to the extent practicable. Surveys for forest practices show high levels of compliance with the law.

The Oregon Board of Forestry, under ORS Chapter 527, has authority to make regulations to implement the Forest Practices Act. ORS 527.714 requires the board to satisfy specific requirements and findings before adopting new forest practice regulations under its broad rulemaking authority.

The Oregon Endangered Species Act

The Oregon Endangered Species Act applies to actions of agencies responsible for managing state-owned or -leased lands. The Oregon Department of Fish and Wildlife is responsible for wildlife protection and the Oregon Department of Agriculture is responsible for protecting plants. Once a plant or wildlife species is listed, these agencies are required to develop and implement plans to ensure that listed species are not harmed by any state agency actions.

Other state laws and regulations directed at protecting environmental quality may also apply to forestlands and forest operations. These are listed on page 23 along with the Forest Practices Act and the Oregon Endangered Species Act.

Land-use planning rules

Oregon's statewide land-use planning program was created in 1973 with the enactment of the Oregon Land Use Act. The program's mission is to conserve farmland, forestland, coastal resources, and other important natural resources; encourage efficient development; coordinate the planning activities of local governments and state and federal agencies; enhance the state's economy; and reduce the public costs that result from poorly planned development.

State responsibilities under the program are to set statewide planning goals, develop guidelines for meeting goals, review city and county comprehensive plans, and review appeals of land-use decisions under the Land Use Board of Appeals. The program requires all cities and counties to adopt comprehensive plans to meet state standards. The standards consist of nineteen statewide planning goals that deal with land use, development, housing, transportation, and conservation of natural resources. State agencies are also required to adopt and implement their programs in a manner compatible with local government plans.

Oregon's key state environmental-protection laws and regulations that may apply to forestlands or forest operations are listed here along with the agencies responsible for their enforcement.

The Oregon Forest Practices Act and laws governing protection from fire	Oregon Department of Forestry
Statewide land-use program	Oregon Department of Land Conservation and Development and local governments
Fill and Removal Act	Oregon Division of State Lands
Oregon Endangered Species Act	Oregon Departments of Agriculture and Fish and Wildlife
Oregon State Scenic Waterways Act	Oregon Parks and Recreation Department and Oregon Division of State Lands
Laws governing the Willamette River Greenway	Oregon Parks and Recreation Department, Oregon Department of Land Conservation and Development, and local governments
Laws governing the Columbia Gorge Scenic Area	Columbia Gorge Commission
Laws governing pesticide applicator licensing and pesticide product label enforcement	Oregon Department of Agriculture
Implementation of federal clean water and clean air requirements and laws governing chemical spills and hazardous materials	Oregon Department of Environmental Quality
Laws governing rock pits, stormwater drainage permits for quarries, and mined-land reclamation	Oregon Department of Geology and Mineral Industries, Oregon Department of Land Conservation and Development, and local governments
Water use permits and laws governing water rights for impoundments, dams, and dam safety	Oregon Water Resources Department
Laws governing preservation of state historical and archaeological sites	Oregon Parks and Recreation Department

The land-use program has generally worked well to protect forestland from outright conversion to other land uses, but it may be less successful in managing development that conflicts with forest uses. In the wildland-urban interface, for example, poorly sited dwellings may be vulnerable to landslides and wildfire and make suppression of forest fires more difficult and expensive (see Strategies C and F).

Sustainability in government

As state government's first step toward meeting the goal of sustainability, state agencies have been directed by statute, ORS 184.421, to focus on improving the sustainability of their internal operations. "Sustainability" is defined as "using, developing and protecting resources in a manner that enables people to meet current needs and provides that future generations can also meet future needs, from the joint perspective of environmental, economic and community [social] objectives." Local governments have adopted similar sustainability efforts and have led with innovative practices to collect and recycle materials such as glass and plastics. Several Oregon cities have adopted purchasing policies favoring sustainably produced commodities.

Boards and commissions

Oregon's legislature has delegated significant policy-making authority to various boards and commissions. Policies, programs, and laws at both the state and federal levels are subject to swings in political power that can create problems for a long-term activity like forest management. The board-and-commission system provides some policy stability by mitigating these political shifts.

The Board of Forestry has been delegated both broad policy authority and specific regulatory authority, as well as some quasi-judicial powers. Oregon requires an open and transparent rulemaking process that is simpler than federal processes and that requires significant public involvement. The Oregon Board of Forestry, like all boards and commissions, follows the Oregon Administrative Procedures Act[9] and often uses public advisory committees in developing rules and other policies.

Dispute resolution

State law requires that the Oregon Dispute Resolution Commission, the Department of Justice, and the Department of Administrative Services collaborate to help state agencies resolve disputes without resorting to litigation. The Department of Forestry has utilized alternative approaches in resolving forest practice violations and contract disputes.

Research programs

State government maintains forest research and extension programs through its land-grant university, Oregon State University. Forest research has generated key information for policy-making as well as for land management. Extension provides a means of transferring knowledge to forest landowners and others concerned with the field application of research. Research and extension at the state level are coordinated with the companion federal effort.

Besides leading in research, Oregon State University, along with other Northwest universities, has the capacity to educate enough natural resource specialists such as biologists, geologists, hydrologists, soil scientists, forest managers, and engineers to meet the growing demands of managing our forests.

Oregon Forest Resources Institute

The Oregon Forest Resources Institute (OFRI) was created by the Oregon Legislature in 1991 to improve public understanding of the state's forest resources. OFRI's mission is to provide information on Oregon's forest practices and encourage sound forest management. The Institute is funded by a tax on forest product producers.

State forests

Oregon owns and manages a limited amount of forestland (three percent of Oregon's total). Most of this land is owned and managed by the Board of Forestry under a "greatest permanent value" policy[10] that requires the board to manage for a variety of values "over time and across the landscape." Board of Forestry forestlands provide revenue for schools and other taxing districts in the counties where the forests are located. The remaining lands are Common School lands managed by the Department for the State Land Board. Common School forestlands provide revenue for schools, pursuant to the federal Oregon Admission Act of 1859.

Tribal relations

Nine federally recognized Indian tribal governments are located in Oregon. Oregon has formalized its relationship with tribal governments in law to provide a process to resolve potential conflicts, maximize

[9] ORS Chapter 183.

[10] OAR 629-035-0020.

intergovernmental relations, and enhance the exchange of ideas and resources. State agencies are required to consult with tribal governments in developing state policies that may affect tribes.

Benchmarks

Oregon, like many states, uses strategic planning to develop and implement its programs. Oregon is unique, however, in the establishment of "benchmarks" (indicators of environmental, economic, and social health) to track progress. The Oregon Progress Board is an independent state planning and oversight agency charged with developing and tracking the Oregon Benchmarks. This *Forestry Program for Oregon* is one example of strategic planning undertaken by a state board to document its mission, strategies, vision, values, and actions to address issues and opportunities.

Oregon Plan for Salmon and Watersheds

In response to the federal Endangered Species Act listing of salmonids across most of Oregon, the state in 1997 developed the Oregon Plan for Salmon and Watersheds to recover salmon and other native fish and to improve water quality. The Oregon Plan has a regulatory foundation, but it relies heavily on cooperation and voluntary activities for its success (see Strategy D).

One of the Oregon Plan's strengths is its encouragement of a local, grassroots approach through state support of watershed councils and other local institutions. Watershed councils are charged with assessing watersheds and developing local, collaborative, watershed-based restoration plans. The Oregon Plan legislation also created the Oregon Watershed Enhancement Board (from the former Governor's Watershed Enhancement Board) and charged it with supporting watershed councils and restoration projects. In 1999, Oregonians passed a ballot initiative guaranteeing a portion of lottery receipts to fund Oregon Plan efforts.

> ***"It is important that this Forestry Program for Oregon talks about not only what kind of forest management we need, but what kinds of institutions we need to address the problems we see before us in natural resources."***
>
> — K. Norman Johnson, professor,
> College of Forestry, Oregon State University

Local government

Local governments (counties and cities) operate in a manner similar to Oregon state government. However, with regard to forest policy, Oregon has established clear limits on the ability of local governments to regulate forest practices. Local government may regulate forest practices only within Urban Growth Boundaries. Some counties own and manage forestland of their own, but management of these forests is regulated under the Forest Practices Act.

Local governments play an important role in implementing the state's land use planning program. Local governments also manage urban and community forests, the mosaic forest of the planted landscape and the remnants of native forest left behind as our cities developed. These are forests where people are not just visitors, but rather where most Oregonians live. Urban and community forests make very important contributions to the environmental, economic, and social health of the state. Among other benefits, forests in and near cities absorb carbon dioxide and air pollution while releasing oxygen. They help conserve energy and maintain water quality. These forests also increase property values and generally enhance the quality of community life.

Regional government

An important trend is the growing number of regional institutions or regional planning frameworks. The Bonneville Power Administration and its outgrowth, the Northwest Power and Conservation Council, were established to address regional power issues. These authorities indirectly affect forestlands through projects to restore wildlife habitat. Federal agencies recently partnered with Pacific Northwest state and local governments in a planning process to address the management of federal lands in the interior Columbia Basin region. A growing region-wide focus in forest policy issues is now represented by the Western

Governors' Association's work on such concepts as the Enlibra principles[11] (see Value Statement 8).

Nongovernmental organizations

Private forest institutions, both industrial and nonindustrial, have a long-standing and important role in the evolution of Oregon's forest policies. Many private forest products companies own both forestland and manufacturing facilities. Nonindustrial owners are a diverse group of individuals, families, and organizations that own forestland for a diversity of purposes. Both industrial and nonindustrial owners have associations to represent their political interests.

Nonprofit institutions, with their range of views, objectives, and methods, are also important in developing forest policy. Most nonprofit groups work at the public policy level or through judicial actions to achieve their goals. Others are more directly involved in land management, acquiring lands or easements to fulfill their organizational mission.

Various forest certification systems represent a new type of nongovernmental institution. Certification is evolving as a market-based incentive, encouraging products that are guaranteed to have met certain environmental, economic, and social standards in their production. Interest in forest certification in this country first emerged through pressure applied on retailers by nonprofit institutions to make certified products available. More than 50 forest certification systems have been developed internationally. This new trend is evolving rapidly, and there is increasing effort to develop reciprocal arrangements among the certification systems.

Finally, working outside the framework of legal institutions, some activist groups and individuals on the extremes of various issues have engaged in unlawful activities such as eco-terrorism to promote their interests. Unlawful activism has become an increasing problem both in Oregon and nationally.

What are the main issues surrounding Oregon's legal and institutional framework?

Federal forest management and local collaboration[12]

Gifford Pinchot, the first chief of the USDA Forest Service, envisioned that federal land management decisions would be made at local levels. However, because of the way federal laws have evolved toward more centralized decision-making over the last century, decisions are now made primarily at the national level, with very little decision space for local federal forest managers. While national laws are the result of mutual agreements at national level, similar agreement with these laws is often not achieved at local scales. In some cases the broad implementation of national forest management standards has caused unintended harm to local forest resources and forest-dependent economies and communities.

Local efforts to collaborate on natural resource and sustainability issues are springing up throughout the American West, especially in Oregon. The impetus behind the local collaboration movement has little to do with seizing power and control. Instead, it is more often about the very survival of rural communities. Many rural communities in the western United States are not interested in gentrification or retirement communities. Their citizens want to continue to work on and with the land. However, where federal lands and federal laws are involved, local collaboration to achieve a desired future is often stifled by a lack of flexibility and a lack of decision space for local federal officials.

A national discussion is needed to resolve the tension between national interests and local interests in the management of federal forestlands. People living near federal forests need to be empowered to take part in decisions affecting the forest's future, so intimately tied up with their own. Society must acknowledge that centralized national decision-making processes and local collaboration processes are

[11] Western Governors' Association, 1999.

[12] Based on remarks by Daniel Kemmis, Center for the Rocky Mountain West, at the Sustainability Forum, May 30, 2003. Portland, Oregon.

inherently incompatible models. National-scale decisions frequently lead to litigation and a resulting low level of satisfaction for all stakeholders. While they may lend themselves to a formal process of public involvement, they are not well suited for the give-and-take of complex problem solving. In contrast, local collaboration can be an effective problem-solving process.


Photo by Mike McMurray

Many Oregon salmon stocks are listed as "threatened" under the federal Endangered Species Act. Several salmon runs have increased dramatically in recent years.

Americans are not ready to turn entire national forests over to local collaboration, but perhaps the collaborative model could be tried experimentally in a small number of places to work out the practical difficulties and to build public trust. New initiatives have been proposed to allow stakeholders in certain localities to prove their stewardship of federal forestlands. Governed by local boards of trustees approved by Congress, and operating under a framework of national standards and monitoring requirements, local collaboration groups should be given an opportunity to show what they can do.

The federal Endangered Species Act

Under the ESA, to "take" a species listed as threatened or endangered means to harm an individual of the species in such a way that injury or death results. "Taking" listed species is prohibited (subject to certain qualifications), and a violation may result in significant legal consequences. The continuing debate about what constitutes "take" of federally listed threatened and endangered species under the ESA creates uncertainty about landowner requirements and expectations. The ESA allows people to better understand, protect, and monitor the status of species at risk. However, uncertainty about regulations, current and future, has left landowners reluctant to produce or retain forest habitat that could be occupied by wildlife of a federally listed species, such as the northern spotted owl, because if one of these species did occupy a site it would severely limit a manager's future options.

> *"The era of single-issue or single-entity or single-focus management is over. It's over for the Forest Service. It's over for the Fish and Wildlife Service. It's over for the state. It's over for the Department of Forestry. And I believe it's over for corporate, private owners."*
>
> — Kemper McMaster, state supervisor, U.S. Fish and Wildlife Service

Scientific debate over the meaning of "take," as well as legal proceedings to prevent or punish alleged instances of "take," may directly affect the board's policymaking activity. Protection of listed species remains at the heart of many debates over forest management practices (see Strategy E).

Lawsuits

Lawsuits by nonprofit environmental groups, industry and landowner associations, and citizens have increasingly involved the federal court system in the interpretation and application of federal environmental laws. These lawsuits can be initiated at little or no cost to the plaintiffs. Even federal programs with substantial public support, such as the Blue Mountain Demonstration Project and the Northwest Forest Plan, have not been fully implemented because of process constraints or the threat or reality of lawsuits. Part of the problem may be that regulatory and planning laws do not provide an effective means for forest managers to take action that would pose short-term risks to forest resources in order to maximize long-term benefits. Lawsuits are costly to government agencies and divert resources from other important work. Litigation has not proved to be an effective tool in developing lasting policy solutions to complex natural resource problems.

Segregation of laws and programs

A serious weakness of both the state and federal legal frameworks is that recent laws have not been well integrated with older ones. For example, the federal Clean Water Act and Endangered Species Act conflict in some respects with earlier legislation such as the 1897 Organic Act, which mandates a continuous supply of timber from federal lands.

Similar problems exist with coordination of state laws and with integration of state and federal laws. The Forest Practices Act is an exception to this general observation in that the Legislature passed specific statutes (1987 and 1991) to integrate it with Oregon's land-use, air-quality, and clean-water programs. While forestlands have a regulatory framework of best management practices to implement the requirements of the water quality standards, other land uses have more limited frameworks. This creates issues of equity and may create a disincentive to retain private forestland for forest uses.

Federal agencies have at times tried to influence state programs such as the Forest Practices Act to implement federal Endangered Species Act standards. Yet, often, the standards applied through state programs already go beyond the basic federal "take avoidance" standard required on non-federal lands.

Before treatment

After treatment

Photos by Andrew White, ODF

Fuel reduction and forest health treatments like this one in in northeast Oregon are needed on millions of acres of Oregon's forests. On federal forests in Oregon, lengthy administrative processes and a lack of funding are significant obstacles to conducting such projects.

They are more comparable to the higher levels of protection found in federal habitat conservation plans.

Regulation, incentives, education, and research are all important tools for achieving public policy goals, but they are often used in uncoordinated ways. For example, prior to 2003, the Department of Forestry's regulatory program was administratively separate from the landowner assistance program. This separation hampered coordination of policy on regulation and incentive approaches to resource protection and customer service, and resulted in program inefficiencies. At the federal level, the USDA Forest Service provides private landowner assistance, while other agencies regulate programs such as the federal Endangered Species Act and Clean Water Act.

Forestlands have fewer federal cost-share programs than agricultural lands (for example, the Conservation Reserve Enhancement Program is not applicable to lands that are already forested). This may be the result of existing regulations for forestlands, while comparable regulations are lacking for agricultural uses.

What is our current economic framework for forest policy?

The U.S. economic system is market-based, but natural resource values cannot always be quantified in dollars and cents. Regulations are used to ensure that non-market resources are given appropriate value. When they develop regulations, policymakers often want cost/benefit analyses. Generally, the costs of proposed regulations are much easier to quantify than the benefits. Many natural resource benefits cannot be valued in our economic system because no cause-and-effect relationship can be identified that can clearly links the proposed change to a quantifiable benefit. For example, in developing rules to leave more trees along streams, it is fairly easy to determine the costs, but it is difficult or impossible to determine how many more fish might be produced or what water quality benefits might ensue. Research is rarely directed at developing this information.

Consumption

Under a market-based system, consumption choices are left to the individual. Consumers are often unaware of the market and environmental tradeoffs of their behaviors and choices. As a result, public opinion and public behavior are often in conflict.

Tax policies

Taxation is a major policy tool used to encourage management and retention of lands in resource uses. Income taxes and property taxes make up the majority of state government revenues. "Payments in lieu of taxes" are federal payments to local governments that help offset losses in property taxes because of the presence of nontaxable federal lands within their boundaries. However, the ability of tax policies to support non-timber goals remains limited due to budget and political constraints.

Manufacturing capacity

Major opportunities exist to process small-diameter logs and economically accomplish work to improve forest health. Forest industry-related manufacturing capacity has retooled over the past 20 years to process second-growth wood into an array of solid, engineered, and composite wood products and pulp. Capacity to handle large trees has been substantially reduced, and past market premiums for large-diameter

Photo courtesy of Green Mountain Woodworks, Inc., Phoenix, OR

Secondary wood products industries, using Oregon-grown wood in furniture, window frames, and other products such as this steamed madrone flooring, are a growing source of jobs in the state.

logs have disappeared. Due to limited log supplies from federal forests, manufacturing capacity in eastern Oregon has been substantially reduced. However, much forestland in that region is in need of management to improve its vigor and its resistance to wildfires and insect and disease infestations. An assessment of how much and what kind of wood should be removed from these forests could serve as the foundation for reviving the industrial infrastructure and achieving both more vital forests and more vital communities.

