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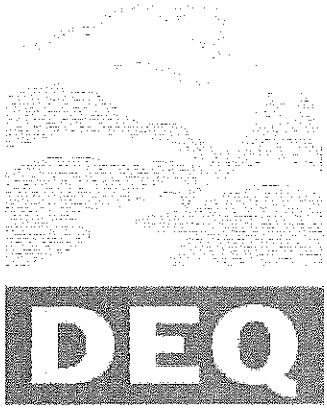
8/28/1987

OREGON
ENVIRONMENTAL QUALITY
COMMISSION MEETING
MATERIALS



State of Oregon
Department of Environmental Quality

OREGON ENVIRONMENTAL QUALITY COMMISSION MEETING

August 28, 1987

Fourth Floor Conference Room
Executive Building
811 S. W. Sixth Avenue
Portland, Oregon

AGENDA

9:00 a.m.

CONSENT ITEMS

These routine items are usually acted on without public discussion. If any item is of special interest to the Commission or sufficient need for public comment is indicated, the Chairman may hold nay item over for discussion.

A. Minutes of the July 17, 1987, EQC meeting.

B. Monthly Activity Report for June.

C. Tax Credits

9:05 a.m.

PUBLIC FORUM

This is an opportunity for citizens to speak to the Commission on environmental issues and concerns not a part of this scheduled meeting. The Commission may discontinue this forum after a reasonable time if an exceptionally large number of speakers wish to appear.

HEARING AUTHORIZATIONS

D. Request for Authorization to Conduct a Public Hearing Concerning Proposed Amendments to the Hazardous Waste Management Rules, OAR Chapter 340, Divisions 100 and 104.

E. Request for Authorization to Hold a Public Hearing on Proposed Redesignation of the Salem Area as Attainment for Ozone and Proposed Revision of the State Implementation Plan.

ACTION ITEMS

Public testimony will be accepted on the following except items for which a public hearing has previously been held. Testimony will not be taken on items marked with an asterisk (*). However, the Commission may choose to question interested parties present at the meeting.

* F. Proposed Adoption of Amendments to Water Quality Standards Regulations, OAR 340, Chapter 41: Mixing Zone Policy and Toxic Substance Standards and Total Dissolved Solids Standards.

G. Appeal by Frank and Sandra Brown of On-Site Sewage Disposal System Variance Denial.

WORK SESSION

The Commission reserves this time, if needed, for further consideration of any item on the agenda.

Because of the uncertain length of time needed, the Commission may deal with any item at any time in the meeting except those set for a specific time. Anyone wishing to be heard on any item not having a set time should arrive at 9:00 a.m. to avoid missing any item of interest.

The Commission will have breakfast (7:30) at the DEQ offices, 811 S. W. Sixth Avenue, Portland. Agenda items may be discussed at breakfast. The Commission will also have lunch at the DEQ offices.

The next Commission meeting will be October 9, 1987, in Bend, Oregon.

Copies of the staff reports on the agenda items are available by contacting the Director's Office of the Department of Environmental Quality, 811 S. W. Sixth Avenue, Portland, Oregon 97204, telephone 229-5301, or toll-free 1-800-452-4011. Please specify the agenda item letter when requesting.

MINUTES ARE NOT FINAL UNTIL APPROVED BY THE EQC

ENVIRONMENTAL QUALITY COMMISSION

Minutes of the One Hundred Eighty-Second Meeting
August 28, 1987

Fourth Floor Conference Room
Executive Building
811 S. W. Sixth Avenue
Portland, Oregon

Commission Members Present:

Arno Denecke, Vice Chairman
Mary Bishop
Wallace Brill
Sonia Buist

James Petersen, Chairman, was absent.

Department of Environmental Quality Staff present:

Director, Fred Hansen
Assistant Attorney General, Michael Huston
Division Administrators and program staff members

Note:

Staff reports presented at this meeting, which contain the Director's recommendations, are on file in the Office of the

Director, Department of Environmental Quality, 811 S. W. Sixth Avenue, Portland, Oregon 97204. Written material submitted at this meeting is made a part of this record and is on file at the above address.

BREAKFAST MEETING

- Stan Biles, Assistant to the Director, advised the Commission that he has been asked to talk at the Oregon Environmental Council retreat on September 19, 1987, on the topic "Life After the Legislature: How to Affect the Public Policy Process". OEC is interested in improving their effectiveness in influencing and providing information to Boards and Commissions. To assist in preparing his presentation, Stan asked the Commission for their views about how citizens and environmental groups can more effectively discuss issues with agencies and policy boards.

  The Commission expressed the view that written material was more desirable than a telephone call. Written material should be concise and brief and visual aids are helpful. The Commission said that an antagonistic tone toward the Department and Commission tends to close off communication and is counterproductive.

- Ron Householder, Acting Administrator for the Air Quality Division, gave the Commission a brief update on the Smoke Management Plan. Mr. Householder told the Commission that while the field burning season started quickly, field burning had slowed significantly due to weather conditions.

  The smoke management plan was recently modified to restrict burning on weekends if smoke would contribute to visibility impairment in wilderness areas in the Cascades. If the Director declares an emergency, weekend burning may be allowed subject to conditions even if smoke intrusion occurs into the cascades.

Growers are feeling the pressure of being behind the normal schedule of burning and are afraid they will not be able to burn this year. They have been representing the situation as a ban on weekend burning. They are asking the director to declare an emergency and allow weekend burning, including on the upcoming Labor Day weekend.

The Commission expressed a reluctance to have any exceptions granted for weekend burning through the Labor Day holiday weekend.

Commissioner Buist asked Mr. Householder if any results had been published from the coastal study of test burns of slash from forested areas where herbicides had been sprayed. Alan Hose, Administrator of the Environmental Quality Laboratory, said that no herbicides had been found during Phase I of the study. Mr. Hose indicated that Phase II of the study, to be completed this summer, will include preparation of a report presenting the finalized results. Commissioner Buist asked that the Department notify the State Health Division of the study findings.

- The Commission also considered an additional item of action not included on the agenda. The item, Request for Authorization to Hold Public Hearings for the Assessment Deferral Loan Program Revolving Fund, resulted from the passage of Senate Bill 878. The department is on a tight schedule to implement this legislation. Rules must be drafted and adopted. Rules must also be reviewed by the Legislative Emergency Board before implementation. In order to meet the needs of this legislation, the Department is requesting Commission authorization to proceed to a rulemaking hearing even thought a draft of the proposed rules is not complete yet.

DIRECTOR'S RECOMMENDATION: It is recommended the Commission authorize the Department to proceed to rulemaking for the purpose of implementing Senate Bill 878.

ACTION: It was MOVED by Commissioner Bishop, seconded by Commissioner Brill and passed unanimously that the Director's recommendation be approved.

- Fred Hansen, Director, informed the Commission that a special EQC meeting needs to be scheduled in late September or early October. The purpose of the meeting will be to consider Judge Howell's recommendation on the contested case hearing on the Bacona Landfill site selection. It was decided that the special meeting should be held during the week of September 28 through October 2.

- The Commission received a copy of the Department's 1987-89 budget. Lydia Taylor, Administrator of the Management Services Division, explained how the budget reflected 115 new positions and approximately $ 14 million additional dollars compared to last biennium. Relative funding sources for the budget are approximately:

  25% General Funds
  25% Federal Funds
  50% Fee Revenues

  The Commission requested that a budget summary be sent to them.

FORMAL MEETING

The regular meeting was called to order by Vice Chairman Denecke.

CONSENT ITEMS

Agenda Item A: Minutes of the July 17, 1987, EQC meeting.