Workforce

With major changes in federal land management policy and improved efficiency in industry, the forest products workforce has changed. While highly skilled workers are still needed, there are fewer jobs for skilled workers and fewer small businesses that support forest management and manufacturing. Federal efforts to retrain displaced workers into "ecosystem workers" has had limited success.

Certification systems

Market-based forest certification systems are being used by some parties to promote their desired environmental or market outcomes. The certification systems are still evolving, and the long-term role they may play in promoting sustainable forestry is still unclear.

What are the main issues surrounding Oregon's economic framework?

Under current land management policies and projections of population growth, Oregonians living today may see a time when the state will no longer be producing enough forest products to meet its own needs.[13] Reflecting global economic pressures, between 1980 and 1995 the world's forests were reduced by 12 million hectares per year. That is equivalent of 30 million acres, more than the total amount of forestland in Oregon. During this period, the amount of forestland increased in the industrialized countries by 20 million hectares. Clearly, the sustainability of forests in developing countries is most at risk. Therefore, it is important to ensure that Oregon's forest resource policies, which may make sense within our state's borders, do not result in unintended adverse effects to the global environment or place

[13] Richard Haynes (PNW Research Station), personal communication, Board of Forestry Symposium, October 2001.

Global implications of Oregon timber harvest constraints

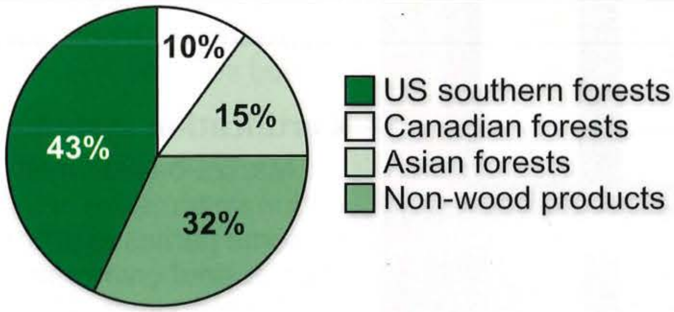


Figure 4. One effect of continued constraints on timber harvesting in Oregon will be that demand will be met in the indicated percentages by forests in other parts of the world and by the substitution of less environmentally friendly products such as concrete, steel, and plastic. (Source: Perez-Garcia, John. 2003)

Oregon forest landowners and businesses at a disadvantage in the global marketplace (Figure 4).

International political and economic forces are now affecting governmental policymaking at the national, state, and local levels. International political goals are focused on sustainable development. Global economic pressures are reducing some of the historical competitive advantages of timber produced in the Northwest, and may also be lowering the value of larger-diameter timber in the global marketplace. Rotation ages on Oregon industrial timberlands are declining as managers produce smaller trees to maintain global market access.

In the meantime, per capita consumption of wood in the United States continues to increase. Domestic consumption has exceeded domestic production since at least the late 1950s. There is a lack of consistency between public opinion about forestry issues and public consumption of forest products. Until the existing systems can provide for reconciliation among these factors, unsustainable practices will be encouraged in other parts of the world.

What are the key interactions of this strategy with other strategies?

The promotion of a sound legal system, effective government, excellent research institutions, and sound economic policies strongly affects, and is affected by, all other strategies and policies for managing Oregon's forests.

What are potential indicators to measure progress toward accomplishing this strategy?

1. Capacity to undertake forest-related planning and assessments
2. Capacity to measure and monitor changes, including the availability and extent of data measuring the indicators for all seven *Forestry Program for Oregon* strategies

Background on Strategy B:

Ensure that Oregon's forests provide diverse social and economic outputs and benefits valued by the public in a fair, balanced, and efficient manner

Why is providing recreation, commercial forest products, environmental benefits, and social and cultural uses important?

Forests are important to people because they offer a range of social, cultural, and economic values. Some of the values that come from forests are obvious—forests provide direct social and economic benefits that include wood products, recreation, jobs, incomes, and timber sale and tax revenues to governments and school districts. Other values are less tangible, such as solitude, scenic beauty, habitat for plants and animals, and spiritual renewal. Oregon's forests also provide environmental benefits such as purifying the state's air and water resources. These values may not be measurable in dollars and cents, but they have an economic impact—they contribute to Oregon's high quality of life and help the state attract desirable industries and skilled workers. This contribution in turn generates additional jobs, incomes, and tax revenues.

If forests continue to provide the social and economic values and environmental services that people want and need, it is likely they will be sustained. If forests cease to provide these benefits, they will be perceived as increasingly unimportant and risk being converted to other uses.

Rural and urban well-being

The economic and social well-being of many of Oregon's rural communities is directly linked to the health of forests and the forest economy. These rural economies depend on the availability of timber and non-wood products, recreational opportunities, and other resources from the forest. They are also affected by national and global markets and broader economic conditions.

Economic conditions are always changing, and some communities are better able to adapt to change than others. It is especially difficult for remote rural communities to adjust to economic change. These communities are more likely to suffer from poverty, unemployment, domestic violence, and other social problems. A diverse Oregon economy that includes a healthy forest products industry enables rural communities to be more adaptable and flexible, and enhances their economic and social well-being.

Not only rural communities benefit from a healthy forest products industry. There is much interdependence between Oregon's metropolitan areas and its smaller communities. Goods and services produced in the metropolitan areas flow to small towns and rural communities; these communities in turn provide workers and goods such as lumber and wood products to the cities. There are other interdependencies: revenues from Oregon's public forests go to schools across the state; and, because much urban income and employment depends on regional trade, Oregon's cities depend on natural resources for their livelihood just as rural communities do, although less directly. For example, one-third of Eugene's jobs and incomes are derived from the city's role as a regional trading center.

A disconnect of perception

Negative attitudes toward active forest management seem inconsistent with Oregonians' desire to have healthy and productive forests and also to consume large quantities of wood products. During the past decade, timber harvests in Oregon have declined, owing in large part to organized public opposition to active management of Oregon's public forests. At the same time, Oregon's consumption of wood products has increased. Active forest management is viewed by many as inconsistent with forest sustainability, but recent research suggests that human intervention is needed to bring some of our forests back to a more natural and sustainable condition.

What do we know about Oregon's forest economy and its ability to produce expected social and economic benefits?

We know a great deal about the lumber and wood products industry, less about forest-related recreation and tourism industries, and very little about mushrooms, floral greens, and other non-wood forest products. We also know that forest-based industries contribute relatively more to rural economies than to urban economies, and that local communities vary greatly in their dependence on forest-based industries.

Since 1990, timber harvest levels have dropped in Oregon, primarily because of reductions in harvests from federal lands. Employment in Oregon's wood-processing industries also has fallen, but not as much as harvest levels have. A number of factors have partially offset harvest declines; namely, growth in the manufacturing of secondary wood products (e.g., furniture and window frames, etc., made from primary products like lumber and plywood), declines in log exports, imports of logs from other states and Canada, harvesting and processing of more labor-intensive smaller timber, more efficient wood utilization, and increased use of recycled fiber (Figure 5).

Oregon's primary and secondary wood processing industries generate approximately $10 billion in annual sales, nearly 75,000 direct jobs, about $2.8 billion in worker income, and about $1.1 billion to landowners from timber sales. Additional employment and income is

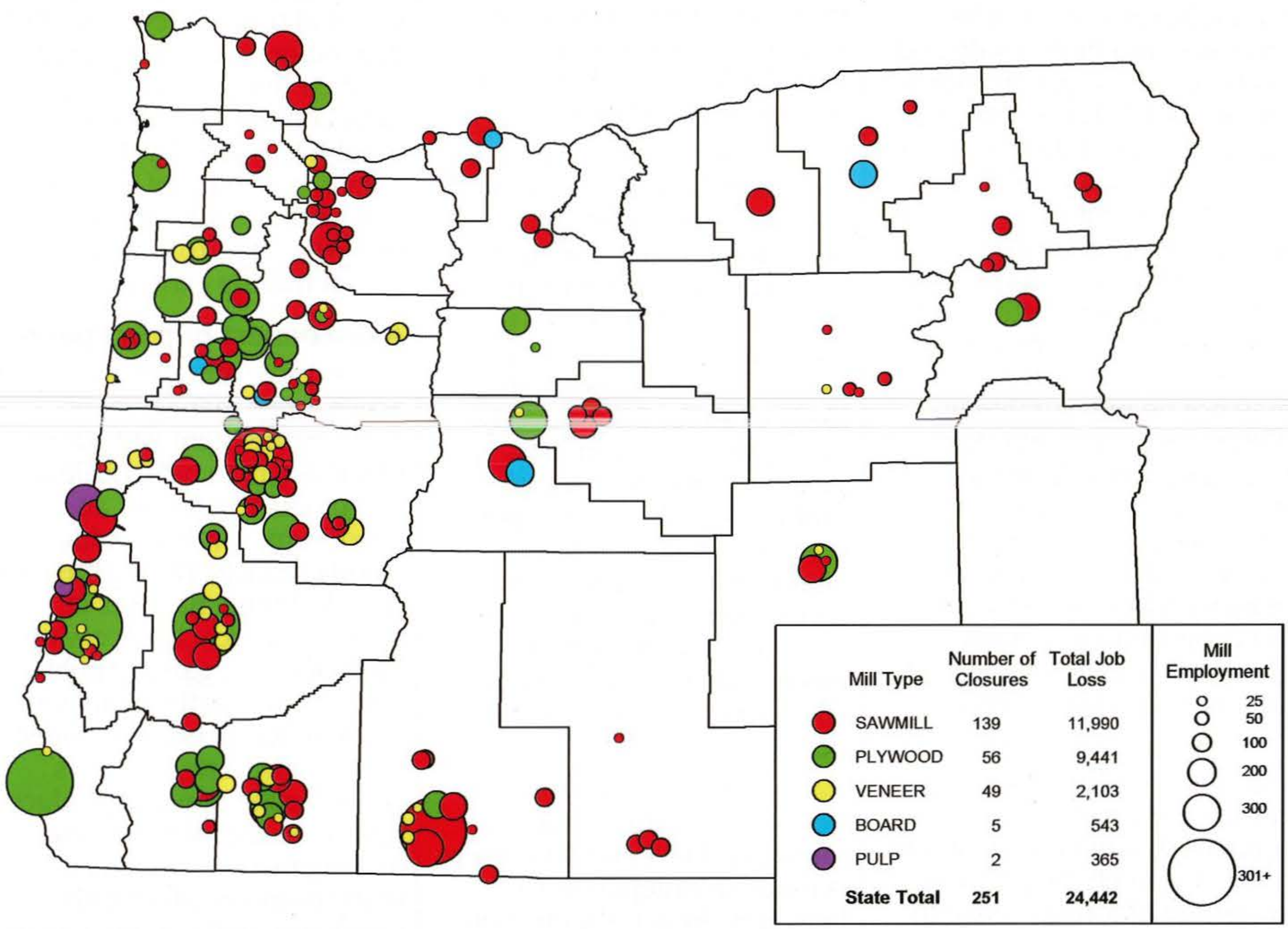


Figure 5. Type of mill closures in Oregon and related job losses, 1980-2003
(Source: Ehinger, Paul F. and Associates, 2003)

generated by businesses supplying products and services to forest products companies and by businesses catering to wood products workers and their families. Future employment in the industry is projected to be stable under current policies, but the potential exists to increase timber harvest levels and, in turn, wood processing employment.

We have less information about other forest-related economic trends. We lack, for example, complete and consistent data about recreation visits to national and Oregon parks and other public lands. We also have very little information about the economic contributions of non-wood forest products such as wild edible mushrooms, floral greens, Christmas greens, ornamentals, and medicinal plants. We need more information about the non-wood components of Oregon's forest industry in order to evaluate their contributions to Oregon's economy.

How can Oregon's forests better contribute to the supply of timber, other forest products, environmental benefits, recreation, and tourism?

Several current federal and state actions are aimed at enhancing the economic and social contributions of forests to local and state economies. These actions, however, lack a consistent policy basis. There is no coordinated state and federal policy regarding community stability and the contributions of lumber and wood products industries to the economy. These efforts do not fulfill their potential to contribute to increased supplies of forest products, greater environmental benefits, and greater economic benefits to state and local economies. We have every reason to expect that better-coordinated, well-funded approaches based on clearer policy would help Oregon generate additional environmental, economic, and social benefits from its forests.

"We have to put our thinking about sustainability into a global context. Over 30 percent of the industrial wood used in the world every year has crossed at least one international boundary between the time it was a tree and the time it becomes a wood product of some sort. Even if you are selling into a local market, the prices you get are influenced by global economic forces."

— Hal Salwasser, dean, College of Forestry, Oregon State University

With better-coordinated policies on economic development, community stability, and forest health, landowners could employ different approaches to produce different economic benefits—air and water purification, timber supply, non-wood forest products, recreation, and tourism. These approaches would vary depending on who owns the forest and where it is located within the state, and on the supply of and demand for the multitude of forest values produced by Oregon's forests.

Much new information useful for implementing effective economic and social forest policies has been jointly developed by the Department of Forestry, Oregon State University College of Forestry, the USDA Forest Service Pacific Northwest Research Station, and others. However, more information is needed about conditions and trends of Oregon's forests to better craft coordinated approaches and to understand the implications of changes in forest policy and management at the landscape level and across ownerships. Once we have this information, we will be better able to implement a more coordinated management approach that is needed to promote the desired balance of forest value production.

How can needed investment in the forest sector be maintained or enhanced?

Oregon's forest landowners invest large sums in reforestation and other management practices. Owners of processing plants have made similar investments, retooling their operations in response to changing raw materials and market realities. These investments have made Oregon's forest products industry extremely efficient. There may be more opportunities for investment, but additional research is needed to discover, evaluate, and implement them. If further opportunities are to be uncovered and used, we need comprehensive assessments of Oregon's forest-related industries, a better understanding of Oregon's rural communities and their relationship to urban areas, and an understanding of how such investments could strengthen the abilities of rural communities to provide the benefits expected by the urban population.

Photo by Cynthia Orlando, ODF

Ron and Clint Bentz, family forest landowners in Scio, Oregon and 2002 National Tree Farmers of the Year. Ron Bentz passed away in November, 2002. Family forestlands are a substantial part of Oregon's culture and natural environment and play a vital role in Oregon's natural resource economy.

We also need more information about how non-wood forest products and recreation contribute to state and local economies, how the various elements of the forest products industry interact with one another, and how economic benefits could be increased by removing barriers to competitiveness and investment.

We need to maintain investment in both industrial forestlands and family forestlands (defined as ownerships of less than 5,000 acres) for both the public values and the private values these lands provide. Being closer to urban and rural residential areas, family forestlands face unique challenges. They are generally more visible to the public than forest industry lands or public lands, and they are expected to provide many of the forest benefits enjoyed by urban and suburban residents. In short, public expectations for private forests can discourage landowners from investing in forest management.

In addition, small woodland owners do not have the economies of scale or marketing expertise of industrial owners. This makes managing their forests more expensive and getting the best prices for their products more difficult. Forest regulations can proportionally affect smaller ownerships more severely than larger owners, causing financial hardships.

As management operations become more expensive, smaller forestlands are more likely to be removed from active management, and alternative investments are more likely to become more attractive. This could encourage conversion of forestland to other uses, resulting in the loss of the environmental, economic, and social benefits these forestlands provide (Figure 6). For these reasons, incentives that provide financial, educational, and technical assistance to enhance public values on private family forestlands are preferred over increased regulation.

"It takes six generations of family to take advantage of two generations of forest stands. It is a lot easier to grow two generations of trees than it is to hold the land in the family for six generations."

— Clint Bentz, 2002 National Tree Farmer of the Year, and family forest landowner

How will rapidly changing national and global economies and environmental programs affect the future management of Oregon's forests?

Oregon influences forest economies and environments well beyond its borders. Changes in forest management in Oregon cause changes in national and international forest products markets and may affect social, economic and environmental conditions in other states and nations. In the same manner, changes at the national and international levels affect markets and environmental conditions in Oregon. The type and magnitude of these interactions are currently unclear. We need additional research to determine how the flow of wood among Oregon, the United States, and other countries affects changes in timber supply, and how it affects the substitution of other products for wood products in different regions. We also need research to find links between environmental changes and changes in wood flow, specifically examining changes in land use, management practices, product substitution, energy use, and carbon flows.

What mechanisms exist to address the unique social and cultural interactions between Native Americans and Oregon's forests?

Nine federally recognized Indian tribal governments are located in Oregon. These tribes have a unique legal status and play a unique role in Oregon's society and culture. The tribes and the State of Oregon work together in an atmosphere of mutual respect for the sovereign interests of both parties. The government-to-government relationship that exists between Oregon's Indian tribes and the State of Oregon has been formalized in state law, providing a process that can help resolve conflicts, maximize intergovernmental relations, and enhance an exchange of ideas and resources. This respectful relationship between Oregon and Indian tribes works toward the greater good of all of Oregon's citizens, whether tribal members or not.

One issue of strong interest to Indian tribes and to many other Oregonians is the protection of cultural and archeological resources on forestlands. Such sites are finite and irreplaceable, and they are an intrinsic part of

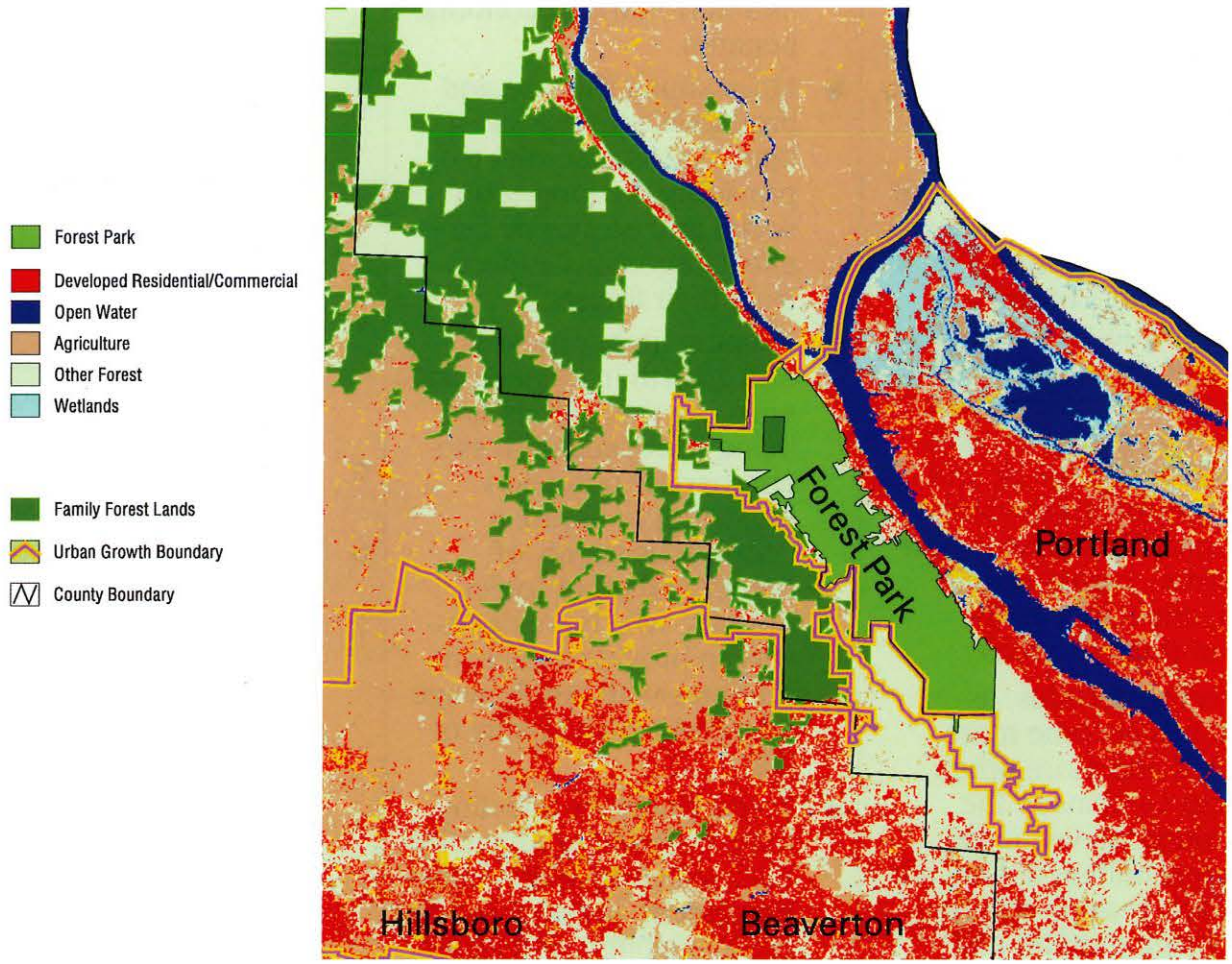


Figure 6. Family forest ownerships in northeastern Washington County and northwestern Multnomah County provide an important environmental benefit by linking wildlife habitat in Portland's Forest Park with habitat on large public and industrial forestlands farther to the northwest. However, these same family forestlands are at risk of conversion to non-forest uses to accommodate urban development.

the cultural heritage of the people of Oregon. All Oregon landowners have an obligation to be aware of state and federal statutes and rules regarding the protection of culturally or archeologically significant sites. Public land stewards are held to a higher standard and have a direct responsibility to protect these sites.

What is the status of Oregon's urban and community forests?

Oregon's urban and community forests are major contributors to the health and well-being of its citizens. They contribute strongly to one of Oregon's major economic advantages, the perception of unsurpassed livability. This quality-of-life advantage helps attract desirable businesses and highly qualified workers. Urban and community forests also provide numerous health and environmental benefits: they help purify our air and water, control stormwater runoff, provide shade, reduce soil erosion, create wildlife habitat, and enhance the health of riparian areas.

In recent decades, as Oregon has become more populated and more urban, resources to manage the urban forests have lagged. Only a few million dollars are spent each year on planting and managing urban and community forests. This is likely well below the level needed to maximize these forests' contribution to the social and economic well-being of Oregonians.

What are the key interactions of this strategy with other strategies?

Balancing the use of forests for recreation, timber and other forest products, and cultural uses affects, and is affected by, other strategies and policies for managing Oregon's forests. Here are some examples of these interactions:

- Abundant fish and wildlife populations and biologically rich native forests can provide significant market and non-market economic benefits.
- Maintaining the size and productivity of the forestland base is essential to providing the long-term social and economic benefits Oregonians expect from their forests.
- Keeping timber harvest and growth in balance and ensuring that forests are being restocked with site-appropriate species is important to assure a continuous supply of timber and other forest outputs, which are necessary to provide local communities with family-wage jobs and a high quality of life.
- Forest practices affecting long-term soil productivity (i.e., soil compaction, mass movement, erosion, nutrient availability, and water-holding capacity) help determine future availability of timber and forest resource outputs.
- Altering management practices on Oregon's forests to maintain and enhance their storage of carbon could affect the availability of timber and other forest resource outputs.

What are potential indicators to measure progress toward accomplishing this strategy?

1. Value of investment in forest health and management, reforestation, wood processing, recreation, and tourism
2. Value and volume of wood and wood products production, including value added
3. Degree of recycling of forest products
4. Area of forestland managed for general recreation and tourism in relation to the total area of forestland
5. Visitor-days attributed to recreation and tourism
6. Direct and indirect employment in the forest sector
7. Viability and adaptability of forest-dependent communities to changing economic conditions

Background on Strategy C:

Maintain and enhance the productive capacity of Oregon's forests to improve the economic well-being of Oregon's communities.

Why is it important to maintain and enhance the productive capacity of Oregon's forests for economic purposes?

The economic productivity of Oregon's forests contributes to a diversified Oregon economy that can better weather downturns in the national economy. Economic productivity of forestlands provides incentives to maintain the forestland base, which in turn provides a host of values other than economic ones. Most of the economic activity generated by Oregon's forests occurs in rural areas, where it is most needed. This economic activity is vital to rural communities, which are an essential component in the richness of Oregon's character.

Maintaining the productive capacity of Oregon's forests means maintaining the amount of forestland and making sure harvest rates for timber and non-wood products do not exceed growth rates. Maintaining and enhancing the timber economy and developing the economic potential for non-wood forest products and recreation could diversify Oregon's economy and add to the growth contributed by Oregon's high-technology and other sectors. It could also encourage forest landowners to invest in management practices that ensure a large and sustainable stream of forest products and other forest values from their lands. Such investments help them both to become competitive in global markets and to maintain their land in forest uses.

What do we know about the productive capacity of forests?

To maintain the productive capacity of our forests, we must know how much forestland exists, the management practices of public and private landowners, and how fast timber and non-wood resources are growing and being harvested. We also need to know the economic and social dynamics behind shifts of forestland into and out of forest use. We need to be able to identify and quantify the influences of natural and human-caused disturbances, forest management activities, and other land uses on the productive capacity of Oregon's forests.

Photo by Mike McMurray

For over 30 years, Oregon's Forest Practices Act has required prompt reforestation of areas where trees are harvested. Voluntary landowner compliance with the law remains very high.

In the past, we have not had adequate information to measure how well the productive capacity of our forests was being maintained. However, recent inventory and assessment work has provided information about land-use change, land available for timber production, merchantable and non-merchantable growing stock available for timber production, the sustainable level of wood products removal, and whether forests are being restocked with site-appropriate tree species. We do not have comprehensive information about the availability and sustainable removal of non-wood forest products.

Are we maintaining the size and productivity of the forestland base?

Since 1990, relatively little forestland in Oregon has been converted to non-forest uses. Because of their remote locations and the laws and policies affecting them, Oregon's federal forestlands—about 57 percent of the state's total — are not threatened with development. However, potential conversion of private lands that make up 38 percent of Oregon's forest land base has been an enduring policy concern. Forestland developed for other uses will produce less timber, fish and wildlife habitat, and other traditional forest values on a sustainable basis. The Oregon legislature passed the Land Conservation and Development Act in 1973 to limit the loss of the most productive of these lands.

"It appears that low-density residential development in or near forests has not affected harvest rates in western Oregon. However, it may be reducing forest investment, as exemplified by planting and thinning rates which could alter forest characteristics in the future."

— Jeffrey Kline, research forester, Pacific Northwest Research Station, USDA Forest Service

Despite rapid economic and population growth since then, conversion of forest lands to other uses has declined dramatically (Figure 7). Overall, a large majority of western Oregon's private forestland zoned for forest uses is free of the effects of population or development. However, in some areas development is occurring within forested lands (Figure 8). With Oregon's population expected to grow by a million people over the next 20 years, we will need to ensure that future development of forestland is carefully managed.

Are statewide timber growth and harvest in balance?

In general, the timber growth rate exceeds the

Figure 7. Change in private timberland area in Oregon (in thousands of acres), 1953-1997.

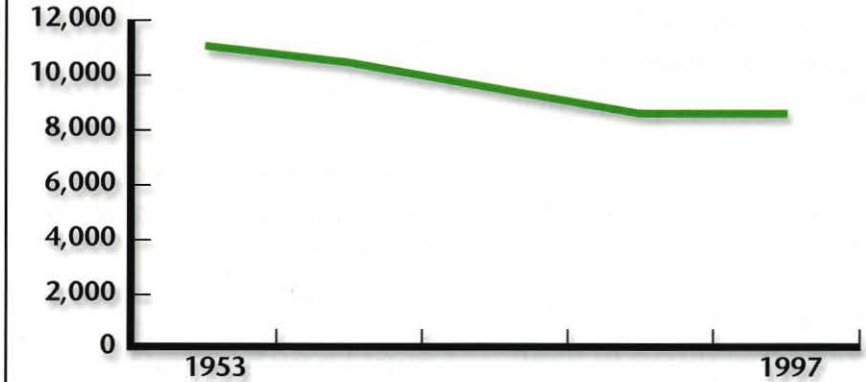


Figure 8. Average annual change in dwellings per square mile on western Oregon nonfederal lands, 1973-2000.

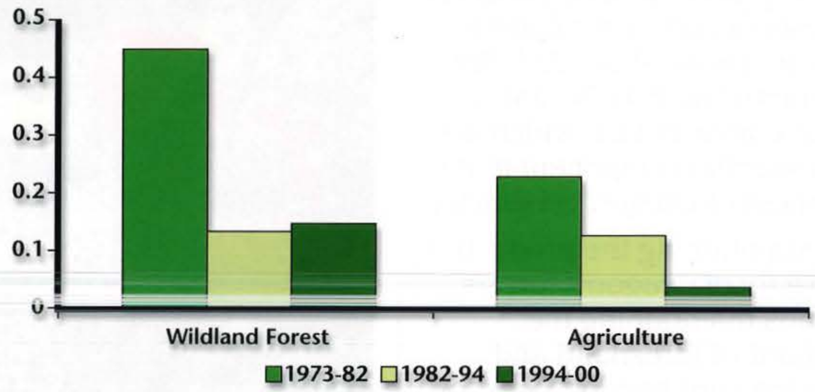
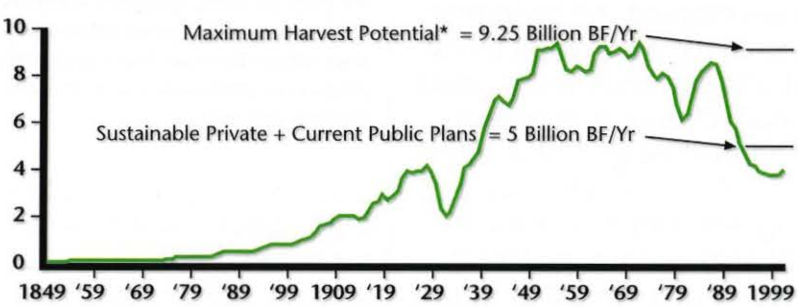


Figure 9. Oregon timber harvests (in billion board feet), 1849-2002.



* Includes all federal forestlands not congressionally withdrawn for other uses.


Photo courtesy of the University of Oregon Map and Aerial Photography Collection

Oregon's land use planning laws have been successful at managing where development occurs and minimizing the conversion of forestlands to non-forest uses.

harvest rate in Oregon, but there are exceptions with some owners and in some geographic areas. Since 1990, timber harvest levels have dropped in Oregon, primarily due to reductions in harvests from federal lands, and the statewide total is less than half of historic levels. The 2001 timber harvest in Oregon was 3.44 billion board feet, far below the state's maximum potential to produce wood on forestlands not congressionally withdrawn for other uses, and it is below estimates of a sustainable harvest level under current laws and forest policies (Figure 9).

By any measure, harvest levels over the last decade have been at or below sustainable levels except on certain industrial ownerships in eastern Oregon. According to a forthcoming study on harvest potential of private timberlands in eastern Oregon, "Past harvests [on these eastern Oregon lands] have steadily reduced the industrial inventory base, shifting the concentrations of both numbers of trees and volume into the smaller diameter classes. The result has been lower aggregate growth and reduced long-term harvest potential." The study projects that industrial harvest potential in eastern Oregon will fall by as much as 50 percent over the next 50 years.[14] In western Oregon and other forestlands in eastern Oregon, growth rates continue to exceed harvest rates.

"In eastern Oregon, projections indicate that industry lands do not have the potential to maintain recent historical harvest levels—with reductions of 50 percent or more anticipated. This ownership has a lot of its inventory in the smaller size classes. As these smaller trees mature, inventory will grow and future harvest potential will expand, but in the near term, the harvest will be sharply restricted because of a lack of merchantable volume."

— Darius Adams, professor,
College of Forestry,
Oregon State University

Although harvest levels have been sustainable statewide, average final harvest age has dropped to 50 years or less in western Oregon, and in eastern Oregon the average diameter of harvested trees is decreasing. Conifers normally put on growth rapidly until they are well past 60 years old, but global forces in wood and financial markets are driving landowners to harvest before trees' growth rate has peaked. The higher returns from alternative investments and the lack of financial incentives for harvesting larger trees is resulting in lower harvest ages. If private forestland owners waited a few more years to harvest their trees, they would get a better yield in the long run. Longer rotations would mean fewer entries into forests for commercial harvesting, which might increase some other forest values, while decreasing others. Short rotations with high average growth rates are sometimes possible and desirable, but they require highly intensive forest management.

In general, Oregon's forests are adequately stocked. Under the Oregon Forest Practices Act, forestland retained in forest use must be reforested promptly and successfully after timber harvesting. Compliance with the reforestation requirement is very high. Stocking with inappropriate tree species may be a problem in some areas as a result of planting practices in the past, before much was known about matching species with sites. In

[14] Adams, Darius M. et.al., 2003.

addition, exclusion of fire in some forests has favored natural regeneration of species that are less well suited to the site than those favored under natural fire regimes (see Strategy F).

Is the harvest of nontimber forest products sustainable?

Non-wood forest products such as wild edible mushrooms, floral greens, Christmas greens, ornamentals, and medicinal plants play an important role in the lives and livelihoods of many Oregonians. In spite of the importance of these products to individuals and local economies, we are only beginning to gather information statewide about the availability, growth, removal, and sustainability of nontimber forest products in Oregon.

What are the key interactions of this strategy with other strategies?

Maintaining and enhancing the productive capacity of Oregon's forests will directly affect the success of other forest policies. Here are some examples of these interactions:

- Avoiding losses of forestland and managing human population pressures on remaining forestland can help to minimize the fragmentation of wildlife habitat.
- Maintaining sustainable levels of timber and other commodity outputs in Oregon could decrease commodity production pressures elsewhere in the world, where there may be comparatively more serious environmental impacts.
- Forest health problems, catastrophic fire, non-native pests, and pollution impair the productive capacity of forest ecosystems and lower sustainable resource outputs.
- Livestock grazing combined with timber management may be essential for keeping less productive private forestlands economically viable.
- Unless private landowners can derive value from managing forestlands, they may convert their lands to a non-forest use.
- Conversion of forestland to other land uses reduces the amount of forested watersheds; soil and water resources are usually more difficult to protect on lands in non-forest uses.
- The productive capacity of forests affects how much carbon dioxide can be removed from the atmosphere and stored in forest vegetation.

What are potential indicators to measure progress toward accomplishing this Strategy?

1. Area of forestland available for timber production
2. Growing stock of both merchantable and non-merchantable timber
3. Annual removal of wood products compared to the volume determined to be sustainable
4. Annual removal of nontimber forest products compared to the level determined to be sustainable

Background on Strategy D:

Protect, maintain, and enhance soil and water resources of Oregon's forests

Why is protecting, maintaining, and enhancing soil and water resources important?

Soil and water are basic elements of forest productivity. Forest soils are also an important part of the regulation of surface and groundwater flow. The interaction of soil and water plays an important role in the health of the streams and rivers flowing through Oregon's forests. Clean water is critical to our quality of life. More than half of Oregon's population depends on water supplies that originate on or are protected in part by forestlands. Oregonians also depend on high-quality water for fisheries, industry, recreation, and agriculture.

What do we know about Oregon's forest soil and water resources?

Water quality from forest streams is good

We have a relatively poor understanding of how current water quality conditions on forestlands compare to those of presettlement times. In particular, we lack data on the presettlement range of variability, both spatial and temporal, of natural disturbances such as fire, insect and disease infestations, windstorms, and floods. However, the recent *Oregon State of the Environment Report* found that water quality and the condition of riparian (streamside) vegetation on forestlands has improved with increasing regulation of forest practices. The report concluded that water quality on forestland remains good and is generally better than that found on land devoted to other uses.

Photo by Keith Baldwin, ODF

A pipe-arch culvert used on a tributary of Clear Creek eight miles south of Estacada is one example of responsible riparian management under the Oregon Plan for Salmon and Watersheds. The landowner is Port Blakely Tree Farm.

Rates of natural soil erosion are highly variable

Forest soils and water have been well studied, but there are little comprehensive data with which to assess the condition and trends of soil and water resources across large areas of forestland and over time. Soils in unmanaged forests erode and deposit sediments into streams at varying rates depending on soil type, topography, vegetation cover, and the amount of rainfall received.

Sediment enters water from soil-surface erosion, channel erosion, and mass soil movements such as landslides and debris flows. These inputs are both chronic (relatively steady and continuous over time) or episodic (characterized by occasional sudden pulses). These erosion and sedimentation processes are functions of the disturbance regime—the spatial and temporal pattern of occurrence of wildfires, floods, and windstorms—that characterizes the forest.