Commissioner Buist indicated that page 2 of the her statement on Agenda Item J, July 17 EQC meeting, was incorrect. Line 8 of page 2 should read:

> The evidence is reasonably good that children whose parents smoke have increased risks, have an increased number of respiratory infections and certainly increased respiratory symptoms and perhaps have a slight decrease in their rate of lung growth.

ACTION: It was MOVED by Commissioner Buist, seconded by Commissioner Bishop and passed that the minutes of July 17 meeting be approved as corrected. Commissioner Brill abstained from voting because he was not present at the July 7 meeting.

Agenda Item B: Monthly Activity Report for June 1987.

Commissioner Denecke asked Michael Huston, Assistant Attorney General, about the status of the McInnis cases. Mr. Huston advised that an October trial date has been set for the criminal case. It is the District Attorney's hope that no slippage will occur in this trial date; however, the Multnomah County docket is quite full.

ACTION: It was MOVED by Commissioner Bishop, seconded by Commissioner Buist and passed unanimously that the June 1987 activity report be approved.

Agenda Item C: Tax Credits.

Commissioner Brill asked if tax credits could be issued when equipment is replaced. Maggie Conley, Intergovernmental

Coordinator, indicated that like-for-like replacement of previously certified pollution control facilities is not eligible for tax credit. However, if the Department requires additional equipment due to new standards, a tax credit could be approved.

ACTION: It was MOVED by Commissioner Bishop, seconded by Commissioner Brill and passed unanimously that the following Director's recommendations be approved:

1. Issue tax credit certificates for pollution control facilities:

   T-1881, Portland General Electric, Riverview Substation; Oil spill control system
   T-1882, Portland General Electric, North Fork Hydroelectric Plant; Oil spill control system
   T-1886, Les Schwab Warehouse Center, Inc.; Resource recovery facility
   T-2069, Marwyn Naegeli; Manure holding facility

2. Revoke Pollution Control Facility Certificate No. 1080 issued to Naumes Orchards of Oregon, Incorporated, and reissue to Wild River Orchards, Incorporated.

PUBLIC FORUM

No public forum testimony was given.

ACTION AND INFORMATIONAL ITEMS

Agenda Item D: Request for Authorization to Conduct a Public Hearing Concerning Proposed Amendments to the Hazardous Waste Management Rules, OAR Chapter 340, Division 100, 102 and 104.

In 1976, Congress passed the Resource Conservation and Recovery Act (RCRA). In November 1984, the Hazardous and Solid Waste Amendments of 1984 (HSWA) became law. These amendments require

extensive changes to the basic RCRA program to be implemented during the period between November 1984 and May 1990. On January 31, 1986, EPA granted the State of Oregon Final Authorization to manage the base RCRA program that existed prior to the HSWA amendments. To maintain authorization, the state was required to modify its laws and rules to be consistent with the HSWA amendments and implementing regulations. The 1987 Oregon legislature passed SB 116 which enables the state to comply with the federal HSWA provisions.

This agenda item is the second in a series of proposed rulemakings which the Department has scheduled over the next two years to comply with the HSWA amendments. The goal of the Department is to operate an equivalent program to the federal program.

> DIRECTOR'S RECOMMENDATION: Based upon the report summation, it is recommended the Commission authorize the Department to conduct a public hearing, to take testimony on these proposed amendments to the hazardous waste management rules, OAR Chapter 340, Divisions 100, 102 and 104.
>
> ACTION: It was MOVED by Commissioner Buist, seconded by Commissioner Bishop and passed unanimously that the Director's recommendation be approved.

Commissioner Denecke asked if hazardous waste fuel could be burned in industrial boilers. Mike Downs, Administrator of the Hazardous and Solid Waste Division, responded that hazardous waste fuel was prohibited for use in commercial boilers (apartment houses, schools, public buildings, etc.) that are generally located closer to people and are not as carefully operated. Use is allowed under controlled conditions in industrial boilers which are usually located in less populated areas, have better emission control equipment installed and are more carefully operated.

Agenda Item E: Request for Authorization to Hold a Public Hearing on Proposed Redesignation of the Salem Area as Attainment for Ozone and Proposed Revision of the State Implementation Plan.

The Clean Air Act of 1977 required states to submit plans for achieving attainment with national ambient air standards. The Salem area was designated nonattainment for ozone in June 1979. The Environmental Quality Commission adopted an ozone control strategy for the Salem nonattainment area in June 1979. The strategy was added to the State Implementation Plan in 1980. Ambient ozone levels in the Salem area have improved significantly. No violations of the standard have been recorded since 1981. It therefore appears appropriate to redesignate the Salem are as attainment for ozone.

DIRECTOR'S RECOMMENDATION: Based on the staff report summation, it is recommended the Commission authorize a public hearing to take testimony on:

1. The proposed redesignation of the Salem area as attainment for ozone.

2. The proposed replacement of the Salem ozone attainment strategy (Section 4.5 of the State Implementation Plan) with an ozone maintenance strategy as a revision to the State Implementation Plan.

ACTION: It was MOVED by Commissioner Buist, seconded by Commissioner Bishop and passed unanimously that the Director's recommendation be approved.

Commissioner Bishop asked about the status of ozone standard compliance in the Portland area. Merlyn Hough, Air Quality Division, responded that the Portland area is designated non-attainment for ozone. Discussions are ongoing with EPA regarding the potential acceptability of designating Portland to be in compliance with the standard.

Agenda Item F: Proposed Adoption of Amendments to the Water Quality Standards Regulation, OAR 340, Chapter 41: Mixing Zone

Policy, Toxic Substances Standards, and Total Dissolved Solids Standards.

This item proposes adoption of amendments to Oregon's water quality standards. This item was initially presented to the Commission for adoption at the July 17 meeting in Coos Bay. At the request of the Northwest Pulp and Paper Association (NWPPA), consideration of the item was delayed to allow them time to review the Department's recommendations. The Department has met with NWPPA representatives and discussed the agenda item.

Douglas Morrison, Northwest Pulp and Paper Association, sent a letter to the Commission about this agenda item. The letter, which is made a part of the record of this meeting, stated that NWPPA was satisfied with the proposed rule and supported the rule adoption. Director Hansen indicated to the Commission that the NWPPA letter did not fully reflect the discussions staff had had with NWPPA. Vice Chairman Denecke asked that a memorandum about the discussions be included in the Department's files.

Director Hansen indicated that Table 20 in the proposed rule amendments included values for several parameters for which water quality standards have already been adopted in other sections of OAR Chapter 340, Division 41. These parameters are: Bacteria, gasses (total dissolved), Oil and grease, oxygen (dissolved), pH, solids (dissolved and salinity), solids (dissolved and turbidity), and temperature. To avoid confusion, it was recommended that these parameters be deleted from Table 20. In addition, since the Department is in the process of conducting an evaluation of color as recommended by the Commission at the July 17 EQC meeting, it was recommended that the color criteria be deleted from Table 20. A revised copy of Table 20 with these 9 parameters deleted was provided to the Commission.

> DIRECTOR'S RECOMMENDATION: Based upon the staff report summation, it is recommended the Commission adopt the final rule language as presented in:

1. Attachment A for the Mixing Zone Policy.

2. Attachment B for the Toxic Substances Standards.

3. Attachment C for the Total Dissolved Solids Standards.

ACTION: It was MOVED by Commissioner Buist, seconded by Commissioner Bishop and passed unanimously that the Director's recommendation in the staff report be approved with substitution of the revised Table 20 as recommended by the Director.

Agenda Item G: Appeal by Frank and Sandra Brown of On-Site Sewage Disposal System Variance Denial.

Frank and Sandra Brown have appealed the decision by the Department's variance officer to deny their application for a variance from Commission rules regarding installation of an on-site sewage disposal system. System deficiencies identified by Clackamas County were not corrected. The Browns installed the system using materials not allowed by EQC rules, and failed to follow procedures in the rules and obtain proper inspections. The system was placed into operation without final approval. The system appears to be functioning properly at this time. They have substantial land available, and the soils appear suitable.