Landslides are a major source of natural soil erosion in Pacific Northwest forests west of the Cascade Mountains. Undisturbed forest soils in western Oregon have a high capacity to absorb rain—up to three feet per hour. Surface erosion is usually not a major source of sediment in these forests. In eastern Oregon, natural surface erosion is the most significant source of sediment in streams. Erosion can be particularly severe after wildfire or heavy rain.

Many of Oregon's forest soils are highly productive

Some of the most productive tree-growing soils in the world are located in parts of western Oregon. Levels of organic soil matter are relatively high in most western Oregon forests. The cycling and maintenance of organic matter in the forest influences the productivity and water-retention capabilities of the soil. Since the 1960s, fertilization and stand manipulation studies have produced localized data on major soil nutrients and organic matter. Overall organic carbon levels are higher in western Oregon than in eastern Oregon. Most Pacific Northwest forests are nitrogen-limited, so fertilizing with nitrogen, or nitrogen and phosphorous, enhances productivity, decomposition, and nutrient recycling.

What human activities on Oregon's forestlands affect soil and water resources?

A variety of activities occurring on forestlands, including forest management (timber harvesting and road construction and use), fire suppression, recreation, and livestock grazing, can affect soil and water resources. We do not have enough long-term data to tell us whether soil and water resources have been significantly changed in areas actively managed for timber production or areas in which wildfire has been suppressed. Long-term monitoring of the physical and biological characteristics of forests could provide a stronger foundation for understanding both human and natural-caused changes in forest soils and water. In general, we know more about the effects of forest practices on water quality than on soils and forest productivity.

For example, we know that natural disturbances that trigger large erosion events can produce important changes in aquatic conditions. These episodic changes are critical in maintaining aquatic habitat over time. Similarly, we know that maintaining organic matter in forest soils is critical to their productivity and water-holding capability. This knowledge and other findings have prompted periodic upgrades of state forest practice rules. Following are observations on how forest management, road construction, and fire suppression affect soil and water resources in the forest.

Forest management and road systems

Many studies have shown that timber management at individual sites can increase erosion in the short term. We know less about how timber management affects soil and water over time and at a landscape scale. Roads used for log hauling and recreational use have been found to be the primary source of stream sediment from forest management activities in the western United States. Roads characterized by high surface erosion or failure of the road fill, and located near streams, are those most likely to cause erosion problems. Research has also found that best management practices can be effective in reducing potential impacts of forest management and road systems.

Forest management and landslides

The effect of forest management on the occurrence of landslides is another major concern. After two large storm and flood events of 1996, a major ground-based study was undertaken in western Oregon to evaluate the relationship between forest practices and shallow, rapidly moving landslides. The study was the largest to date in the Pacific Northwest to collect detailed data about landslides on the ground and compare them with data from aerial photos. It is also the first study whose findings reflect current management practices on different forestland ownerships in Oregon, and the only one so far to collect detailed information on forest stands of intermediate age, 20 to 100 years old.

Because it is based on an inventory following individual storm events, the study has several limitations. Nonetheless, its findings suggest that, while timber harvesting does have an influence on shallow, rapid landslides, these landslides are endemic in unmanaged forests. They also suggest that effects from timber harvesting may only impact the timing of landslide-occurrence, rather than the absolute number of landslides that occur over space and time. The study's key conclusions:

- There is significant landslide risk on very steep slopes regardless of forest age, especially in certain geological formations in which major storms and landslide processes are the dominant means by which the landscape is shaped.
- Higher landslide densities and erosion volumes were found in stands that had been harvested in the

previous nine years than in forests older than 100 years, in three out of four study areas monitored by the Department of Forestry for storm effects. However, areas with forest between the ages of 30 and 100 typically had lower landslide densities and erosion volumes than were found in the mature forest stands.

- Landslides from recently harvested and older forests had similar dimensions, including depth, initial volume, and debris flow volume.
- Timber harvesting can affect the occurrence of shallow, rapidly moving landslides on steep slopes with a high inherent risk of landslides.

Forest management and soil disturbance

Little quantitative work is available to analyze soil disturbance at a watershed or landscape scale. We know that at the site level, soil disturbance, especially compaction, can reduce forest growth and increase soil erosion. Logging practices can cause compaction as heavy equipment and logs are moved across the forest floor. Oregon's forest practice rules require operators to reduce soil disturbance during and after logging operations. Using cable yarding on steeper slopes, for example, can significantly reduce the impact of timber harvest. Reforestation is also required after timber harvest to ensure that trees promptly reoccupy the land and help protect the soil.


ODF photo file

Maintaining trees and other vegetation along streams minimizes or eliminates increases in stream temperature and provides a source of large wood which often is needed to maintain aquatic habitat for fish.

Forest management and streams

We have a reasonably good understanding of the effect of forest management on peak flows (streamflows during relatively heavy rainfall events). Forest management can increase small and moderate peak flows (less than or equal to two-year floods) in smaller watersheds; however, the majority of research indicates that large peaks (greater than two-year floods) are not affected by forest management in either small or large watersheds.

Increases in stream temperatures from forest management were a concern in the days when logging was allowed down to the edges of streams. For more than three decades, though, forest operators have been required to leave buffer strips of trees and other vegetation along most streams. Maintaining riparian vegetation minimizes or eliminates increases in stream temperature in the years immediately after forest harvesting. At a landscape scale across Oregon, younger, denser forests cover much forestland. In riparian areas, those areas directly adjacent to streams, younger, denser forests provide high levels of shade that can result in relatively cool stream temperatures. The current distribution of forest ages across the landscape is different from historical conditions, where mature and old-growth forests were more common but generally did not produce the high shade levels associated with younger, denser forests. It is unknown how this difference might be affecting stream temperature dynamics at different spatial and temporal scales.

Maintaining vegetation cover in riparian areas also helps protect aquatic habitat by preventing adverse levels of sediment from entering the stream. In addition, we know that large pieces of wood in forest streams are essential for high-quality aquatic habitat. Trees and rootwads near the stream are more likely to fall in and produce high-quality aquatic habitat than are trees farther away. Between 70 and 99 percent of large wood in forest streams comes from within 50 to 100 feet, and most of the "key pieces"—the largest ones—come from closer than 50 feet. Significant contributions of large wood can also be delivered to streams by shallow, rapid landslides originating in upland or headwall areas.

Fire suppression

Efforts to protect and manage water and soil resources from fire must take into account the dynamic nature of forests. Over the long term, wildfires are inevitable. They cause significant changes in sediment deposition and streamflow, altering the condition of forest soils and water at the watershed or even the landscape scale. These periodic, long-term natural disturbances are critical in maintaining the forest's aquatic habitat features over time. Fire suppression may reduce the risk of harm to water quality in the short term, but fire suppression without active management, as noted in Strategy F, will ultimately result in unnaturally intense fires that cause greater damage to soil and water.

Data needs

At the October 2001 symposium, "A Landmark Assessment of Oregon's Forest Sustainability," called by the Board of Forestry to review the current state of scientific data about forests and forest management, several scientists observed that the existing literature on the impacts of forest practices on soil and water is outdated. Most of the watershed data available today comes from research carried out in the '50s and '60s, before Oregon enacted any comprehensive forest practice law. The timber harvested during that time consisted mostly of big, old trees. The machines were large to match the timber, the road system had to be built to handle heavy logs and machines, and, relative to current practices, best management practices were poor. Now we are entering the fourth decade of forest practice regulations. Trees are smaller and more uniform, and the equipment is much smaller and uses, for the most part, an existing road system. The scientists strongly recommended that new research focused on harvest impacts under current practices should be a high priority for the Board of Forestry and the state (Figure 10).

"I think there is an opportunity—maybe a necessity—to demonstrate that current and future forest practices are not going to be creating adverse impacts. It's really a credibility question. To address this, we need to upgrade the research knowledge base to bring us into the next century. We're really running off results of studies that took place 25 and 30 years ago, when the forest practices and society's view of these systems were just incredibly different. So an upgrading of our understanding is really very important."

— Robert Beschta, professor emeritus,
College of Forestry,
Oregon State University

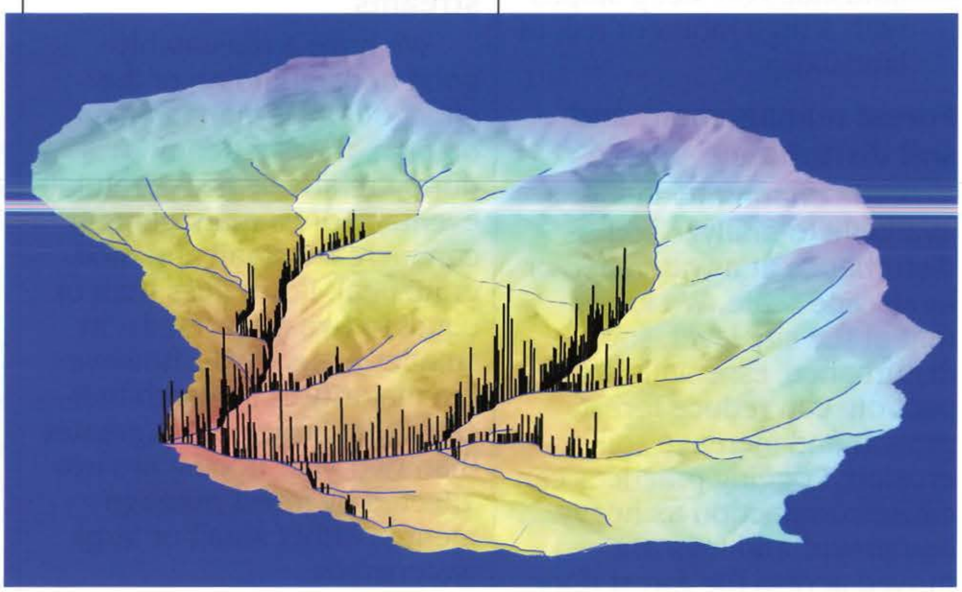


Figure 10. Distribution and relative abundance of coastal cutthroat trout in the North and South Forks of Hinkle Creek in the Umpqua River Basin. This is an example of watershed-scale data being generated through the cooperative Hinkle Creek Paired Watershed Study and Demonstration Area Project (Source: Gresswell, R.E., et.al.,2003).

Relatively little comprehensive monitoring is being done on the condition of soil and water resources. Protocols have been developed to measure some aspects of soil and water conditions, but there is no system that can generate comprehensive information on multiple questions on a broad landscape scale. Collaboration among forestry scientists, government agencies, and private organizations will be a critical in developing a cost-effective monitoring and research system .

What is being done to protect soil and water quality?

State and federal protection measures

The Oregon Forest Practices Act was enacted in 1971 to regulate forest practices for the protection of all resources, including soil and water, on non-federal forestlands outside of cities with their own forestry ordinances. State policy designates the Forest Practices Act as the mechanism for water quality protection and gives the Board of Forestry authority, in coordination with the Environmental Quality Commission, to establish best management practices to ensure that water quality is protected.

"Mimicking disturbance regimes is how you move into the future with regard to protecting riparian resources along major rivers. We need to be thinking about the dynamic disturbance regimes that created these forests and their riparian systems, rather than locking up a place or a thing at this time."

—— Robert Beschta, professor emeritus, College of Forestry, Oregon State University

The forest practice law addresses the protection of soil resources through a number of regulations. These require, among many other things, timely reforestation to stabilize soils after a forest harvesting operation. They also require operators to minimize the amount of soil and logging debris entering waterways, and to take particular care in harvesting and road building to minimize disturbance to the ground, especially on steep slopes.

Operators must maintain buffer strips of trees and other vegetation within a certain distance of most streams to promote mature-forest conditions in the riparian zone, to help keep the water cool, and to help keep sediment from entering the stream. The forest practice rules also restrict the application of chemical herbicides and fertilizers near forest streams.

On federal forestlands, the regional Northwest Forest Plan and the plans of individual national forests and Bureau of Land Management forests are

Collaborative efforts by state and federal agencies, private landowners, private nonindustrial forestland owners, and others have been a hallmark of the success of the Oregon Plan. Examples of restoration work include surveys of forest roads, culvert and fish passage improvements, and life-cycle monitoring for coho salmon and steelhead in coastal watersheds.

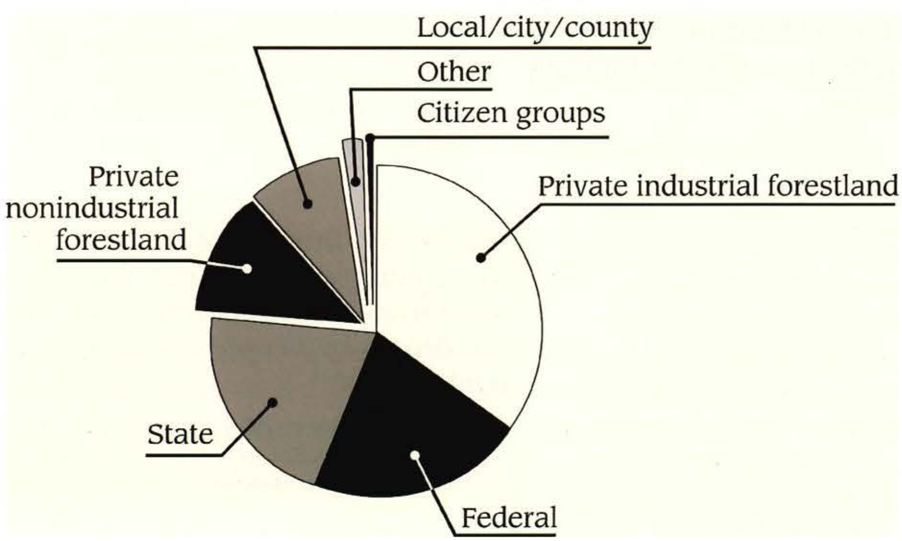


Figure 11. Restoration investments by land ownership, 1997-2001 (source: Oregon Watershed Enhancement Board).

Figure 12. Improving habitat in forest streams (Source: Oregon Watershed Enhancement Board)

The more than $70 million spent by private landowners and the state since the Oregon Plan began in 1997 has resulted in thousands of miles of roads surveyed, improved, or vacated. Fish passage has been enhanced by culvert improvements and the placement of instream structures.

	Private Forest Landowners	State Forests
Years	2000-2002	2000-2002
Miles of road surveyed	2,333	83
Miles of road vacated, closed or relocated	217	37
Miles of road improvements	1,042	392
Number of peak flow improvements	3,298	546
Number of surface drainage improvements	7,402	1,221
Number of stream crossings and culverts	502	60
Instream wood placement projects	125	32

the primary mechanisms for ensuring soil and water quality protection consistent with the federal Clean Water Act.

Measures under the Oregon Plan for Salmon and Watersheds and other voluntary efforts

Many forest roads built before forest practice regulation pose a risk to water quality from sediment and soil erosion. Industrial forest landowners and state forest managers are implementing a voluntary program called the "Road Hazard Identification and Risk Reduction Project" to identify and address sediment risks from roads. The program identifies the most troublesome roads so that landowners can take action to reduce the amount of sediment they produce. Road repairs conducted as part of this project improve fish passage, reduce the potential for washouts and landslides, and reduce the delivery of surface erosion to streams.

"There is a huge amount of voluntary work going on that's not driven by incentives, not driven by economics, but driven by people wanting to do what's right."

— Bill Arsenault, Committee for Family Forestlands member and family forest landowner

Individual forest landowners are taking other initiatives beyond what the law requires, such as voluntarily retaining additional trees along streams (Figures 11 and 12). Finally, incentive programs such as the Conservation Reserve Enhancement Program support efforts to establish riparian forests on agricultural lands.

What are the major issues surrounding soil and water quality?

Because of a belief that forest management inevitably harms watershed health, management is often restricted in watersheds that provide drinking water. Such restrictions can lead to unintended and adverse consequences. The ability to actively manage forested watersheds, including those that supply drinking water, is often critical in maintaining both healthy forests and high-quality watersheds. To sustain the health of our forests and watersheds in the future, we must increase the ability of public forest managers, private landowners, and communities to address forest-related water issues and to manage, protect, and enhance forests for water supply, water quality, and watershed health.

Oregon has as yet no comprehensive riparian or stream corridor management policy or program. The various state programs that influence the management and use of riparian areas were created to achieve a variety of objectives, and their efforts today are not always well coordinated. In order to achieve water quality and aquatic habitat objectives across Oregon, riparian areas will need to be protected and enhanced not only on forestlands but on other lands as well.

Because riparian protection standards on forestlands are generally more protective than those covering other land uses, the policy of ORS 527.714 becomes important in considering future changes to riparian protection policy on forestlands. ORS 527.714 requires that any benefits achieved by adopting more protective riparian standards through regulation be in proportion to the degree that the existing practices of forest landowners, as a whole, are contributing to the overall resource concern that the standards are intended to address.

What are the key interactions of this strategy with other strategies?

Protecting, maintaining, and enhancing soil and water resources affects, and is affected by, other strategies and policies for managing Oregon's forests. Here are some examples of these interactions:

- Forest soils, riparian areas, and aquatic areas provide habitat for diverse plant and animal species. Productive soils and functioning waterways are a basic foundation for providing native plant and animal habitats.
- Loss of forestland to other land uses directly reduces the amount of forested watersheds and potentially increases the intensity of management on remaining forests.
- Resource loss from fire, insects, and disease can cause a temporary change in sediment and streamflow dynamics at a watershed scale.
- Changes in forest health that influence the types of tree and plant species in and around riparian areas, such as invasions of non-native plant species, can lead to changes in the riparian functions that influence water quality and aquatic habitat.
- Forest soils can store significant amounts of carbon, and forest practices may potentially affect this storage capability.

What are potential indicators to measure progress toward accomplishing this strategy?

1. Area and percent of forestland with significant soil erosion
2. Percent of water bodies in forest areas and other land uses with significant variance of biological diversity from the historic range
3. Percent of forest waterways with significant deviations from normal in pH, levels of dissolved oxygen, levels of chemicals, sedimentation, or temperature

Background on Strategy E:

Contribute to the conservation of diverse native plant and animal populations and their habitats in Oregon's forests

Photo courtesy of City of Eugene Parks and Open Space Division

This oak savanna near Eugene is one forest habitat type that receives little attention under Oregon's plant and animal conservation policies. Meanwhile, vast areas of other forest habitat types have been set aside in federal reserves.

What do we mean by "diverse native plant and animal populations and their habitats?"

The scientific term for this concept is "biological diversity," which means having various kinds and types of living organisms. Managing for biological diversity requires maintaining a diversity of habitats and ecological processes at various spatial scales, from entire landscapes to specific localized habitats (Figure 13). It also includes understanding individual species populations and the genetic diversity of these species. The concept of biological diversity is necessarily very broad and therefore difficult to measure directly.

Why is the conservation of native forest plants and animals and their habitats important?

Oregonians value native forest plants and animals for the economic, scientific, educational, cultural, recreational, and aesthetic values that they provide. Maintaining healthy forest habitat and healthy native plant and animal communities is essential to economic vitality and environmental quality of life. In addition, the federal Endangered

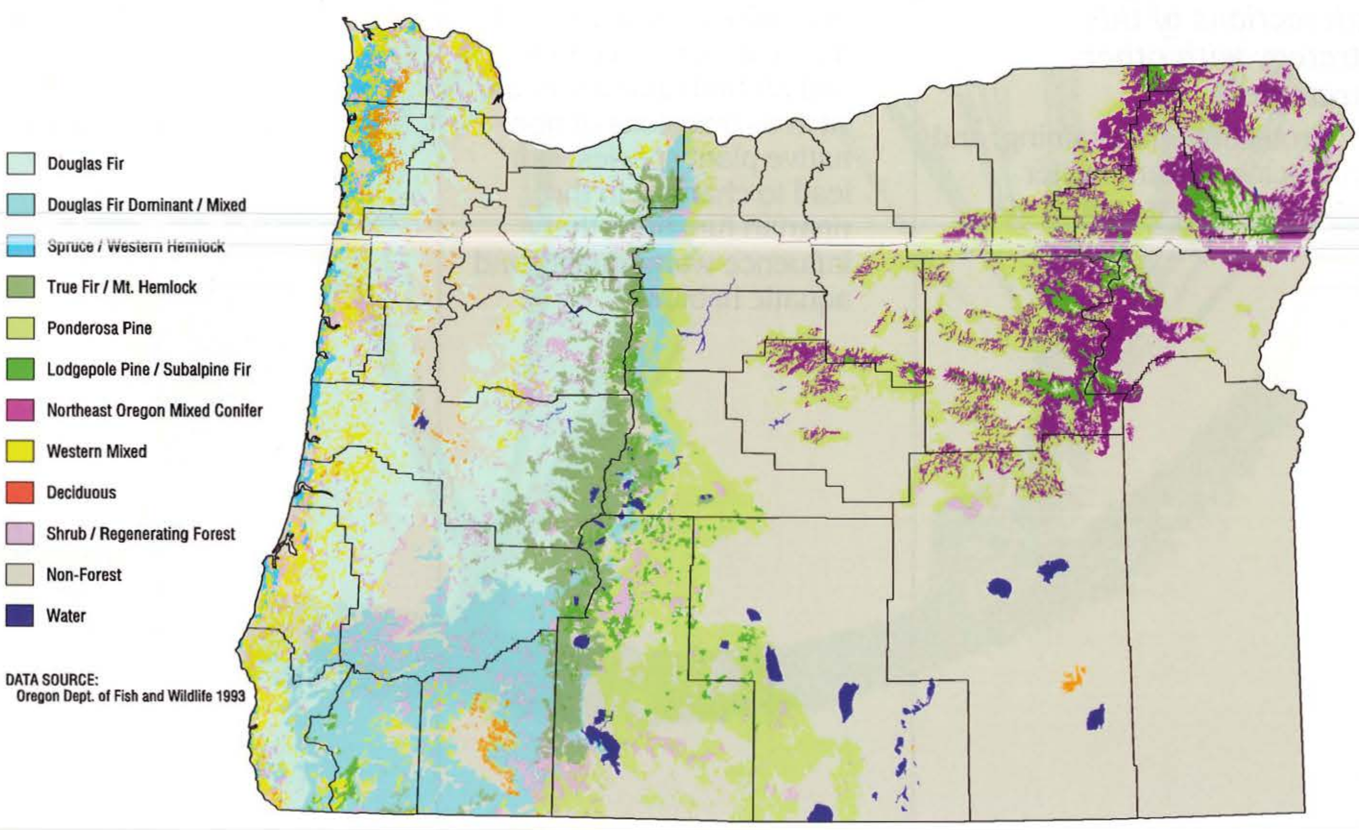


Figure 13 Oregon forest types

Species Act and other federal and state regulations require biological resource issues to be addressed.

Human activities can reduce, maintain, or enhance biological diversity. Both natural disturbances and human actions can affect biological diversity and need to be considered collectively to assess whether native plant and animal populations and their habitats are being adequately protected, maintained, and enhanced in Oregon's forests.

What characteristics of Oregon's forests affect native plants and animals and their habitats?

Stand age and structural composition are key forest characteristics that affect biological diversity. Since some plants and animals prefer young-forest conditions and others prefer older-forest conditions, a healthy, diverse forest landscape will be a mosaic of many different stand ages and structural components of native forest plants at appropriate scales.

Natural disturbances such as fire, wind, floods, landslides, insects, and diseases frequently alter these characteristics. Natural disturbance sometimes results in the conversion of older-forest stages to younger-forest stages, often with some remaining older-forest elements such as dead standing trees (snags) and fallen trees and logs (down wood) still present. These disturbances are vital processes of ecosystem renewal, creating pulses of nutrients and reorganizing ecosystem structures and processes.

"I know that we don't want to be species-specific in protecting wildlife, but at the same time, if we're not looking at some of the species and what they actually need, then we also could be asking people to do a lot with almost no gain or measurable objectives."

— Sybil Ackerman,
conservation director,
Audubon Society of Portland

The scale at which biological diversity is assessed is important. Some elements of biological diversity are best understood on a larger scale, that of watershed, basin, or region. The amount, size, and location of plant communities and the diversity of forest successional stages are important large-scale factors affecting biological diversity. The condition of plant communities across the landscape can be an index to the condition of individual species within them. For example, the abundance and vigor of certain plant communities can give better clues about the abundance and vigor of lichens, fungi, and invertebrates than can smaller-scale studies of individual species. Similarly, wildlife habitat types, areas of the landscape characterized by particular vegetation patterns, are used to determine the amount, diversity, and condition of wildlife habitat at these large scales.

Smaller scales are better for measuring some characteristics. Individual forest stands or even smaller sites such as patches of streamside vegetation, shrub communities, snags, wood on the forest floor, cavities in dead trees, and hardwood trees are key fine-scale habitat elements. In addition, some wildlife species need special habitat elements such as springs, rock outcrops, caves (bats, for example), and talus slopes (mountain goats).

What do we know about native Oregon forest plants and animals and their habitats?

The following list summarizes some key information about the current status of native forest plants and animals and their habitats in Oregon:

1. Because of the history of economic benefits derived from sustainably managing forests for commercial uses, combined with land use planning and forest practice laws, Oregon has been very successful in maintaining its forest land base.
2. The number of large, older trees in Oregon's forests has been decreasing, but changes, primarily in federal land management policies, could cause it to increase significantly in the future. For example, computer modeling studies suggest that the amount of older forests (200 years or older) in the Oregon Coast Range probably varied from approximately 24 percent to 73 percent coverage of the landscape prior to European settlement. Current old-growth levels

are at about five percent; late-successional forests (80 to 200 years old) cover about 11 percent of the Coast Range. It is conceivable that coverage of old-growth forests in the Coast Range could return to presettlement levels as federal forest stands mature under existing management plans.

3. Oregon has lost more than 50 percent of its historical bottomland hardwood forests from conversion to agriculture, urbanization, and invasive exotic plants.
4. Restrictions or prohibitions on timber harvesting and other human activities currently exist on approximately one-third of Oregon's 28 million acres of forest.
5. Timber harvesting and fire suppression are altering forest structural diversity and stand age classes in different ways than would occur through natural disturbances such as wind, fire, and disease.
6. Roughly 77 percent of Oregon's forestland is at risk of losing key ecosystem components from uncharacteristic wildfire. Thirty-five percent is at high risk, while 42 percent is at moderate risk. Forests at risk include areas of federal forestland allocated to reserves for protection of ecological values, such as late-successional reserves.
7. Forest management in areas of western Oregon may be reducing the amount of young-forest types (successional stages) containing shrub communities, remnant snags, and down wood, which are important for some wildlife species.
8. Management activities have had a negative effect on certain native forest-dependent plants and animals and a positive effect on others.
9. Invasive non-native plants are changing Oregon forestlands, sometimes irreversibly damaging native plant and animal populations.
10. Oregon does not have adequate information regarding wildlife population trends and changes in the geographic ranges of wildlife species.

Photo by Mike McMurray

How do current government policies affect Oregon's native forest plants and animals and their habitats?

Although government policies affect forest plants and animals in many ways, Oregon does not have an integrated set of policies to address this topic across all land uses. Individual agencies address individual aspects of plant and animal population and habitat conservation, but Oregon has no comprehensive policy to ensure that biological diversity goals are being met through the combined management objectives of Oregon's public and private forest landowners.

In 1993, the Oregon Department of Fish and Wildlife published the first statewide *Oregon Wildlife Diversity Plan*. The goal of the plan is to maintain Oregon's wildlife diversity by protecting and enhancing populations and habitats of native wildlife at self-sustaining levels throughout natural geographic ranges in Oregon. This plan is being implemented through the agency's Wildlife Diversity Program; however, budget reductions have greatly reduced the capacity of the agency to implement the program.

Oregon's land-use planning laws, particularly Goal 5,[15] provide processes for local governments to address how some biological resources are protected from development, but protection policies

[15] Goal 5 is one of 19 statewide land-use planning goals. It addresses the protection of resources such as wetlands, riparian (streamside) corridors, wildlife habitats, open spaces, and scenic and historic areas.

differ for forest, agricultural, and developed lands. These policies are not coordinated or based on a common, comprehensive set of biological data.[16] Even on forestlands, policies vary widely, from reserving areas from further human disturbance, to active management that retains desired proportions of forest structures over time at a landscape or ownership scale, to protection of unique individual sites such as threatened and endangered species habitat and streamside (riparian) areas, to mandating the retention of specific habitat structures and avoiding harm to certain plants and animals.

Photo by Mike McMurray

The Board of Forestry has an important role in contributing to the conservation of diverse native forest plants and animals and their habitats. Private forest landowners are required to protect certain habitat elements by complying with the Oregon Forest Practices Act, which is the tool for ensuring that significant Goal 5 resources are protected on forestlands. The Board of Forestry adopts forest practice rules to ensure that the "overall maintenance" of fish and wildlife is provided, while also providing specific protection to certain designated fish and wildlife habitat features.[17]

The board also plays a role through its oversight of state-managed forests. In 2001, the board completed the six-year public process of revising the Northwest Oregon State Forests Management Plan, which provides management direction for more than 615,000 acres of state forestland in northwestern Oregon, located in 12 counties. The plan uses an approach called structure-based management, which is designed to produce and maintain an array of forest stand structures across the landscape in a functional arrangement that provides environmental, economic, and social benefits. These include not only habitat for native plants and animals, but also sustainable timber harvests and local government revenue, a landscape that contributes to healthy aquatic systems, and a forest that provides for diverse recreational opportunities. Similar management plans are in place for Oregon's other state-managed forests.

"From a sustainability standpoint, you can argue that these different approaches to biodiversity really are a way of spreading risk. We don't have all the answers. No one owner has all the answers of how to do this. This mix of ownerships I think is a wonderful experiment. If we follow up with monitoring and evaluation, it's really a great opportunity to learn about the effects of different forest management practices."

— Thomas Spies, research forester, Pacific Northwest Research Station, USDA Forest Service

Different forest ownerships can play different roles in providing a wide range of plant and animal habitat conditions. Within the regulatory limits of the Forest Practices Act, private lands are managed to meet individual landowner objectives, which often means their emphasis is on timber production (wood production forests). Most forests currently managed specifically for species conservation (reserved forests) are in reserves on federal forestland. Thus most older forest structures are on federal land, while mostly young and mid-aged forests are on private land. State forests are managed to provide a range of stand ages and structures, in part to meet biological diversity objectives (multiple-resource forests). The variety of forest types is expected to enhance native plant and animal habitat, but this expectation is not proven,

[16] Two programs, *the Oregon Biodiversity Project*, published by Defenders of Wildlife, and the *Oregon Gap Analysis*, conducted by the Oregon Natural Heritage Program, are major steps toward this goal.

[17] ORS 527.710.

because we have as yet no complete assessment of the conditions and trends of native plants and animals and their habitat.

Restrictions or prohibitions on timber harvesting and other human activities currently exist on approximately one-third of Oregon's 28 million acres of forest. Many of those acres are in federal reserves designed to protect biological diversity and water quality. These federal reserves are concentrated in three of the 20 habitat types in Oregon and are primarily located along the western slopes of the Cascade Mountains (Figure 14). Their location is dictated by federal ownership and may not be the highest-priority areas for the conservation of forest plant and animals. As a result, some habitat types may be over-represented and others may be under-represented in the current system of reserves and other protection and conservation strategies. In addition, reserve strategies currently do not address the potential for natural disturbances, through which Oregon's forests have evolved and to which they are adapted.

"I worry about discussions that lead to a public perception that there is a lot wrong out in the forests without knowing that is the case. We should be careful about rushing to solutions when we are still in an assessment stage. Even if we believe some things are wrong, we shouldn't jump on every issue and assume every issue has a problem. If we move too quickly, without completing adequate assessments, collaborators will step away from each other, and we'll lose public support. Though we need to recognize the problems that do exist, moving too quickly, before adequate assessments are completed, will cause potential collaborators to step away from each other and will further erode public support."

-- Jennifer Phillippi, treasurer,
Rough & Ready Lumber Co. and
president, Perpetua Forests Co.

Environmental regulations also have an influence on the conservation of forest plants and ani-

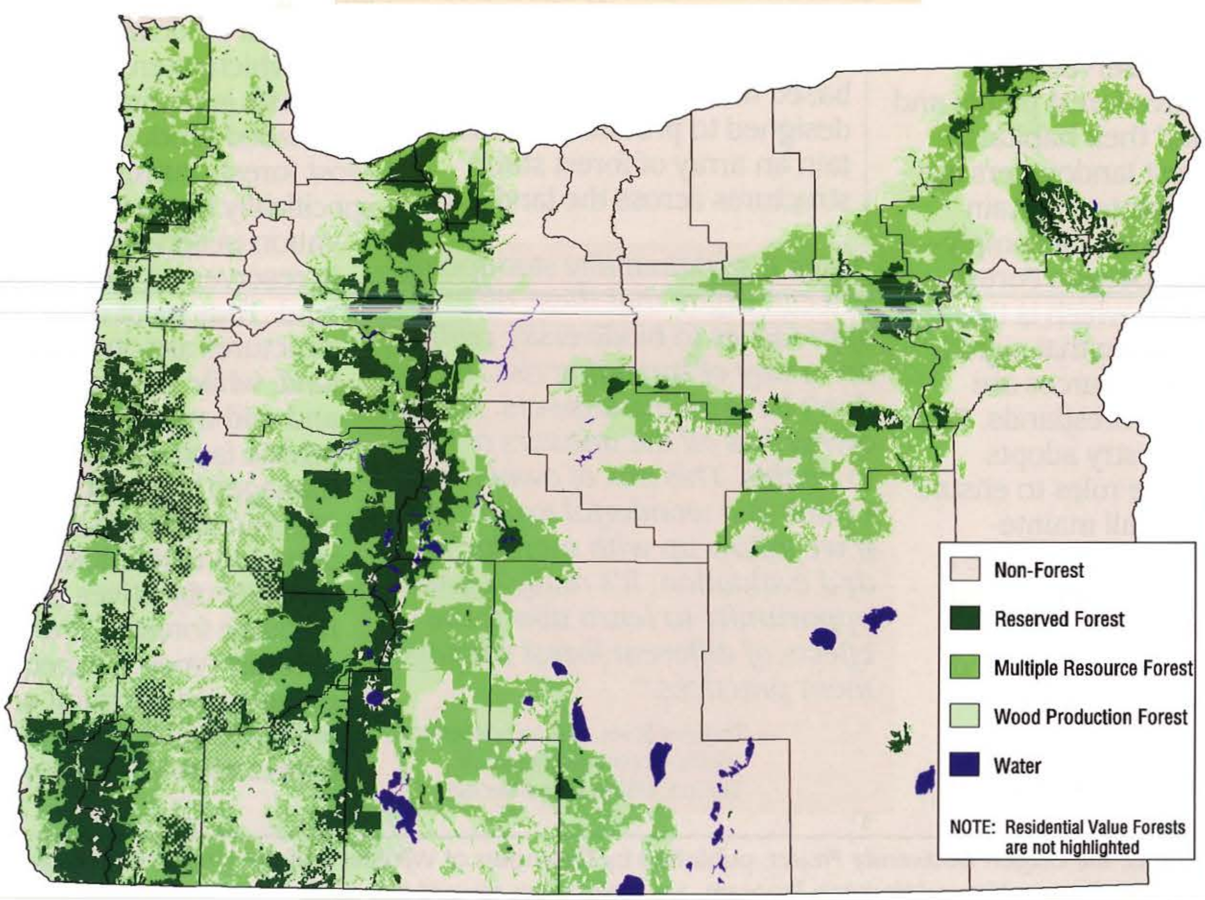


Figure 14. Habitat protection on Oregon's forestlands.

mals. Sometimes these regulations have unintended effects. For example, the federal Endangered Species Act is intended to provide a framework to help people to identify species that are in danger of becoming extinct, understand why that is happening, and provide mechanisms to protect and enhance such species populations. However, if a forest landowner creates habitat suitable for threatened or endangered species, and then such a species occupies the site, Endangered Species Act regulations may severely restrict future economic use of the forestland without compensation to the landowner. This risk may create a strong economic disincentive to create or maintain such habitat and an incentive to change the land use.

Oregon needs to conduct a comprehensive, scientifically and politically accepted assessment of native forest plant and animal population and habitat conditions, trends, and associated risks across all land uses. The assessment would increase our knowledge of the dynamics of habitat ranges and population status of Oregon plant and animal species and help policymakers evaluate alternative strategies to manage native plant and animal species and their habitats. Such a statewide assessment will be a significant technical, financial, and political challenge. A focus on vascular plant species and vertebrate animal species would make the assessment more feasible.

Climate change, invasive plants, and population growth make it impossible to manage Oregon's forests as they existed before European settlement, even if this were a desired public policy. But Oregonians can better understand the biological diversity of all of Oregon's lands, and we can develop policies that balance statewide goals and priorities for the protection, maintenance, and enhancement of ecosystems and plant and animal species with other environmental, economic, and social needs.