In order to grant a variance, the Commission must find that strict compliance with the rules is inappropriate for cause, or that special physical conditions render strict compliance unreasonable, burdensome, or impractical. The department concluded that questions of materials should be more properly addressed through a rule change. The department further found no basis to conclude that the standard of unreasonable, burdensome, or impractical was met. Therefore, a variance in this situation is inappropriate.

DIRECTOR'S RECOMMENDATION: Based on the staff report summation , it is recommended the Commission uphold the decision to deny Frank and Sandra Brown's proposal to vary

from materials standards OAR 340-71-130(7), OAR 340-71-220(10), OAR 340-71-220(11), Or 340-71-220(12), and construction standards in OAR 340-71-175(4), OAR 340-71-175(5), OAR 340-71-175(6).

Mrs. Brown appeared to represent herself in this matter. She indicated that cost is the issue. She further indicated that they installed the system themselves, and put in the materials they were sold. They covered the system because it was raining and they needed to get the equipment out before it got too muddy. She stated the system is working effectively and they agree to replace the system if problems occur in the future. She believes that reconstruction of the system now is unreasonable and unduly burdensome.

Commissioner Denecke recapped the facts from the staff report and noted that Mr. and Mrs. Brown appeared to have ample opportunity to comply with the rules but seemed to make no effort to do so. Commissioner Bishop expressed the view that use of a variance in this case was inappropriate.

ACTION: It was MOVED by Commissioner Bishop, seconded by Commissioner Buist and passed unanimously that the variance officer's decision be upheld and that the appeal be denied.

There was no further business, and the meeting was adjourned at approximately 10 a.m.

MINUTES ARE NOT FINAL UNTIL APPROVED BY THE EQC

ENVIRONMENTAL QUALITY COMMISSION

Minutes of the One Hundred Eighty-First Meeting
July 17, 1987

Coos Bay City Hall
Council Chambers
500 Central Avenue
Coos Bay, Oregon

Commission Members Present:

Chairman, James Petersen
Vice Chairman, Arno Denecke
Mary Bishop
Sonia Buist

Commissioner Wallace Brill was absent.

Department of Environmental Quality Staff present:

Director, Fred Hansen
Assistant Attorney General, Michael Huston
Division Administrators and program staff members

Note:

Staff reports presented at this meeting, which contain the Director's recommendations, are on file in the Office of the Director, Department of Environmental Quality, 811 S. W. Sixth Avenue, Portland, Oregon 97204. Written material submitted at this meeting is made a part of this record and is on file at the above address.

BREAKFAST MEETING

The Environmental Quality Commission heard reports from Sandra Diedrich representing the Coos-Curry Council of Governments, Mr. Lynn Heusinkveld representing the Charleston Sanitary District, council representatives from the cities of North Bend and Coos Bay, and the Coos County commissioners. The reports reflected the sewage treatment improvements occurring in the cities and county. Ms. Diedrich presented an overview of the Coos Bay shellfish study conducted by DEQ in cooperation with the local governments in the area. She asked the EQC to acknowledge the efforts of numerous advisory committee members who assisted in the study.

FORMAL MEETING

CONSENT ITEMS

Agenda Item A: Minutes of the May 29, 1987, EQC meeting; June 12, 1987, Special Meeting; and June 19, 1987, Special Conference Call.

ACTION: It was MOVED by Commissioner Bishop, seconded by Commissioner Denecke and passed unanimously that the May 29, June 12 and June 19 minutes be approved.

Agenda Item B: Monthly Activity Report for April and May 1987.

Commissioner Denecke asked Linda Zucker, Hearings Officer, about the status of the McInnis cases. Ms. Zucker replied that David Ellis, the Assistant Attorney General prosecuting the cases, had said DEQ would wait until fall for the Multnomah County District Attorney's decision about pursuing criminal action. DEQ has not requested Ms. Zucker to reconsider her decision to delay the administrative hearings until conclusion of the criminal proceedings.

Commissioner Denecke volunteered to contact the District Attorney if the department thought that would be helpful. Michael Huston, Assistant Attorney General, indicated that his office would check

with the District Attorney and confer with Director Hansen about the next step.

ACTION: It was MOVED by Commissioner Buist, seconded by Commissioner Bishop and passed unanimously that the April and May 1987 activity reports be approved.

Agenda Item C: Tax Credits.

Commissioner Bishop asked about Styrofoam bottles and the high cost of recycling the bottles. Commissioner Bishop wondered if an additional cost could be added to the price to help with the recycling cost. Mike Downs, Administrator of the Hazardous and Solid Waste Division, said the department would review the existing law and consider this idea as potential amendments are formulated for the next legislative session.

ACTION: It was MOVED by Commissioner Denecke, seconded by Commissioner Buist and passed unanimously that the following Director's recommendations be approved:

1. Issue tax credit certificates for pollution control facilities:

   T-1875, Sandra Thun; manure control system.

   T-1877, Robert Wassmer; manure control system.

   T-1878, Robert Durrer; manure control system.

   T-1879, Crown Zellerbach Corp.; fugitive emissions control system.

   T-1880, Owens Illinois, Inc.; vacuum system addition to the glass recycling system.

   T-1883, Teledyne Industries, Inc.; fugitive emissions control system.

   T-1884, Teledyne Industries, Inc.; fugitive emissions control system.

2. Revoke Pollution Control Facility Certificate No. 1600 issued to Cascade Construction Company and reissue to Lakeside Industries.

3. Revoke Pollution Control Facility; Certificate No. 1359 issued to Willamina Lumber Company and reissue to Wheeler Manufacturing Company.

PUBLIC FORUM

No public forum testimony was given.

ACTION AND INFORMATIONAL ITEMS

Agenda Item D: Request for an Exception to OAR 340-41-026(2), (an EQC Policy Requiring Growth and Development be Accommodated within Existing Permitted Loads), by Pope & Talbot, Inc.

This item was a request by Pope & Talbot to increase the biochemical oxygen demand (BOD) permit limitations and to eliminate the existing color limitations required in their NPDES (National Pollutant Discharge Elimination System) waste discharge permit.

Pope & Talbot Pulp, Inc. owns and operates a pulp and paper mill near Halsey, Oregon. Wastewater is treated and discharged to the Willamette River in accordance with conditions of the NPDES permit issued by the Department. Pope & Talbot has applied for renewal of the permit.

In order to approve the company's request for the load limit increase, the Department had to be confident the increase would not cause water quality standards violations and the EQC would grant an exception to their water quality management plan policy, as defined by OAR 340-41-026(2).

DIRECTOR'S RECOMMENDATION: Based upon the staff report summation (in the staff report), it is recommended the Commission take the following actions about the request from Pope & Talbot, Inc. for modified permit limits:

1. BOD Limits

   a. Maintain the existing BOD limitations from May 1 to October 31.

   b. Authorize the Department to permit increased winter BOD discharges if the Department determines there is a demonstrated need.

   c. Direct the Department to determine how much additional summer season waste assimilative capacity exists in the Willamette River, and propose criteria for allocation of any reserve assimilative capacity to existing and potential new dischargers.

2. Color Limits

   a. Deny the request for elimination of the color limit and maintain the existing color limitation of 1500 color units based on an effluent flow of 18 million gallons per day from May 1 to October 31 of each year.

   b. Eliminate color limitations from November 1 to April 30 of each year.

Steve Penner of Shedd, Oregon, told the Commission he was a recreational user of the Willamette River near the Halsey discharge area. He felt the discharge was significant: the color had increased and the odor was stronger, particularly in the morning. Mr. Penner said there seemed to be a reduction in the number of cutthroat trout below the mixing area of the plant. He said the water stain could disrupt the food chain occurring in the river. In concluding, Mr. Penner felt Pope & Talbot should continue to treat their effluent for color and their request to eliminate the color limit should be denied.

The following spoke on behalf of Pope & Talbot Pulp, Inc.:

Peter Pope, Chairman and Chief Executive Officer, Pope & Talbot

William Frohnmayer, Vice President, Fiber Products, Pope & Talbot

Steve Wolffe, Engineer, Pope & Talbot

Bryan Johnson, Consultant to Pope & Talbot

Dr. Frank Schaumburg, Professor of Engineering, Oregon State University, Consultant to Pope & Talbot

The following points were emphasized by the company representatives:

-- The Halsey mill is a modern, environmentally clean mill.

-- The pulp business supplies the Oregon economy with $400 million dollars, and the pulp business is very competitive.

-- The company is willing to accept the current BOD limits at this time; however, they believe a study of the waste receiving capacity of the Willamette River is essential.

-- Although it appears the company can meet the current BOD limit, they are concerned about compliance problems when temperatures drop in the fall and efficiency of the treatment process declines.

-- The bleach sequence at the mill has been changed to meet market demand. Less chlorine is used for bleaching. Additionally, mill effluent color has increased.

-- About 60,000 gallons of chlorine solution must now be added to the effluent to meet the color limit. Cost of wastewater treatment for the mill has nearly doubled, and no environmental benefit is produced.

-- Color in the effluent does not adversely impact aquatic life, although color in the water can result in subtle changes in the aquatic community of the river.

-- The color limitation is an unreasonable restriction, and effluent color is an aesthetic problem. Based upon the few

complaints the Department has received, the company has spent a great deal of money to meet color limits.

-- The color difference with and without treatment at the mill would probably not be noticeable in the river to the casual observer.

-- While alternative technologies for color prevention or color removal are being tested around the world, the techniques have not been successful for the types of pulping being done at the Halsey mill.

-- Color and odor in the river are not related.

-- When chlorine is added to the effluent (which contains lignins, tannins and other organic compounds), chlorinated organic compounds are produced. These compounds are a significant environmental concern because of their designation as carcinogens and mutagens.

Rod Schmall, Smurfit Newsprint Corporation, presented written testimony urging the Commission to study the waste assimilative capacity of the Willamette River. Due to a time limitation, Mr. Schmall did not speak to the Commission; however, the written testimony is made a part of the record of this meeting.

Larry Patterson, Water Quality Division, responded to the testimony presented and questions from the Commission. He reviewed background information on the color limits and the original concerns about the color impact on the City of Corvallis' downstream water supply. Mr. Patterson indicated that in 1985 the plant's color limits were being exceeded and the Department received more complaints. He also described the potential for oxygen bleaching as an alternative. This technique reduces the color and chlorine is not used in the process.

Chairman Petersen questioned whether it was appropriate for the department to approve wintertime waste load increases, in light of the policy statement wording of the rule.

Commissioner Buist expressed concern with cancer rates and cancer causing chemicals. She said that health concerns are more significant than aesthetics. Commissioner Denecke noted that he

was faced with a dilemma: while he did not want the color in the river, he did not want chlorine added because of the potential long-term health effects.

Chairman Petersen asked the Department to pursue a study of the Willamette River. The purpose of the study would be to update the assessment of the wasteload assimilative capacity and to develop criteria for load allocation. He also suggested that the color issue be included in the study.

> ACTION: It was MOVED by Commissioner Buist, seconded by Commissioner Bishop and passed unanimously to authorize the department to eliminate the color limit from the Pope & Talbot permit.
>
> It was further MOVED by Commissioner Bishop, seconded by Commissioner Buist, and passed unanimously to approve sections 1.a. and 1.c. of the Director's Recommendation. (Sections 1.b., 2.a. and 2.b. of the Director's Recommendation were not approved.)

Agenda Item E: Request for Commission Approval of the Construction Grants Management System and Priority List for Fiscal Year 1988.

This item was a request to approve the Fiscal Year 1988 Construction Grants Priority Management System and List.

Within the Management System there is a proposed amendment to establish reserves for capitalization of the State Revolving Fund; a proposed addition to establish a non-point source management planning reserve; and a proposed amendment to broaden eligibility for major sewer replacement and rehabilitation and combined sewer overflow separation projects.

> DIRECTOR'S RECOMMENDATION: Based on the staff report summation , it is recommended the Commission adopt the FY88 Construction Grants Priority List as presented in Attachment H. It is further recommended the Commission adopt the proposed amendment to OAR 340-53-025 regarding establishment of reserves to capitalize the State Revolving Fund, adopt the proposed addition to OAR 340-53-025 to allow establishment of

a non-point source management planning reserve, and adopt the proposed amendment to OAR 340-53-027 to broaden eligibility for major sewer replacement or rehabilitation and for combined sewer overflows.

Tom Lucas, Water Quality Division, responded to Commission questions about the ranking criteria used to create the priority list.

Ron Stillmaker, City of North Bend, asked the Commission to consider changing the ranking assigned to the City of North Bend. He said the city should be classified as B priority instead of C. Mr. Stillmaker felt the B rating is justified since the city has experienced water quality violations and bypassing of sewage to the bay.

Mr. Lucas responded that while the previous North Bend project had been classified as a B, information available to the department does not support a B rating for the current project. He further noted that said 1987 funding would cause about 20 projects to be moved off the 1988 list. This shift would effectively place the City of North Bend at about Number 21 and within the anticipated funding range assuming funds become available for 1988.

Lynn Heusinkveld, Charleston Sanitary District, recommended approval of the priority list.

ACTION: It was MOVED by Commissioner Denecke, seconded by Commissioner Bishop and passed unanimously that the Director's recommendation be approved.

Agenda Item F: Proposed Adoption of Amendments of Rules Related to Standards of Performance for New Stationary Sources of Air Contaminants, OAR 340-25-505 to 553.

This item was a request to incorporate provisions applicable to federal requirements into the Oregon Standards of Performance for New Stationary Sources.

The Clean Air Act requires the Environmental Protection Agency (EPA) to establish New Source Performance Standards (NSPS) to limit pollutant emissions from major new and modified sources.

States are allowed to develop rules enforcing NSPS in their jurisdiction. If EPA finds a state's rules to be adequate, then authority to administer the NSPS is delegated to the state.

Oregon first adopted rules to administer NSPS in 1978. Since then, the rules have been amended several times to keep them current with federal requirements. DEQ has committed, through the State/EPA Agreement (SEA), to update the NSPS rules on an annual basis. In the last year, EPA has published one new and three amended NSPS relevant to Oregon. The new provisions primarily affect large steam generating facilities and coil coaters.

DIRECTOR'S RECOMMENDATION: Based upon the staff report summation , it is recommended the Commission adopt the proposed amendments (attached to the staff report) to OAR 340-25-505 to 340-25-553, rules on National Standards of Performance of New Stationary Sources.

ACTION: It was MOVED by Commissioner Buist, seconded by Commissioner Bishop and passed unanimously that the Director's recommendation be approved.

Agenda Item G: Proposed Adoption of Amendments to Water Quality Standards Regulations, OAR 340, Chapter 41: Mixing Zone Policy, Toxic Substance Standards and Total Dissolved Solids Standards.

The Commission earlier directed the Department to prepare an issue paper about the standards for mixing zones and toxic substances. These issue papers were presented to the Commission in June 1986 with a request for authorization to conduct hearings on the proposed rule amendments. The hearings were authorized and conducted in five locations around the state in July 1986.

While most of the respondents favored the rule revisions, additional language changes were suggested, an explanation of rule implementation was requested and a discussion of the economic impact resulting from the changes was asked. Staff reviewed the testimony and revised the proposed amendments to incorporate the public comments. Final rule language is consistent with state statutes and the Clean Water Act.