What are the key interactions of this strategy with other strategies?

- Any loss of forestland to other land uses directly reduces the amount of available plant and wildlife habitat and potentially increases the intensity of management on remaining forests. Forests managed for wood production provide many more plant and wildlife benefits than most forestlands converted to non-forest uses.
- Under a continuation of current policies on federal and private lands, the amount of older forests in Oregon will increase from current levels. This increase will occur almost entirely on federal lands. At the same time, private forestlands will tend to remain in younger age classes as a result of timber management.
- Many of the current federal forest reserves, particularly in eastern and southwestern Oregon, are in areas where the natural fire regimes have been moderately or severely altered. Some forests and wildlife habitats within these reserves are in jeopardy of uncharacteristic stand-replacement fires.
- Invasive non-native plants threaten the native plant and animal diversity of Oregon's forests.
- Long-term investments in forest resources are needed to maintain abundant fish and wildlife populations, biologically rich forests, and the significant social and economic benefits they provide. Clear and comprehensive plant and animal conservation policies that equitably address all land uses can provide greater certainty for forest landowners when making investment decisions.
- Changes in global climate may affect the viability and distribution of native Oregon plant and animal species.

What are potential indicators to measure progress toward accomplishing this strategy?

1. Forest area by ecological type
2. Area of forest types by successional stage
3. Area by forest type in protected area categories
4. Status and population levels of rare, sensitive, threatened, or endangered native plants and animals

Background on Strategy F:

Protect, maintain, and enhance the health of Oregon's forest ecosystems, watersheds, and airsheds within a context of natural disturbance and active management

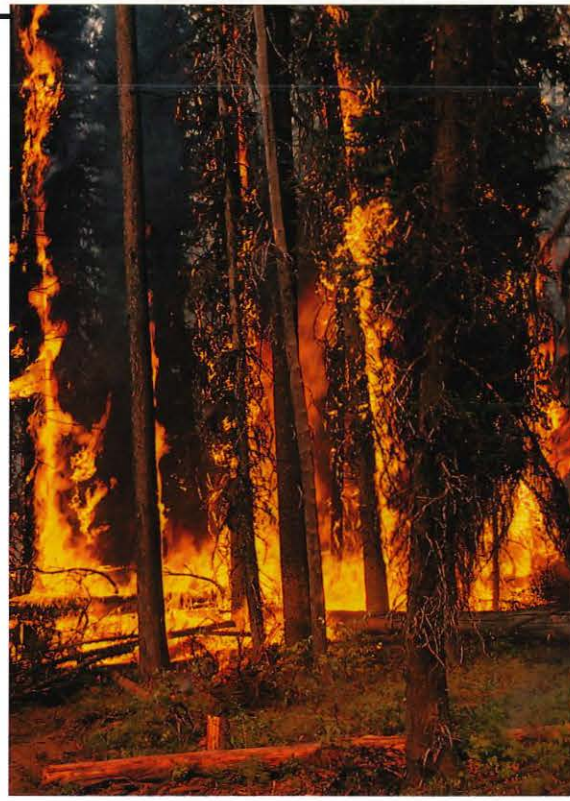


Photo by Mike McMurray

Today, many forests in Oregon are more susceptible to catastrophic fire and insect and disease problems than those that existed before European settlement.

What is a healthy forest?

Forest health is a social value based on both public perception and scientific information. We define a healthy, vital forest landscape as one that maintains its functions, diversity, and resiliency within the context of natural disturbances and is capable of providing people with the array of values, uses, and products desired now and in the future. Forests are "unhealthy" when potential disturbances, such as fire or pest outbreaks, are unusually frequent, severe, or widespread and when the desired outputs such as wood fiber, special forest products, and recreational opportunities cannot be provided or sustained. We view healthy forests as preferable to unhealthy ones because they are resilient and because they are capable of providing the goods, values, services and habitat upon which humans and plant and animal species depend.

Perceptions about forest health have evolved from a focus on preventing tree death from insects, disease, or wildfire to a concept of "forest ecosystem health" that ties together physical, terrestrial, aquatic, and human aspects of the landscape. The ecosystem concept also recognizes that forests are dynamic and that disturbance is an important element in maintaining desired forest conditions. In this document, policies for protecting, maintaining, and enhancing the health of forest aquatic and riparian systems are more thoroughly discussed under Strategy D.

What is known about major disturbances affecting forest health?

Oregon's forests are shaped by natural disturbance in the form of fire, storms, climate change, wildlife, volcanic activity, insect outbreaks, and diseases. Prior to European settlement, natural disturbances created a range of forest types, age classes, and structures across the landscape. Native Americans regularly set fire to assist in hunting game and to produce certain edible vegetation, and for other reasons. It has been estimated that fires burned approximately 790,000 acres annually; however, we have no estimate of the amount of presettlement acreage affected by insect outbreaks, diseases, and storm damage. It is known that disturbances such as windstorms or insect and disease outbreaks often set the stage for large-scale wildfires.

European settlement changed the pattern of disturbances on Oregon's forest landscapes. Most natural disturbances were seen as undesirable because they detracted from settlers' uses of and products from the forest. New sets of human-caused disturbances were added to the mix, and the natural disturbance pattern was greatly modified. Among the changes introduced by European settlement were suppression of wildfire; elimination of Native American burning; introduction of invasive non-native plant and animal species; land management activities such as livestock grazing, timber harvest, land clearing, and burning for agriculture and urban use; air pollution; and road building. The following passages discuss some of the major natural and human-caused disturbances affecting Oregon's forests.

Climatic and geological disturbance

Infrequent climatic and geological disturbance provides an important context for forest health. Short- and long-term climatic cycles influence the frequency and severity of disturbances such as fire and windstorms. Climatic changes are usually relatively slow, while geological events can be sudden and cataclysmic. The vegetation types now covering Oregon are relatively recent, having occupied Oregon since the end of the most recent glacial period (13,000 years before the present). During previous warmer climatic periods, species such as redwood spread much farther north from where they now exist. Cataclysmic events such as lava flows and the Lake Missoula floods have modified soils and vegetation in significant ways. For example, Willamette Valley ponderosa pine may be a product of the Lake Missoula floods.

Fire

The range of natural fire regimes in Oregon reflects current climatic, vegetative, and geological conditions. In moister regions, the return interval between wildfires (the fire frequency) may be 200 years or more, and the fires tend to be large, stand-replacing events. In drier regions, fire may come as frequently as every 10 to 15 years, often burning with low intensity, but not always; fires in some stand

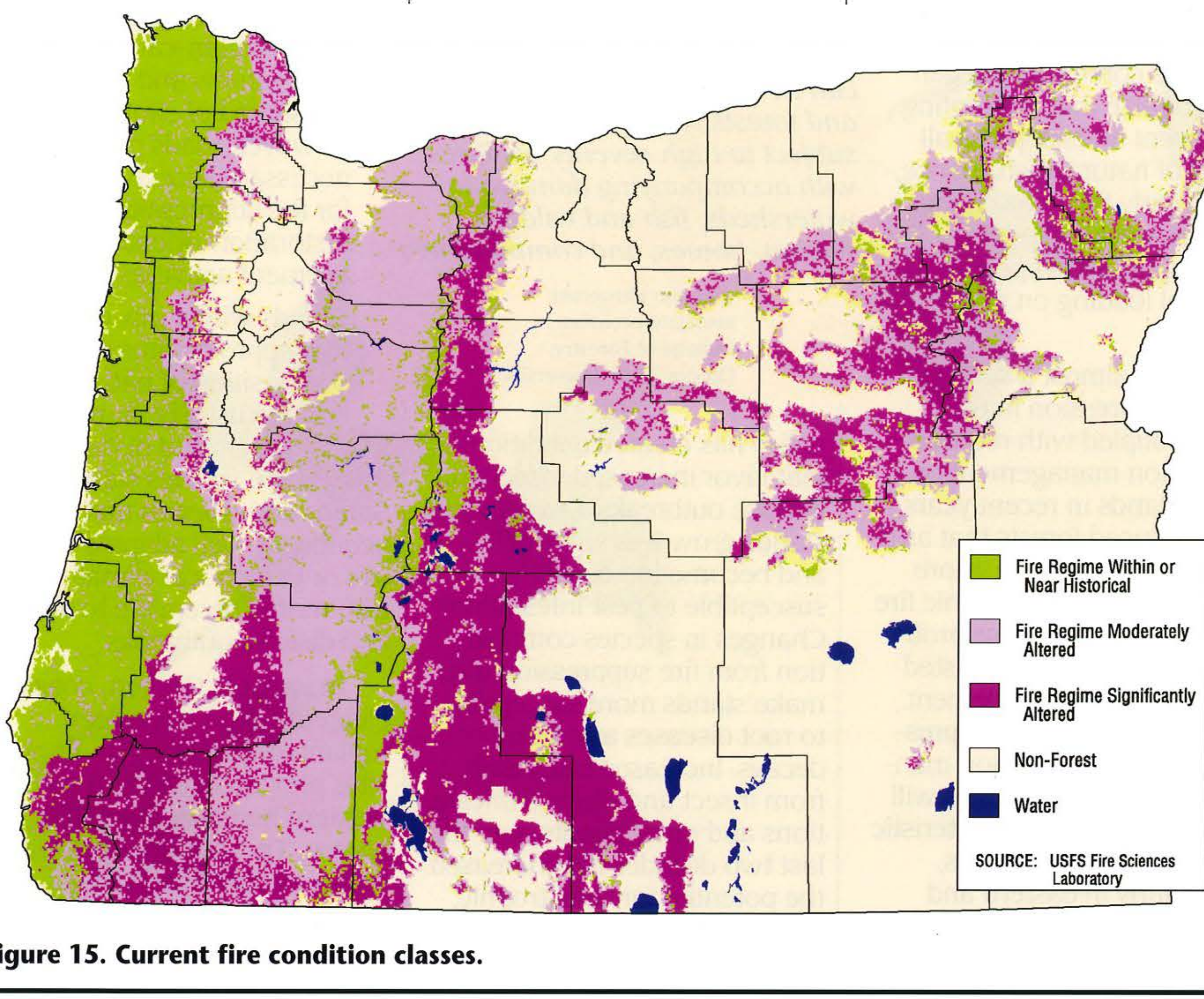


Figure 15. Current fire condition classes.

types (for example, lodgepole pine) are more often stand-replacing events. Much of Oregon's forest in the drier regions is characterized by fire return intervals of 35 to 100 years, and by a range of fire intensities.

During the 20th century, the suppression and prevention of wildfire became an important role of government for the purpose of protecting property and conserving existing forest values. Fire prevention and suppression changed the nature of forest structure and wildlife habitat across fairly significant portions of the forest. However, beginning in the 1960s, landowners, governments, and the scientific community began to recognize that attempting to prevent and suppress all forms of natural disturbance, particularly fire, was changing tree stocking levels, forest species composition, and fuel loading on many forests.

Today, almost a century of fire suppression in Oregon, coupled with reduced vegetation management on federal lands in recent years, has produced forests that are, across the landscape, more susceptible to catastrophic fire and insect and disease problems than those that existed before European settlement. Fire prevention and suppression without vegetation management to remove fuels will result in more uncharacteristic stand-replacing wildfires, particularly in eastern and southwestern Oregon. These wildfires will be more difficult and expensive to control (Figure 15).

Insects and disease

Outbreaks of native forest insects such as the Douglas-fir tussock moth or western spruce budworm get relatively more public interest than forest diseases, though diseases kill or damage more trees and thus have a more significant effect on timber management. The aggressive fire-suppression policy has created conditions that favor increased insect and disease outbreaks. Overstocked stands grow less vigorously and become increasingly susceptible to pest infestations. Changes in species composition from fire suppression also make stands more susceptible to root diseases and stem decays. Increased tree death from insect and disease infestations and other agents over the last two decades has increased the potential for catastrophic, stand-replacing fires.

"The management approach currently being applied across our nation's western federal forests is unlikely to be sustainable in the long run. If we continue the current passive management approach, forest health conditions can be expected to deteriorate, and forests will continue to be subject to high-severity wildfires, with accompanying damage to watersheds, fish and wildlife habitat, homes, and communities."

— Stephen Fitzgerald,
associate professor,
College of Forestry,
Oregon State University

Timber management

Most private forests and some public lands have been intensively managed for timber for decades. On these lands, harvesting is now the most frequent disturbance event. In addition to harvesting trees and modifying vegetative succession, timber harvest and road-building can, in some instances, affect the timing, frequency, and intensity of disturbance events such as shallow, rapid landslides (see Strategy D).

Forest roads, power lines, and rights-of-way also change disturbance patterns by allowing access to the forests, which can result in more human-caused wildfire ignitions and increase the spread of exotic plants. However, roads provide necessary access to forests for fire suppression or restoration-oriented management activities.

Stands with a mix of species that approximates the composition of native forests are usually more resilient to insects and diseases than single-species stands. Stands with species that are not genetically well adapted to the site or to the local climate are also more susceptible to insect and disease outbreaks.

In western Oregon, coastal clearcuts often have been replanted with Douglas-fir on sites previously stocked with western hemlock and Sitka spruce. This has resulted in a severe problem with Swiss needle cast disease. Native root diseases also spread in areas planted to poorly adapted species. Planting root disease-resistant or -tolerant species and using local seed sources can reduce insect and disease damage and also contribute to native plant and animal habitat. Surveys show that landowners are beginning to plant a mix of tree species better adapted to local sites.

Photo by Mike McMurray

Scotch broom is rapidly spreading throughout western Oregon forest and agricultural lands. In the future, invasive non-native plants, animals, and diseases may become the dominant threat to Oregon's native forest plants and animals.

In eastern Oregon, intense fire suppression and the harvesting of larger, higher-value ponderosa pine and western larch over the last century have changed forest conditions significantly from those that existed in the 1800s. Some stands are now dominated by densely stocked, and generally smaller, shade-tolerant true firs and Douglas-firs, which are less fire-resistant and more susceptible to root diseases and stem decays than ponderosa pine and western larch. This shift in species composition and stand structure has increased tree death and caused heavy accumulations of highly fire-prone vegetation. The resulting insect epidemics and wildfire, along with timber harvesting, have led to dramatic declines in standing timber volumes on affected private lands, and possibly to increases in understocked areas in what were previously productive forest stands. Other forested areas remain highly overstocked.

Wildlife and livestock management

Native animals such as deer, elk, and beaver can be natural disturbance agents in some areas of the forest. Usually such disturbances are minor or localized, but that is not always the case. Today in the northeastern United States, foraging by unusually high deer populations is altering the plant species composition of the region's forests in undesired ways.

Livestock grazing can be managed to emulate disturbances from foraging by native animals and to provide an additional economic incentive to retain low-productivity private forestlands in forest use. However, intensive, poorly managed livestock grazing dating back to the late 1800s has eroded streambank cover, increased the encroachment of juniper forest into rangelands, and contributed to the spread of invasive non-native plants.

"Probably the biggest overriding threat to our forests from a forest health standpoint is the introduction of non-native organisms. The irony of the situation is that while we in the forest community have the most to lose with such an occurrence, we have not been as actively involved as we should in seeking possible solutions or preventing these kinds of introductions."

— Alan Kanaskie, forest pathologist, Oregon Department of Forestry

Land conversion

While management for timber or grazing may modify natural disturbance regimes, land conversion for urban and agricultural uses is the ultimate disturbance, because the site no longer returns to forest. The amount of forestland conversion was significant during settlement, but Oregon's land-use system now limits such changes (see Strategy C).

Invasive non-native species

In the last century, the introduction of non-native pathogens, plants, and insects has impaired forest health in Oregon. White pine blister rust, for example, has virtually eliminated western white pine from areas in the Coast Range and Cascades. Insect and disease introductions during the last century that have had significant impacts on the forest ecosystem also include Port-Orford-cedar root disease and balsam woolly adelgid. Eradicating an established population of European gypsy moth during the 1980s required an effort costing millions of dollars.

The recent detection of sudden oak death disease in southwestern Oregon exposes a new threat to several important tree and shrub species. The introduction and spread of invasive plants like Scotch broom, gorse, English ivy, and Himalayan blackberry to forestland poses an indirect threat. These non-native plants typically reduce native-plant diversity on a site and prevent or delay the regeneration of trees.

Increased commerce, a mild climate, and a continuous influx of people make western Oregon particularly vulnerable to the introduction and establishment of exotic insects, pathogens, and plants. Increasing levels of international and interstate trade in logs and wood products, in particular, make it likely that new pests will be introduced in the future. The introduction of exotic insects and diseases is increasingly becoming a serious threat to the health and vitality of forest ecosystems.

The first lines of defense against non-native species are programs to detect, monitor, and eradicate them and prevent further introductions. When exotic plant diseases become established, breeding programs for disease resistance may become critical to the survival of native tree species.

Air pollution

Urban and suburban development to accommodate Oregon's growing population will continue to be a threat to the state's air quality. Visibility and air quality in forest areas is degraded not only by prescribed fires and wildfires but also by air pollution from factories, vehicles, woodstoves, agricultural burning, and other non-forest-related sources. Prescribed fire can be used to achieve desired future conditions in many of the state's forest types. However, for it to be successful, very large acreages need to be burned annually, particularly in eastern and southwestern Oregon. It may be increasingly difficult in the future to make this strategy available to forest landowners and also meet air-quality requirements for urban, rural, and forest areas.

Air-pollution damage to vegetation is an important indicator of forest ecosystem health, but one that has so far had little impact here. Oregon has only recently documented air-pollution impacts to sensitive lichen species downwind of major urban areas. Because of a relatively small urban industrial sector in the region and dominant marine air currents passing over Oregon from the west, our forests have had little exposure to airborne pollutants, compared to other areas of the country and the world. However, air-pollution effects on forest vegetation will probably increase with Oregon's population and may also result from increasing industrial emissions originating in other parts of the world.

How do current government policies affect the strategy of protecting, maintaining, and enhancing forest ecosystem health?

The Oregon Department of Forestry was established in 1911 because of the need to suppress wildfires, which threatened public safety, timber values, and private property. Wildfire suppression on forestlands is still an important mandate for the agency today, as it is for the federal land management agencies and every state forestry agency in the West. In the past, the objectives of forest landowners and government policies alike focused on limiting damage to timber values from natural disturbance agents such as fire and native pests. Today, management objectives on most federal lands no longer emphasize timber values. Today we also understand that forest ecosystems must be managed in the context of the natural disturbance events to which they are well adapted.