DIRECTOR'S RECOMMENDATION: Based on the staff report summation , it is recommended the Commission adopt the final rule language as presented in the staff report for Attachment A, Mixing Zone Policy; Attachment B, Toxic Substances Standards; and Attachment C, Total Dissolved Solids Standards.

Robert Gilbert, Northwest Pulp and Paper Association (NWPPA), asked the Commission to delay this item until the Association had further time to review the standards. Mr. Gilbert indicated the Association did not receive a copy of the staff report and proposed standards until July 13 and the NWPPA staff was not immediately available to comment on the report.

Director Hansen advised the Commission that a delay would not be critical to the Department.

ACTION: It was MOVED by Commissioner Bishop, seconded by Commissioner Denecke and passed unanimously that Agenda Item G be delayed until the August 28 EQC meeting.

Agenda Item H: Proposed Adoption of Amendments to Rules Concerning Hazardous Waste Management Fees, OAR 340-102-065 and 340-105-113 and Proposed Repeal of OAR 340-120-030.

This item was a request to adopt proposed amendments to rules about hazardous waste management fees and to repeal another fee-related rule.

The proposed amendments would increase the annual compliance determination fees paid by generators and handlers of hazardous waste and would increase the permit application processing fees for certain facilities. Other proposed amendments are for clarification.

The proposed fee increases are necessary to offset a current funding deficit in the Hazardous Waste Program and to maintain the program at the level required for EPA authorization.

DIRECTOR'S RECOMMENDATION: Based upon the staff report summation , it is recommended the Commission adopt the proposed amendments to rules concerning hazardous waste

management fees, OAR 340-102-065 and 340-105-113 and repeal OAR 340-120-030.

The department provided the Commission with a corrected version of the proposed rule. A letter from the law firm representing Chem Securities was also provided to Commission members.

Frank Deaver, Tektronix Inc., told the Commission he agreed with the provisions of the amendments except for Page 3 of the proposed amendment. He said the $70,000 fee would be excessive for a small on-site hazardous waste treatment facility, and he would prefer the fee be based on a graduated payment schedule. Mr. Deaver asked the Commission to approve the fee schedule on page 3 of the rule and reconsider within the next 90 days a graduated fee for small business.

Diane Stockton, Omark Industries, agreed with Mr. Deaver. Additionally, Ms. Stockton asked the Commission to allow reconsideration of Pages 1 and 2 of the proposed rule. She felt the rule was not consistent with public policies supporting waste minimization and on-site treatment.

Mike Downs, Administrator of the Hazardous and Solid Waste Division, explained the intent of the amendments. He urged the Commission to adopt the rule as proposed, to direct the department to review the matter over the next 90 days and to return with proposed amendments.

ACTION: It was MOVED by Commissioner Buist, seconded by Commissioner Denecke and passed unanimously that the Director's recommendation be approved. Additionally, the department was directed to consider amendments to address concerns raised by Mr. Deaver and Ms. Stockton. The EQC authorized the department to proceed with a public hearing within 90 days.

Agenda Item I: Proposed Adoption of Revisions to "Oil and Hazardous Material Spills and Releases" Rules, OAR 340-108-002(9)(b); OAR 340-108-010; OAR 108-020(5); and Repeal of OAR 340-108, Appendix I, in its entirety.

This item was a request for permanent adoption of federal values for reporting hazardous waste spills. In addition to this request was a recommendation to incorporate 406 hazardous substances with reportable values. These values were adopted by the Environmental Protection Agency in April 1987.

> DIRECTOR'S RECOMMENDATION: Based upon the staff report summation , it is recommended that the Commission find that the extremely hazardous substances listed in 40 CFR Part 355-Appendix A, because of their quantity, concentration or physical or chemical characteristics, may pose a present or future hazardous to human health, safety, welfare or the environment when spilled or released. It is also recommended the Commission adopt the proposed revisions to "Oil and Hazardous Materials Spills and Releases" rules OAR 340-108-002; OAR 340-108-101; OAR 340-108-020 and repeal in its entirety Appendix I of OAR 340 Division 108.

Robert Gilbert, Northwest Pulp and Paper Association, submitted written testimony to the Commission. A copy of this testimony is made a part of this meeting record.

Director Hansen explained that industry was concerned with the strict liability imposed if the Director's recommendation was adopted. This resulted because the department was proposing to adopt 40 CFR Part 355 Appendix A list ahead of comparable adoption by EPA.

Rich Reiter, Hazardous and Solid Waste Division, presented an alternative recommendation that had been worked out with industry representatives. He presented the following amended Director's Recommendation:

> Based on the above (staff) report, it is recommended that the Commission adopt proposed revisions to "Oil and Hazardous Materials Spills and Releases" rules OAR 340-108-002; OAR 340-108-010; OAR 340-108-020 and repeal in its entirety Appendix I of OAR 340 Division 108 as presented in Attachment II with the further amendment that all references to 40 CFR 355 Appendix A be deleted from the amendments proposed in Attachment II.

ACTION: It was MOVED by Commissioner Buist, seconded by Commissioner Denecke and passed unanimously that the amended Director's recommendation be approved with all references to 40 CFR 355 removed.

Agenda Item J: Informational Report: Oregon's Toxic Air Pollutant Emission Inventory and Related Indoor Air Quality Issues.

This item presented information on the recently released Oregon Toxic Air Pollutant Emissions Inventory. The toxic air pollutant emissions inventory was conducted from 1985 to 1986 as a prerequisite to the development of a toxic air pollutant control program. The program is currently being developed.

The emissions inventory report identified non-point sources as being responsible for the largest quantities of toxic air pollutants released in Oregon. The report also emphasized the problem of indoor emissions of toxic air pollutants. The American Lung Association of Oregon asked if the Commission and the Department officially endorse those recommendations in the report relating to cigarette smoke. The Department recognizes that emission of cigarette smoke in public places is regulated through the Administrative Rules of the Oregon State Health Division.

DIRECTOR'S RECOMMENDATION: It is recommended the Commission accept the Oregon Toxic Air Pollutant Emissions Inventory and support appropriate Department actions protecting those exposed to indoor air pollutants.

Joe Weller, American Lung Association of Oregon, told the Commission there are two groups involuntarily exposed to tobacco smoke: children living in homes where their parents smoke and employees who spend their days in enclosed areas with no regulations of smoking. Mr. Weller suggested the Commission support the following actions:

1. Request the department to work closely with the State Health Division and with Workers Compensation Department to develop an indoor air legislation package for the 1989 Legislature. This package should identify a lead agency and also

appropriate funds to develop a program to reduce exposure to indoor air pollution, specifically cigarette smoke.

2. Request the department to develop a media-based educational program about children exposed to passive smoke at home.

3. Request the department to adopt an indoor air quality standard for cigarette smoke, to publicize that standard and to provide measurement services or instruments to interested people.

Dr. Buist told the Commission she strongly supported the study and Mr. Weller's proposals. Attached to the minutes is the transcript of Dr. Buist's comments about the risks and effects of indoor air pollutants caused by cigarette smoke.

Steve Boedigheimer, Oregon State Health Division, spoke to the Commission about the training programs and publications the State Health Division offers. Mr. Boedigheimer gave the Commission several copies of the publications.

ACTION: It was MOVED by Chairman Petersen, seconded by Commissioner Buist and passed unanimously that the informational report be accepted and that the department be directed to work with the Health Division to develop legislation that addresses Mr. Weller's suggestions for the 1989 legislative session.

Agenda Item K: Information Report: Issues, Concerns and Legislation Associated with Marine Paints Containing Tributyl Tin (TBT).

Tributyl tins are organotin compounds used as the active biocidal ingredient in marine antifouling paints. After the antifouling paints are applied, a small amount of TBT is leached slowly from the paint surface to retard or prevent the growth of fouling organisms such as barnacles, algae and tubeworms. However, TBT is also highly toxic to other marine biota such as oysters and clams. Oysters have been an indicator species for TBT, developing abnormal shell structure in the presence of TBT at parts per trillion levels.

Restrictions for using TBT are in effect in Europe and are currently being considered by EPA. Individual states have enacted legislation to control TBT immediately in the absence of guidance from EPA. Without any indication that TBT is a problem in Oregon estuaries, Oregon passed Senate Bill 551, which prohibits the use of TBT on recreational boats to prevent future contamination.

Commercial oyster growing areas near South Slough sanctuary, Coos Bay, were recently inspected and evidence of potential TBT contamination was discovered. Shell samples showed a high degree of thickening and malformation. Tissue and water quality samples were collected for TBT analysis and sent to Moss Landing Marine Laboratory in California. Depending on the analysis of the TBT analysis, a plan of action for the oyster growers and consumers to address potential human health risks will need to be coordinated with the Health Division.

DIRECTOR'S RECOMMENDATION: Although no published water quality standards or human health risk information exist, the presence of TBT in the oysters continues to concern the Department. In the absence of regulatory information, the Department believes that implementing actions to reduce and eventually eliminate toxic levels of TBT from entering waters of the sate and affecting aquatic life is essential. Therefore, the Department will continue to seek out the most up-to-date information available. Additionally, the Department will pursue funding opportunities and cooperative efforts with federal organizations to monitor and to manage potential sources of TBT for maximum environmental protection. By reducing the amount of TBT introduced into the environment, the amount that may be currently present in Oregon's estuaries should gradually degrade to less toxic forms and create less environmental risks in the near future.

To accomplish this goal, the Department proposes to do the following:

1. Evaluate existing conditions in other oyster growing estuaries such as Yaquina Bay and Tillamook Bay. The evaluation will be compared with the Coos Bay study and used to determine if other sensitive marine organisms such as clams might also be affected by TBT.

2. Investigate shipyard dry dock practices to determine what improvements for managing paint application and removal procedures and thus reducing the amount of TBT entering sensitive estuarine areas.

3. Develop a public information bulletin, as directed by SB 554, as quickly as possible to provide information on environmental effects of TBT. Included in the bulletin would be guidelines for recreational boat owners about properly removing and disposing TBT paints prior to non-TBT paint application.

Krystyna Wolniakowski, Water Quality Division, provided the Commission with samples of oysters affected with TBT.

ACTION: It was MOVED by Commissioner Denecke, seconded by Commissioner Buist, and unanimously passed that the report be accepted. The Commission asked the Department to keep them updated on this situation.

Agenda Item L: Proposed Repeal of Temporary Rule Amending Solid Waste Permit Application Processing Fee for Large General Purpose Domestic Waste Landfills, OAR 340-61-120.

This item was a request to repeal the temporary rule, which amended OAR 340-61-120, adopted by the Commission at the June 12 meeting.

At the June 12, 1987, EQC meeting, the Commission adopted a temporary rule amendment to the Solid Waste Permit Fee Schedule, OAR 340-61-120. The rule provided for an $85,000 permit application processing fee for large general purpose domestic waste landfills.

Since that meeting, the Legislature passed House Bill 2619, which amends Section 3, Chapter 679, Oregon Laws 1985 requiring the Department to investigate, evaluate, review and process any permit application for landfills and associated transfer stations proposed to receive solid waste from Multnomah, Clackamas and Washington Counties. This amendment meant that the Department would be able to cover the costs of processing the permit applications for the Waste Management and Tidewater Barge landfill

proposals from the existing Senate Bill 662 $1 per ton fee on disposal of solid waste in the Metro region.

DIRECTOR'S RECOMMENDATION: It is recommended the Commission repeal the temporary rule amending OAR 340-61-120 adopted at the June 12, 1987, EQC meeting.

ACTION: It was MOVED by Commissioner Denecke, seconded by Commissioner Bishop and passed unanimously that the Director's recommendation be approved.

Additional Items

Director Hansen advised the Commission that the Department is preparing to issue the Part B License for the Hazardous Waste Disposal Site operated by Chem Securities at Arlington. Oregon Law (ORS 466.130) requires the Commission to hold a public hearing prior to issuance of a license in the area where the site is located. Director Hansen recommended the Commission authorize the Department to conduct the hearing.

ACTION: It was MOVED by Chairman Petersen, seconded by Commissioner Denecke and passed unanimously that a hearing on the proposed license for the Chem Securities Hazardous Waste Disposal Facility be authorized and that the Department be authorized to serve as Hearings Officer for the Commission.

The Commission discussed the remaining EQC dates for the year and decided to leave the dates as previously scheduled.

Director Hansen called the Commission's attention to the written report on legislation prepared by Stan Biles.

There was no further business, and the meeting was adjourned.

DR. BUIST'S COMMENTS ON AGENDA ITEM J

While I don't have a question, I strongly support what Joe Weller said. When I first became involved with the whole issue of second-hand smoke, I was frankly quite skeptical about its importance and the health risk. My real involvement came when I chaired a committee for the National Institute of Health, which had to look at the evidence. As a result I was then put on the National Academy of Sciences panel and also on the Surgeon's General Committee that produced last year's Surgeon General's report. I spent a great deal of my time reviewing the evidence and listening to experts in many different areas who had all reviewed their area. I have come to the conclusion that the weight of evidence is certainly coming down on the side that there is an appreciable health risk to second-hand smoke. Let's take lung cancer for instance. Almost all of the studies that have looked at the risk for lung cancer have demonstrated there is indeed an increased risk for people exposed to second-hand smoke. When you look at the reason for this, it becomes quite clear when you recognize that second-hand smoke has, in fact, as many toxic chemicals in it as mainstream smoke. In fact, some of these chemicals are in higher quantities although they are obviously tremendously diluted. So, there is a very, very good theoretical basis for second-hand smoke being carcinogenic. It almost certainly is and what saves us from an increased risk is the fact that it is diluted so much. For people working in environments where it isn't diluted that much, clearly there is an increased risk and I think the workplace is especially important. You can perhaps choose to do what you want at home, but if you are exposed to smoke at work, then that's another matter. I think the clearest risk is for lung cancer. Now the number of 5,000 deaths a year attributable

to second-hand smoke, lung cancer deaths, is a number that has been modeled from all sorts of existing numbers piled on each other. This may or may not be accurate. Nevertheless, it's almost certainly true that the risk is increased and the evidence is best for lung cancer. The evidence is reasonably good that children whose parents smoke have increased risks, have an increased number of respiratory infections and certainly increased respiratory symptoms and perhaps have a slight decrease in their rate of mind growth. The evidence is pretty good for all of that. Children are innocent victims and I can't tell you how often in the outpatient clinic we see a mother balancing a child on her lap with cigarette ash dropping onto the child. That child is certainly an innocent victim. So I do think that it is important to recognize that the risks are there. Cigarette smoke, if it was treated as both mainstream and second-hand smoke and treated as a usual occupational exposure, would have been regulated a long time ago. Joe mentioned that the risks were as great or greater than for radon. Interestingly, one of the theories as to why second-hand smoke is potentially carcinogenic is that normally radon attaches itself to solid surfaces. It attaches to the wall it's on. One of the ideas is that when there is smoke around in the room, the radon comes off from the surfaces and attaches itself onto the particulates from the smoke; actually that's how it gets down into the lungs. So normally the radon may be fairly innocuous but in this case it is piggy-backed down into the lungs. It is the radon that is causing some of the damage. In addition to the radon, there are, of course, hundreds of chemicals--many of which are carcinogenic. So the risk is there. The question is what to do about it. Now there is no question that we are moving toward a smoke-free society. The rate of smoking in this country now is about 27 percent in adults. That is remarkable. It's almost been cut in half of the last

25 years and gradually, each year it's moving down. One of the things that makes it move down is restricting the ability to smoke in the work place and in public places. I see smokers every day who are coming for help with giving up smoking because it is becoming so difficult for them to smoke at the work place and because they feel so embattled. There's no question that that has been a very effective policy. Putting up the price of cigarettes: every time you put up the price of cigarettes, a few more people stop smoking. That is another very effective policy. As you increase the price, fewer people will smoke. That has clearly been proved to be very effective. I endorse all that Joe has said and what the American Lung Association stands for. I'm not quite sure what we are empowered to do, but I would certainly strongly encourage the Department to move toward whatever it can. The suggestions Joe made are reasonable.