Oregonians continue to expect the department to carry out its aggressive protection of private property from fire. This is mandated by law and paid for by both the State General Fund and forest landowners. At the same time, the department is being increasingly challenged to take part in emerging state and national policy initiatives that call for reintroduction of fire to restore forest ecosystem health.

There is strong agreement among foresters, forest scientists, and most Oregonians that hazardous fuel conditions need to be more actively managed so that fire-dependent forest ecosystems can better meet our environmental, economic, and social needs. Additionally, there are broad areas of social agreement about how to enhance ecosystem health in the forests of eastern Oregon. Oregon's *An 11-Point Strategy For Restoring Eastern Oregon Forests, Watersheds And Communities, 2001* provides a clear outline of how government agencies, other landowners, and rural communities can work together to achieve this goal. This approach has been applied at a landscape scale in the three-million-acre Blue Mountains Demonstration Area project. The project focuses generally on watershed management and specifically on reduction of fuels by reducing tree densities across the landscape.

Prescribed fire can be used to achieve desired future forest conditions. However, very large acreages need to be burned annually. The costs associated with controlled burning are high, and considerable controversy surrounds prescribed fire because of the risk that fires will escape and burn onto other ownerships, and because of air-quality problems associated with smoke. The technique remains especially controversial in the aftermath of property damage caused by an escaped prescribed fire near Los Alamos, New Mexico, in 2000.

Silviculture is another

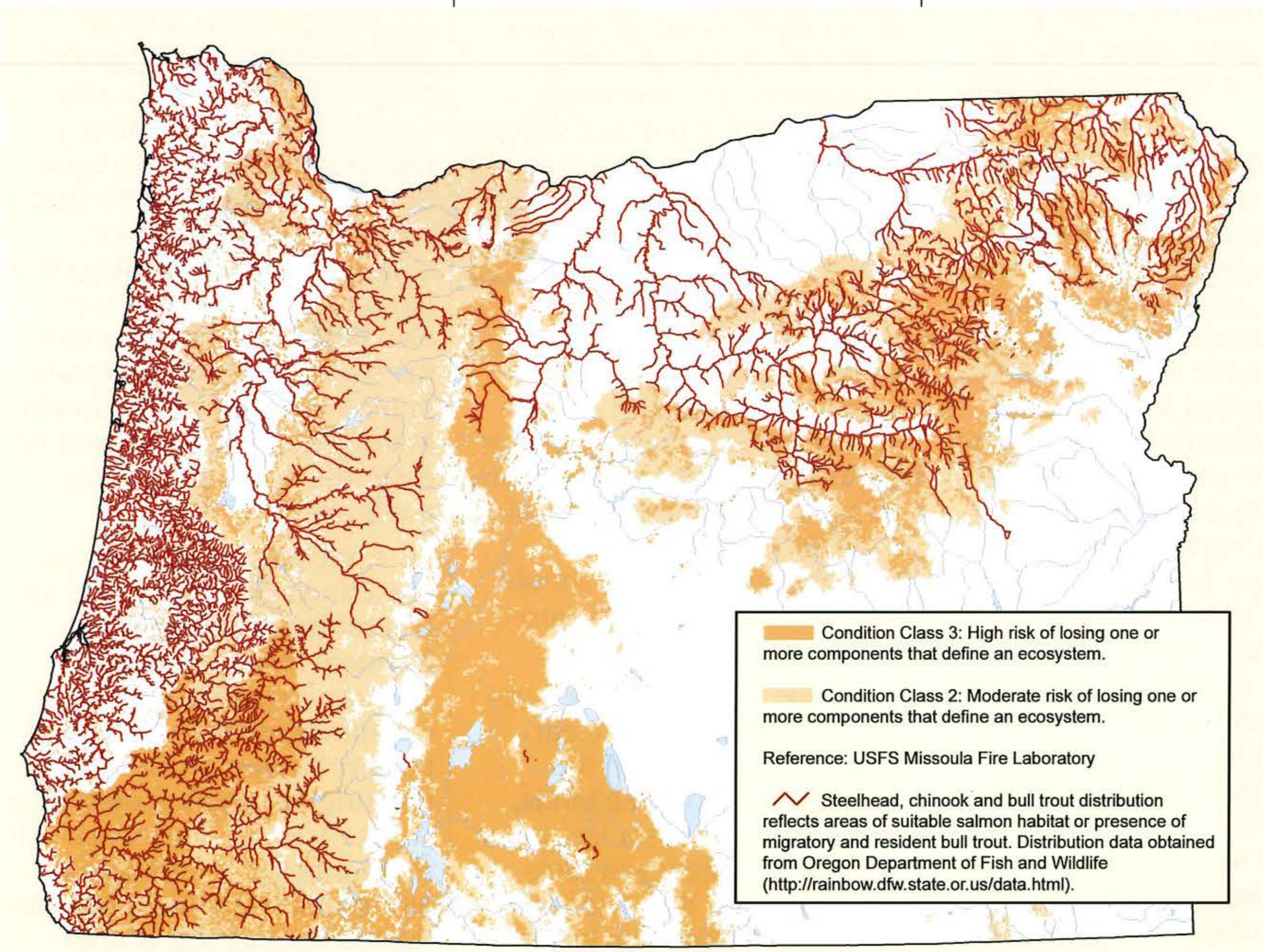


Figure 16. High and moderate fire risk areas and current distribution of steelhead, chinook salmon, and bull trout. (Source: Mealey, S.P. and J.W. Thomas in Fitzgerald, 2002)

pathway to achieving forest health goals. Combinations of tree thinning and prescribed fire can be designed to reduce fuels and wildfire risk on a site-specific basis. These combined treatments may often be the best choice if both short- and long-term risks to forest resources are evaluated and managed. However, lack of public trust, increased procedural workloads, and legal challenges have resulted in ongoing analysis and decision-making backlogs. For example, for most Forest Service project analyses with any commercial timber component, normal procedural requirements alone take an average of four years to complete.

Conflicting government policies and processes are major reasons why needed fuel-management work is not getting done. While the federal Endangered Species Act is a valuable tool for protecting imperiled forest species, it has an inherent bias favoring reduction of short-term adverse effects. Long-term habitat degradation from landscape-scale changes in forest conditions—such as wholesale changes in historic wildfire regimes in fire-dependent forests—are often discounted in the analysis of forest management projects. While the National Fire Plan calls for aggressive fuel reduction on federal lands, public controversy, lack of funds and staff, and substantial environmental analysis requirements have led to far less treatment than anticipated (Figure 16).

Under current federal fire-suppression policy, homes in the wildland-urban interface receive fire-suppression priority, even though most homes are insured and homeowners can take action on their own lands to mitigate the fire hazards and risk to their homes. Private forestlands managed for timber and other values are usually not insured, and managed forests are at high risk from wildfire spreading from federal lands. Thus wildfire originating on or spreading through federal lands presents underappreciated yet significant risks to private forest management investments. Future wildfire policies should better balance the risks to private forestlands with risks to homes and other structures in the interface. For example, when a decision must be made whether to allocate wildfire-suppression resources to protect $1 million in uninsured private timber or to protect an insured structure with a replacement value of $100,000, the limited firefighting resources should be allocated first to the protection of timber values.

While the Oregon Department of Forestry has clear statutory authority in fire suppression on forestlands, the law prescribes a less clear role for the agency in fuels management. It is clear that fuels management is key to reducing fire risk and hazards in the urban-forest interface. However, Oregon laws that make landowners and forest operators liable for escaped fire and that impose smoke management restrictions discourage prescribed burning on private lands. In recent years, federal money has been available to help private landowners reduce fuel loads in specific areas. The areas targeted by this incentive program are forests that are at high risk from wildfire and that have homes nearby.

Maintaining and enhancing visibility in wilderness areas and in national parks (Class I Visibility Areas) is a state and national goal under the federal Clean Air Act. Visitors to Oregon's Class I Visibility Areas experience some of the best visibility in the country, and the Oregon Smoke Management Program has been instrumental in making that happen. Regional haze-reduction goals have also been established under the Clean Air Act. Continued implementation of the Smoke Management Program will be essential in ensuring those goals are met.

Anticipated increases in prescribed-fire treatments on federal lands through the National Fire Plan and the Western Governors' 10-Year Comprehensive Strategy will present further challenges in meeting the public's desire for smoke-free air. This work will require better coordination and monitoring, more sophisticated forecasting, and increased public education. Greater public acceptance of alternatives to burning, including mechanical treatments, may offer the best opportunity to reduce smoke emissions.

Oregonians have many different views on how the state's forests should be managed, and so their views on the potential forest health risks and effects from natural and human-caused disturbances are also very diverse. However, we all must understand there are no islands of forest big enough in Oregon to isolate the effects of our choices related to fire, fuels management, invasive plants and animals, and air quality.

In the past, the objectives of both Oregon forest landowners and government policies focused on limiting the damage from natural disturbance agents such as fire and native pests. Today we understand that forest ecosystems in Oregon are well adapted to natural disturbance events and can absorb and recover from them much more quickly and completely than they can from the effects of exotic pests or pollution. Future Oregon forest policies must take the initiative in monitoring and responding to these new, under-appreciated but significant threats to forest ecosystem health and vitality.

What are the key interactions of this strategy with other strategies?

Protecting, maintaining, and enhancing forest health and vitality affects, and is affected by, other strategies and policies for managing Oregon's forests. Here are some examples of these interactions:

- Introductions of non-native plants and animals often reduce the diversity of native plants and animals.
- Carbon emissions from forest fires are not preventable, but the increased use of prescribed fire on federal lands may result in decreased carbon emissions by preventing much larger emissions from catastrophic fires.
- Large-scale controlled burning on federal lands to thin dense forests and reduce fuels may degrade air quality in areas of eastern and southwestern Oregon.
- Limiting opportunities for prescribed burning because of air-quality concerns may affect the timely reforestation of forestlands after timber harvesting and may result in the increased use of herbicides on some sites.
- Implementing Oregon's *An 11-Point Strategy For Restoring Eastern Oregon Forests, Watersheds And Communities, 2001* and other fuel-reduction programs should result in economic benefits to local communities.
- Promoting Oregon's self-sufficiency in wood products could reduce the need to import raw wood and thus lower the risk of introducing invasive non-native species.
- Establishment of invasive non-native species could lead to quarantines and the loss of important markets for Oregon's forest products and other plant industries (e.g., nurseries).

What are potential indicators to measure progress toward accomplishing this strategy?

Area and percent of forest affected by processes or agents beyond the range of historical variation (for example, areas of forest in which fire condition classes are different from those of presettlement times)

Background on Strategy G:

Enhance carbon storage in Oregon's forests and forest products

What is global climate change?

Carbon dioxide is one of the gases found naturally in the earth's atmosphere. It is widely accepted and well documented that atmospheric levels of carbon dioxide have increased dramatically over the past 100 years. The increased level of carbon dioxide in the atmosphere acts much like a greenhouse, allowing sunlight in and trapping its heat so as to keep the air warm. Other gases in the atmosphere, such as methane and nitrous oxide, have the same effect. These gases are referred to collectively as greenhouse gases.


Photo by Mike McMurray

Carbon storage, Oregon style.

Studies have shown a strong relationship over the past 100 million years between the levels of atmospheric greenhouse gases and the earth's temperature. Many scientists believe the greenhouse effect from increased levels of atmospheric carbon dioxide is increasing the earth's average temperature to the point of undesirably changing the earth's climate–a phenomenon referred to as "global warming" or "global climate change."

Many scientists, policymakers, and others believe that climate change from increasing atmospheric levels of greenhouse gases needs to be addressed by reducing or offsetting human-induced sources of greenhouse gases, in particular carbon dioxide. Proponents for taking action feel that doing nothing is too risky, and that inaction forecloses opportunities to achieve other benefits such as conserving energy, developing alternatives to fossil fuels, and placing greater emphasis on maintaining healthy, productive forests to mitigate carbon dioxide emissions. Others question whether climate change from increased levels of carbon dioxide is occurring, and if it is, whether humans are causing the changes and whether society needs to be concerned.

How does carbon move from the atmosphere to plants and back again?

All plants use energy from the sun's light to make their own food in a process called photosynthesis. During photosynthesis, carbon dioxide absorbed through leaves is broken down by the sun's energy and combined with hydrogen from water to make sugars that plants live on. This process releases oxygen into the air. The carbon in the sugars is stored as biomass in the plant's leaves, branches, trunk, and roots.

Plants break down the sugars into energy. This process, called respiration, releases carbon dioxide back into the air. Plants use much more carbon dioxide in making their food and storing it as biomass than they release during respiration. The remainder of the carbon is stored in their tissues. The process of removing carbon dioxide from the atmosphere, breaking it down into carbon, and storing the carbon in living and dead plant tissues and as organic material in the soil is called carbon sequestration. The carbon returns to the atmosphere as carbon dioxide when plants die, decompose, or burn. When trees are harvested and manufactured, carbon continues to be stored in lumber and other wood products until they decompose. Collectively, these processes are called the carbon cycle.

People, in their use of the earth's resources, are very much a part of the carbon cycle (Figure 17). For example, when we burn fossil fuels such as coal and natural gas to produce electricity or run our automobiles on gasoline, carbon dioxide is emitted as waste into the atmosphere. Similarly, clearing forestland for other uses not only reduces the area where carbon sequestration and storage can occur, but the clearing itself (i.e., removing stumps and disposing of slash) also releases stored carbon back into the atmosphere as carbon dioxide.

"The Pacific Northwest, and western Oregon in particular, is a great place to store carbon because the forests here can be long-lived. These forests are very productive, and they store a lot of material in soil and in detritus — that is, dead stuff. We have done studies where we've gone out to different old-growth forests and tallied the total amount of carbon stored in them. These are very large stores, some of the largest you can find on earth."

— Mark Harmon, professor,
College of Forestry,
Oregon State University

How do forests and forest management affect the carbon cycle?

The role of forests in the global carbon cycle and the use of forests to offset increases in atmospheric carbon dioxide have been widely discussed. It is very important to keep scale in mind when discussing the effects of forests and forest management on carbon storage.

The carbon cycle occurs at various scales–individual trees and plants, forest stands, and landscapes containing many forest stands. The plants themselves are a pool of stored carbon. At the stand scale, the age, species composition, and forest structure define the types of carbon pools present. Young conifer forests are very productive and grow rapidly. The pool of stored carbon in young forests is modest in size, but it increases rapidly, and it is made up mostly of the living trees themselves. An older forest containing trees of different ages, sizes, and species is still sequestering and storing carbon. The rate at which carbon is being

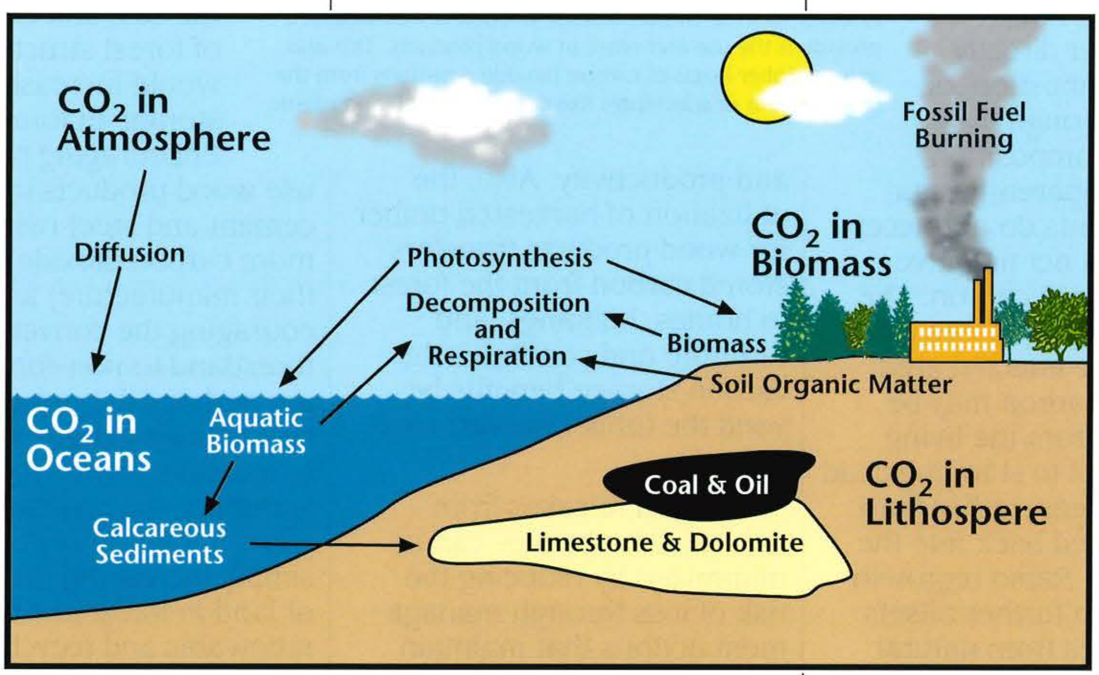


Figure 17. The global carbon cycle. Arrows indicate emissions (upward arrows) and sequestration (downward arrows).

stored (amount per unit of biomass) is lower than in a young forest, but there is more biomass present in an older forest. In addition to live-tree biomass, older forests contain other carbon pools: dead trees, leaf litter, duff, and organic material in the soil. The distribution of forest stands with respect to age, species composition, size, and structure is what determines the amount of carbon stored at landscape scales.

The size, frequency, and severity of natural disturbances such as floods, wildfire, wind, and insect and disease infestations greatly influence the carbon cycle at all scales. Losses of large expanses of forests to wildfires, insects, or diseases release carbon dioxide back into the atmosphere, either directly through combustion, or indirectly through increased decomposition. However, apparently catastrophic events do not necessarily have a net negative effect on stored carbon. The severity of forest losses can vary over the affected area, and stored carbon may be transferred from the living biomass pool to standing dead and down trees, rather than being released back into the atmosphere. Rapid regrowth of vegetation further offsets carbon losses from natural disturbances as the growing plants sequester carbon dioxide from the air.

Forest management influences the carbon cycle. Site preparation and timber harvest create logging slash and disturb down wood, leaf litter, duff, and other organic material in the soil. This results in increased decomposition, which releases stored carbon into the atmosphere as carbon dioxide. However, these effects are temporary if the subsequent forest is well stocked and managed to ensure its long-term health and productivity. Also, the utilization of harvested timber for wood products transfers stored carbon from the forest to homes, buildings, and furniture and continues the carbon storage benefits beyond the timber harvest rotation.