DOP973

NEIL GOLDSCHMIDT
GOVERNOR

Environmental Quality Commission

811 SW SIXTH AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. B, August 28, 1987, EQC Meeting

June 1987 Program Activity Report

Discussion

Attached is the June, 1987 Program Activity Report.

ORS 468.325 provides for Commission approval or disapproval of plans and specifications for construction of air contaminant sources.

Water Quality and Solid Waste facility plans and specifications approvals or disapprovals and issuance, denials, modifications and revocations of air, water and solid waste permits are prescribed by statutes to be functions of the Department, subject to appeal to the Commission.

The purposes of this report are:

1. To provide information to the Commission regarding the status of reported activities and an historical record of project plan and permit actions;

2. To obtain confirming approval from the Commission on actions taken by the Department relative to air contaminant source plans and specifications; and

3. To provide logs of civil penalties assessed and status of DEQ/EQC contested cases and status of variances.

Recommendation

It is the Director's recommendation that the Commission take notice of the reported program activities and contested cases, giving confirming approval to the air contaminant source plans and specifications.

Fred Hansen

RHARROWER:y
MD26
229-6484
Attachment

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DEPARTMENT OF ENVIRONMENTAL QUALITY

Monthly Activity Report

June, 1987

Table of Contents

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Air Quality, Water Quality, Hazardous and Solid Waste Divisions
(Reporting Units)

June, 1987
(Month and Year)

SUMMARY OF PLAN ACTIONS

	Plans Received		Plans Approved		Plans Disapproved		Plans Pending
	Month	FY	Month	FY	Month	FY	
Air							
Direct Sources	7	73	3	48	0	0	23
Small Gasoline Storage Tanks Vapor Controls	-	-	-	-	-	0	-
Total	7	73	3	48	0	0	23
Water							
Municipal	8	140	6	160	0	0	43
Industrial	6	90	5	86	0	0	8
Total	14	238	11	246	0	0	51
Solid Waste							
Gen. Refuse	3	21	2	12	3	4	19
Demolition	-	4	1	4	-	-	2
Industrial	1	14	1	17	1	1	11
Sludge	-	1	-	1	-	-	1
Total	4	40	4	34	4	5	33
Hazardous Wastes	-	0	-	0	-	-	-
GRAND TOTAL	25	351	18	328	4	5	107

MP658

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

MONTHLY ACTIVITY REPORT

DIRECT SOURCES
PLAN ACTIONS COMPLETED

Permit Number	County	Plan Action Number	Source Name	Process Description	Date Rcvd	Status
09 0001	DESCHUTES	213	DAW FOREST PRODUCTS CO	SCRUBBER FOR BOILER	02/13/87	APPROVED
26 3231	MULTNOMAH	220	WILLAMETTE ELECTRIC PRODS	HEAT CLEANING OVEN	04/16/87	APPROVED
10 0030	DOUGLAS	223	SUN STUDS, INC	BOILER PRE-HEATER	04/28/87	APPROVED

TOTAL NUMBER QUICK LOOK REPORT LINES 3

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Air Quality Division (Reporting Unit) — June 1987 (Month and Year)

SUMMARY OF AIR PERMIT ACTIONS

	Permit Actions Received Month	Permit Actions Received FY	Permit Actions Completed Month	Permit Actions Completed FY	Permit Actions Pending	Sources Under Permits	Sources Reqr'g Permits
Direct Sources							
New	6	32	3	27	19		
Existing	2	28	1	29	9		
Renewals	9	107	9	140	47		
Modifications	6	60	4	70	15		
Total	23	227	17	266	90	1398	1424
Indirect Sources							
New	2	18	0	21	5		
Existing	0	0	0	0	0		
Renewals	0	0	0	0	0		
Modifications	0	2	1	3	0		
Total	2	20	1	24	5	271	276
GRAND TOTALS	25	247	18	290	95	1669	1700

Number of Pending Permits	Comments
12	To be reviewed by Northwest Region
12	To be reviewed by Willamette Valley Region
5	To be reviewed by Southwest Region
1	To be reviewed by Central Region
0	To be reviewed by Eastern Region
22	To be reviewed by Program Operations Section
25	Awaiting Public Notice
13	Awaiting end of 30-day Public Notice Period
90	

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Air Quality Division (Reporting Unit) — June 1987 (Month and Year)

PERMIT ACTIONS COMPLETED

County	Name of Source/Project /Site and Type of Same	Date of Action	Action

Indirect Sources

MAR.6
AA5324

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Water Quality (Reporting Unit) — June 1987 (Month and Year)

PLAN ACTIONS COMPLETED - 11

County	Name of Source/Project /Site and Type of Same	Date of Action	Action
MUNICIPAL WASTE SOURCES - 6			
Jackson	Medford - Anaerobic Digester No. 3 - Cogeneration Equipment	7-6-87	Provisional Approval
Washington	USA - Rock Creek - Phase I Expansion (17 mgd)	7-2-87	Provisional Approval
Clackamas	Lake Oswego - Ride Lake Park Subdivision Pump Station	6-22-87	Provisional Approval
Yamhill	Newberg - Misc. Equipment	6-9-87	Provisional Approval
Douglas	El Camino Motel - Twin Sand Filters Disposal System (3,000 gpd)	6-12-87	Comments to Roseburg Office for permit issuance

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Water Quality Division (Reporting Unit) — June 1987 (Month and Year)

PLAN ACTIONS COMPLETED - 11

County	Name of Source/Project /Site and Type of Same	Date of Action	Action
INDUSTRIAL WASTE SOURCES - 5			
Marion	Meduri Farms, Inc. Manure Control Facility	6-8-87	Approved
Tillamook	Tom Blanchard Manure Control Facility	5-26-87	Approved
Tillamook	Mike Burdick Manure Control Facility	5-26-87	Approved
Tillamook	Moon Creek Farm Lyle Bledsoe Manure Control Facility	6-8-87	Approved
Tillamook	Twin Springs Dairy Manure Control Facility	6-8-87	Approved

Summary of Actions Taken
On Water Permit Applications in JUN 87

Source Category &Permit Subtype	Number of Applications Filed						Number of Permits Issued						Applications Pending Permits Issuance (1)			Current Number of Active Permits		
	Month			Fiscal Year			Month			Fiscal Year								
	NPDES	WPCF	Gen	NPDES	WPCF	Gen	NPDES	WPCF	Gen	NPDES	WPCF	Gen	NPDES	WPCF	Gen	NPDES	WPCF	Gen
Domestic																		
NEW	1	4		2	21		1	1		2	10		4	19				
RW				1				1		1	1		1					
RWO	5	6		50	36		1	7		32	25		47	30				
MW										3			1					
MWO	1	1		7	9		1	1		4	10		7	2				
Total	7	11		60	66		3	10		42	46		60	51		229	173	29
Industrial																		
NEW			7	7	15	51	2		5	7	5	55	4	15	4			
RW				1						1			1					
RWO	1			31	21		1	2		26	14		15	15				
MW				1						1			1					
MWO		2		12	8	10		2	1	18	9	11	2	3	2			
Total	1	2	7	52	44	61	3	4	6	53	28	66	23	33	6	165	131	383
Agricultural																		
NEW					2						1			1				
RW																		
RWO				1	1			1		1	2							
MW																		
MWO																		
Total				1	3			1		1	3			1		2	12	56
Grand Total	8	13	7	113	113	61	6	15	6	96	77	66	83	85	6	396	316	468

1) Does not include applications withdrawn by the applicant, applications where it was determined a permit was not needed, and applications where the permit was denied by DEQ.