Photo by Mike McMurray

Another form of carbon storage Oregon is well-suited to provide is the use and reuse of wood products. This also avoids higher levels of carbon dioxide emissions from the manufacture of substitutes like concrete, steel, and plastic.

Carbon releases from natural disturbances can be minimized by reducing the risk of loss through management actions that maintain the forest's health and productivity, such as reduction of hazardous fuels, timber harvest, thinning, and prescribed fire, or combinations of these measures. While these actions may lead to reduced levels of stored carbon on the acres treated at the stand level, they maintain and enhance the overall carbon storage of the forested landscape by reducing the risk of wildfire and pests and by reducing the size and severity of loss when fire or pest outbreaks occur.

There is tremendous opportunity to increase the carbon storage ability of Oregon's forests. Planting trees along city streets and neighborhoods, converting marginal agricultural and pasture land back into forests, extending forest rotations, reducing stand density and wildfire fuels, and increasing the size and complexity of forest structures, all would increase carbon storage in forests. Encouraging people to use wood products instead of cement and steel (which emit more carbon dioxide during their manufacture) and discouraging the conversion of forestland to non-forest uses are perhaps the most important actions Oregon can take to increase carbon storage. In summary, we can make big gains in carbon storage by simply increasing the amount of land in forest and using renewable and recyclable wood materials.

What kinds of policies encourage forest landowners to maintain and increase the contribution of their forestlands to global carbon storage?

Oregon has a strong history of promoting policies that encourage the productive management of forestlands for the full array of environmental, economic, and social values people want from forests. While these policies have not explicitly recognized the benefits forests provide to carbon storage, they nonetheless have maintained the positive role Oregon's forests play in the carbon cycle by encouraging the management of forestland.

Through the Forest Practices Act, the State of Oregon encourages economically efficient forest practices that ensure the continuous growing and harvesting of forests consistent with the protection of soil, air, water, fish and wildlife, and scenic resources. The law specifically ensures the renewability of the forest by requiring that all areas harvested for commercial timber be promptly reforested to new "free-to-grow" stands. While the benefits of carbon sequestration were not explicitly recognized at the time of the law's development, this reforestation requirement ensures that Oregon's state, private, county, and municipal forests contribute positively to the carbon cycle. Oregon is also a leader in protecting productive forestland from being converted to non-forest uses such as urban and rural residential development. Over the period 1973-2000, only two percent of Oregon's non-federal wildland forest and seven percent of western Oregon's non-federal mixed agricultural-forest acreage was lost to development (see Strategy C).

"[On the subject of carbon offsets,] prices per ton of carbon stored are running between about $5 and up to $30 per ton. We're really talking about a multi-billion-dollar potential stream of revenue. It could be a way to pay for a lot of conservation easements and pay for things like riparian buffers and other changes in forest practices that would increase storage of carbon."

— Mark Harmon, professor,
College of Forestry,
Oregon State University

In the early 1990s Oregon's two major power suppliers, PacifiCorp and Portland General Electric, both began using trees and forests as a means to offset carbon dioxide emissions. By the mid-1990s, Oregon's policy link between carbon dioxide emissions and forests was established by the Oregon Energy Facility Siting Council's "best of batch" site license competition. The competition was intended to encourage power providers to find creative ways to reduce carbon dioxide emissions. The Klamath Cogeneration Project won the competition by demonstrating the lowest net carbon dioxide emission level through efficiency, co-generation, and specific offset projects, including the investment of $1.5 million into Oregon's Forest Resource Trust. The Forest Resource Trust is a state incentive program that finances efforts to convert marginal agricultural, pasture, and brush land on nonindustrial private forestlands to healthy, productive forest. The Klamath project investment in the trust is expected to offset 1.16 million metric tons of atmospheric carbon dioxide by restoring forests on 2,400 acres over a 100-year period.

Based on these efforts, Oregon became a recognized leader in developing energy policies directed at reducing human-induced carbon dioxide emissions from the burning of fossil fuels. In 1997, the Oregon Legislature adopted a carbon dioxide emission standard for new power-generating facilities. Besides promoting efficiency, energy conservation, and cogeneration, the law allowed new power plants to fund specific offset projects including those involving forests. The Climate Trust, a nongovernmental organization, was set up to disseminate funds for eligible offset projects under the law's monetary path provision. In effect, power companies pay in advance for their carbon dioxide emissions by funding The Climate Trust–leaving the Climate Trust with the task of finding projects that will offset their carbon dioxide emissions. The Climate Trust has awarded several offset project grants, including two involving forests.

In 2001, the Oregon Legislature passed a law that established forestry carbon offsets as a marketable commodity. The law authorizes the state forester to sell carbon offsets on behalf of landowners to energy companies, power plants, or other businesses wishing to mitigate the effects of their carbon dioxide emissions. The innovative law[18] anticipates that forest landowners who invest in forest management to improve the carbon-storage capability of their forestlands can get a return on this investment.

What are the key interactions of this strategy with other strategies?

Enhancing carbon storage in Oregon's forests affects, and is affected by, other strategies and policies for managing Oregon's forests. Here are some examples of these interactions:

- The productive capacity of forests defines how much carbon dioxide can be removed from the atmosphere through sequestration and storage. Conversion of forestland to other uses directly reduces carbon storage in Oregon's forests.
- Forests in poor health and in decline can be net sources of carbon dioxide released back into the atmosphere.
- Managing fuel and stocking levels stabilizes and maintains carbon stores in forested landscapes by helping to ensure that wildfires do not destroy those essential components that define the forest ecosystem.
- Soils are important carbon pools, and many practices that prevent erosion and protect and conserve forest soils serve to maintain and enhance the carbon pools found in leaf litter, duff, humus, and other organic material.

What are potential indicators to measure progress toward accomplishing this strategy?

1. Amount of stored carbon in forests and forest products
2. Number of verifiable projects to offset carbon dioxide emissions by restoring or enhancing forests

[18] ORS 526.780-789.

Conclusion

The *2003 Forestry Program for Oregon* is intended to engage Oregonians in an ongoing conversation about how best to manage Oregon's forests to meet our present and future environmental, economic, and social needs. While the meaning of the concept of "sustainability" has evolved with time, sustainability has remained a consistent theme for the Board of Forestry since the publication of the first *Forestry Program for Oregon* in 1977.

As we plan for the future, we ask citizens to consider the advantages we share as Oregonians:

- Oregon is blessed with rich and diverse natural resources, with 90 percent of the state's historic forestland still in forest use and a diverse ownership base.
- Oregonians have the knowledge and commitment to care for these resources.
- Oregonians understand that forest resources and related businesses are vital to Oregon's future.
- Oregon's forest resources remain the economic foundation of many rural communities and, carefully managed, these resources hold great potential for creating family-wage jobs in rural areas.
- The productivity of Oregon's forest resources is high, and the state has the potential to increase its contribution to meeting growing national and global needs.
- Oregon is a pioneer in scientific innovation, technological developments, forestry research, and forest practices monitoring.
- Oregon has a strong legal framework, built on our land-use planning laws, the Forest Practices Act, the Oregon Plan for Salmon and Watersheds, the Sustainability Act, and the Conservation Incentives Act.
- Oregon is fortunate to have forward-thinking institutions such as the Oregon Forest Resources Institute, the Institute for Natural Resources, and the Oregon State University Forest Research Laboratory.
- Oregon's reputation for sound forest management can leverage international consumer preferences for Oregon forest products.

Nature has given us a tremendous advantage. We must use it responsibly to build our economy, enhance our environment, and ensure that economic recovery reaches every community. Oregon is a progressive leader in forest management. By firmly incorporating sustainable forestry concepts into state policies, we will continue to be an example to other states and even to other nations. We will continue to test and use the tools provided by the criteria-and-indicators framework, and we will better engage all forest landowners, interest groups, and the general public in a constructive conversation.

Our goal through this conversation will be to create new alliances among diverse environmental, economic, and social interests, increase everyone's appreciation of the multiple values of Oregon's public and private forestlands, and promote a broader consensus on the future direction of Oregon forest policies. We hope that, through this process, society as a whole may also come to understand better what sustainability means in all areas of life and what every citizen and consumer will need to do to achieve it.

Our next tasks in this process are:

Increase public awareness. Results of public-opinion surveys and focus groups indicate that, while many Oregonians have strong opinions about the management of Oregon's forests, those opinions are often based on outdated, incomplete, or inaccurate information. Sometimes these opinions are inconsistent with these same Oregonians' behaviors as consumers. The board and the department will assist the public in becoming more knowledgeable about current forestry issues and about the science, strategies, and actions contained in the *2003 Forestry Program for Oregon* to promote sustainable management of Oregon's forests.

Conduct strategic planning for the Department of Forestry. The department is developing a long-range strategic plan that will serve as a companion document to the *2003 Forestry Program for Oregon.* Looking at the same eight-year planning horizon, the agency strategic plan will describe the specific steps the agency's programs will take to carry out the Board of Forestry's strategies and actions. Where actions are needed by other agencies, organizations, or individuals, the plan will describe how the department will work with these other parties to further the board's strategies. Department of Forestry programs will contain outcome-based performance measures to evaluate progress in implementing the agency strategic plan and linking it to the department's budgeting, quality improvement, and employee appraisal processes.

Develop core indicators of sustainable forest management. Under each of the *Forestry Program for Oregon* strategies, potential indicators are listed that could be used to measure progress toward achieving the goals of that strategy. These indicators are a subset of 67 internationally recognized indicators. Consensus is needed within the Oregon forestry community on whether these are the appropriate indicators to use to evaluate Oregon's performance. Once they are finalized, these "core" indicators can be used to focus monitoring, assessments, and research, so that Oregon can more clearly tell its own citizens and the rest of the world the story of how well our forests are being managed. In particular, private landowners and federal land management agencies will need to work in partnership with the State of Oregon to reach agreement on the indicators and on the methods that will be used to collect and share data about them. Over time, the Board of Forestry and others will use the information collected for the core indicators to establish quantifiable policy targets and then measure and report on progress towards those targets.

The *2003 Forestry Program for Oregon* will serve as the foundation for Board of Forestry policy deliberations and Department of Forestry strategic planning over the next several years. The board and the Department of Forestry are committed to implementing the strategies and actions outlined in this document, in combination with monitoring and evaluation to adjust our course as necessary.

Continued public involvement will also be needed for these strategies and actions to be successful. Please become involved in this ongoing discussion. Oregon needs to hear from you!

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Appendix: *A comparison of the 2003 Forestry Program for Oregon strategies with internationally recognized criteria for the conservation and sustainable management of temperate and boreal forests*

In 1992, at the United Nations Conference on the Environment and Development held in Rio de Janeiro, the United States committed itself to forest sustainability. In 1994, the United States participated in the Working Group on Criteria and Indicators for the Conservation and Sustainable Management[19] of Temperate and Boreal Forests (known as the Montreal Process group). The working group was charged with developing internationally recognized criteria and indicators for the conservation and sustainable management of temperate and boreal forests at the national level. The United States was a signatory, along with 11 other nations, to the *Montreal Process Santiago Declaration* in 1995.[20] This group of countries represents more than 90 percent of the world's temperate and boreal forests, 60 percent of all the world's forests, 45 percent of the world's trade in wood and wood products, and 35 percent of the world's population. The *Santiago Declaration* established seven criteria and 67 indicators of sustainable forest management for use by policy-makers, forest managers, and the general public.

A "criterion" is defined as a category or process by which sustainable management may be assessed. An "indicator" is defined as a measure (or measurement) of an aspect of a criterion.

The seven criteria are:

1. Conservation of biological diversity
2. Maintenance of productive capacity of forest ecosystems
3. Maintenance of forest ecosystem health and vitality
4. Conservation and maintenance of soil and water resources
5. Maintenance of forest's contribution to global carbon cycles
6. Maintenance and enhancement of long-term multiple social and economic benefits to meet the needs of societies
7. Legal, institutional, and economic framework for forest conservation and sustainable management

The criteria and indicators are not legally binding on any of the participating countries and are intended to serve only as guidelines. In 2003, the United States published a report on the conditions and trends of the nation's forest resources using the criteria and indicators as an organizing framework.[21] The National Association of State Foresters has produced an online publication titled *Principles and Guidelines for a Well-managed Forest.* These principles and guidelines are also built on the Montreal Process criteria.[22]

The Board of Forestry has endorsed the use of this internationally recognized criteria and indicator framework as a tool to respond to legislative direction to assess and report on the cumulative effects of forest practices. In 2000,

[19] The Montreal Process refers to both "conservation" and "sustainable management." In the context of the *Forestry Program for Oregon*, these terms have similar definitions. "Conservation" means forest management with the objective of sustaining forest productivity in perpetuity while providing for human use compatible with sustainability of forest resources (based on Society of American Foresters definition).

[20] The other signatory nations are Argentina, Australia, Canada, Chile, China, Japan, Republic of Korea, Mexico, New Zealand, the Russian Federation, and Uruguay.

[21] More information about the Montreal Process Criteria and Indicators can be found at http://www.mpci.org/home_e.html. More information on the 2003 United States report can be found at http://www2.srs.fs.fed.us/2003/2003.htm.

[22] http://www.stateforesters.org/positions/P&G2003.htm.

Oregon became the first state in the nation to publish a "first approximation report" to assess the status and trends of the state's forest resources as measured against the Montreal Process criteria and indicators. In *Oregon's First Approximation Report for Forest Sustainability*, the indicators are presented not as a set of thresholds that must be met to achieve sustainability, but rather as a set of agreed-upon topics on which to base forest policy dialogues. The report provided a snapshot of Oregon's forests at that point in time, based on available data, and a starting point for discussions about future forest sustainability.

The seven strategies listed in the *2003 Forestry Program for Oregon* are directly related to the Montreal Process criteria (see below).

Within the background text for each *Forestry Program for Oregon* strategy, selected indicators have been listed as potential tools the Board of Forestry and the public can use to measure Oregon's progress in achieving that strategy. Further technical and policy discussion is needed to reach a consensus on which indicators should be used for this purpose and how data will be collected to measure performance.

***2003 Forestry Program for Oregon* Strategies**	**Comparable Montreal Process Criteria**
Strategy A. Promote a sound legal system, effective and adequately funded government, leading-edge research, and sound economic policies	Criterion 7. Legal and institutional framework for forest conservation and sustainable management
Strategy B. Ensure that Oregon's forests provide diverse social and economic outputs and benefits valued by the public in a fair, balanced, and efficient manner	Criterion 6. Maintenance and enhancement of long-term multiple socioeconomic benefits to meet the needs of societies
Strategy C. Maintain and enhance the productive capacity of Oregon's forests to improve the economic well-being of Oregon's communities	Criterion 2. Maintenance of productive capacity of forest ecosystems
Strategy D. Protect, maintain, and enhance the soil and water resources of Oregon's forests	Criterion 4. Conservation and maintenance of soil and water resources
Strategy E. Contribute to the conservation of diverse native plant and animal populations and their habitats in Oregon's forests	Criterion 1. Conservation of biological diversity
Strategy F. Protect, maintain, and enhance the health of Oregon's forest ecosystems, watersheds, and airsheds within a context of natural disturbance and active management	Criterion 3. Maintenance of forest ecosystem health and vitality
Strategy G. Enhance carbon storage in Oregon's forests and forest products	Criterion 5. Maintenance of forest's contribution to global carbon cycles

Glossary

For the purpose of the *2003 Forestry Program for Oregon*, the Board of Forestry uses the following key definitions:

Active management means the application of practices through planning and design, over time and across the landscape, to achieve site-specific forest resource goals. Active management uses an integrated, science-based approach that promotes the compatibility of most forest uses and resources over time and across the landscape. "Active management" should not be equated with "intensive timber management." Instead, it refers to taking proactive steps to achieve whatever management objectives have been established for a forest site. [Based on OAR 629-035-000 (1).]

Aggressive fire suppression means the proactive and immediate application of activities necessary to extinguish undesired forest fires, beginning with fire detection and continuing until fires are completely controlled and extinguished.

Best management practices means a combination of practices that are determined to be the most effective and practical means (considering current technology, economics, and institutional frameworks) of meeting water quality and other environmental quality goals.

Biological diversity means the presence of various kinds and types of living organisms. Managing for biological diversity requires maintaining a diversity of habitats and ecological processes at various spatial scales, from entire landscapes to specific localized habitats. It also includes understanding populations of individual species and the genetic diversity of these species.

Conservation means management of a renewable natural resource with the objective of sustaining its productivity in perpetuity while providing for sustainable human uses.

Ecosystem means a spatially defined, relatively homogenous area that includes all interacting organisms and components of the abiotic environment within its boundaries.

Enhance means to make greater in value.

Forest health means a healthy, vital forest landscape that maintains its functions, diversity, and resiliency within the context of natural disturbances and that is capable of providing people with the array of values, uses, and products desired now and in the future. Forests are "unhealthy" when potential disturbances, such as fire or pest outbreaks, are unusually frequent, severe, or widespread and when the desired outputs such as wood fiber, special forest products, and recreational opportunities cannot be provided or sustained.

Maintain means to keep in an existing state.

Protect means to cover or shield from injury or destruction.

Sustainable forest management means forest resources are used, developed, and protected at a rate and in a manner that enables people to meet their current environmental, economic, and social needs, and also provides that future generations can meet their own needs. [Based on ORS 184.421.]

For more information about the Board of Forestry or about the *Forestry Program for Oregon*, please write to Oregon Board of Forestry c/o the Oregon Department of Forestry at 2600 State Street, Salem OR, 97310.

You may also reach us by calling: 503.945.7200, or by visiting the Board of Forestry website at www.oregonforestry.org

"The center of gravity must rest with people who see not only that the West can attract and keep good workers and good businesses by protecting the environment and enhancing the health of its ecosystems, but also that such protection and enhancement is itself a globally significant economic activity. Every part of the world—and indeed the world itself—will be increasingly challenged in the coming decades by the necessity to figure out how human communities can thrive within sustainable and thriving ecosystems. The more pressing this challenge becomes, the more urgently the world will look for lessons and leadership from those places that have come closest to meeting that challenge. No place on earth is better positioned than the American West to serve as the world's classroom in sustainability. And the world will be willing to pay a good price for a good education if the West can coalesce around a regional strategy that puts this activity at the center of its global economic positioning."

—Daniel Kemmis, *This Sovereign Land*