It does include applications pending from previous months and those filed after 30-JUN-87.

NEW - New application
RW - Renewal with effluent limit changes
RWO - Renewal without effluent limit changes
MW - Modification with increase in effluent limits
MWO - Modification without increase in effluent limits

CAT	PERMIT NUMBER	TYPE	SUB-TYPE	OR NUMBER	FACILITY	FACILITY NAME	CITY	COUNTY/REGION	DATE ISSUED	DATE EXPIRES
DOM	100331	NPDES	NEW	OR003191-7	87425/A	TANGENT, CITY OF	TANGENT	LINN/WVR	11-JUN-87	31-MAR-92
IND	100339	NPDES	RWO	OR000101-5	32536/B	AGRIPAC, INC.	WOODBURN	MARION/WVR	24-JUN-87	30-APR-92
IND	100341	NPDES	NEW	OR002130-0	72596/B	RSG FOREST PRODUCTS, INC.	LIBERAL	CLACKAMAS/NWR	26-JUN-87	31-MAY-92
IND	100342	NPDES	NEW	OR003211-5	66661/B	CONSOLIDATED ROCK PRODUCTS, INC.	CLACKAMAS	CLACKAMAS/NWR	30-JUN-87	30-APR-92
WPCF										
IND	3629	WPCF	MWO		81035/A	SHINY ROCK MINING CORPORATION		MARION/WVR	04-JUN-87	31-DEC-87
DOM	100326	WPCF	RWO		7518/A	BEND, CITY OF	BEND	DESCHUTES/CR	04-JUN-87	30-APR-91
DOM	3669	WPCF	MWO		18678/B	AMERICAN ADVENTURE, INC., A CORPORATION OF DELAWARE		WASCO/CR	05-JUN-87	30-APR-88
DOM	100327	WPCF	RWO		78460/A	CENTRAL POINT SCHOOL DISTRICT NO. 6	CENTRAL POINT	JACKSON/SWR	11-JUN-87	31-MAY-92
DOM	100328	WPCF	RWO		27112/B	EWING, RICHARD G.	OTIS	LINCOLN/WVR	11-JUN-87	30-APR-92
DOM	100330	WPCF	NEW		100028/A	LAPINE SPECIAL SEWER DISTRICT	LAPINE	DESCHUTES/CR	11-JUN-87	31-MAY-92
DOM	100332	WPCF	RW		88312/A	THOUSAND TRAILS, INC.	PACIFIC CITY	TILLAMOOK/NWR	11-JUN-87	30-APR-92
IND	100333	WPCF	RWO		38634/A	HILL MEAT CO	PENDLETON	UMATILLA/ER	15-JUN-87	30-APR-92
DOM	100334	WPCF	RWO		58780/A	MOUNT BACHELOR, INC.	BEND	DESCHUTES/CR	15-JUN-87	31-MAR-92
AGR	100335	WPCF	RWO		81591/A	SIMPLOT, J R COMPANY	BOARDMAN	MORROW/ER	15-JUN-87	30-APR-92
DOM	100336	WPCF	RWO		600/A	ADRIAN, CITY OF	ADRIAN	MALHEUR/ER	17-JUN-87	30-APR-92
DOM	100337	WPCF	RWO		90657/A	UKIAH, CITY OF	UKIAH	UMATILLA/ER	17-JUN-87	30-APR-92
DOM	100338	WPCF	RWO		97152/A	WILLAMETTE LUTHERAN HOMES, INC.	SALEM	MARION/WVR	17-JUN-87	31-DEC-89
IND	100340	WPCF	RWO		24192/B	HULME, LESLIE	BROOKS	MARION/WVR	24-JUN-87	30-APR-92
IND	100171	WPCF	MWO		90622/A	WESTERN BRANDS, INC.	METOLIUS	JEFFERSON/CR	29-JUN-87	31-JAN-91

CAT	PERMIT NUMBER	TYPE	SUB-TYPE	OR NUMBER	FACILITY	FACILITY NAME	CITY	COUNTY/REGION	DATE ISSUED	DATE EXPIRES
General: Cooling Water										
IND	100	GEN01	MWO	OR003233-6	102873/A	F.E.I. CO.	BEAVERTON	WASHINGTON/NWR	24-JUN-87	31-DEC-90
General: Filter Backwash										
IND	200	GEN02	NEW	OR003234-4	102878/A	CLARKS BRANCH WATER ASSOCIATION	MYRTLE CREEK	DOUGLAS/SWR	26-JUN-87	31-DEC-90
General: Suction Dredges										
IND	700	GEN07	NEW		102831/A	GIBBY, SUE		JOSEPHINE/SWR	05-JUN-87	31-JUL-91
IND	700	GEN07	NEW		102867/A	BROWN, HAROLD K.		MOBILE SRC/ALL	19-JUN-87	31-JUL-91
IND	700	GEN07	NEW		102891/A	BECKER, L. WADE		MOBILE SRC/ALL	29-JUN-87	31-JUL-91
General: Gravel Mining										
IND	1000	GEN10	NEW		102866/A	JORGENSEN, ROBERT D.	MOLALLA	CLACKAMAS/NWR	17-JUN-87	31-DEC-91
NPDES										
DOM	3828	NPDES	MWO	OR003072-4	70095/B	AMERICAN ADVENTURE, INC., A CORPORATION OF DELAWARE	OTIS	LINCOLN/WVR	05-JUN-87	31-MAR-89
DOM	100329	NPDES	RWO	OR003102-0	39750/A	CLACKAMAS COUNTY SERVICE DISTRICT #1	WELCHES	CLACKAMAS/NWR	11-JUN-87	31-JAN-92

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Hazardous and Solid Waste Division (Reporting Unit) — June 1987 (Month and Year)

SUMMARY OF SOLID AND HAZARDOUS WASTE PERMIT ACTIONS

	Permit Actions Received Month	Permit Actions Received FY	Permit Actions Completed Month	Permit Actions Completed FY	Permit Actions Pending	Sites Under Permits	Sites Reqr'g Permits
General Refuse							
New	2	5	1	4	2		
Closures	1	3	-	3	4		
Renewals	1	13	3	20	14		
Modifications	2	16	3	17	-		
Total	6	37	7	44	20	175	176
Demolition							
New	-	1	-	2	-		
Closures	-	-	-	-	-		
Renewals	-	2	-	1	2		
Modifications	-	2	-	3	-		
Total	0	5	0	6	2	12	12
Industrial							
New	-	5	1	10	6		
Closures	-	4	1	2	1		
Renewals	-	7	1	15	4		
Modifications	3	17	4	17	-		
Total	3	33	7	44	11	103	103
Sludge Disposal							
New	-	2	-	3	1		
Closures	-	-	-	-	-		
Renewals	-	1	-	1	-		
Modifications	-	1	-	1	-		
Total	0	4	0	5	1	17	17
Total Solid Waste	9	79	14	99	34	307	308

Hazardous Waste

Outputs currently under revision.

MAR.5S (11/84) (SB5285.B)

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Hazardous and Solid Waste Division (Reporting Unit) — June 1987 (Month and Year)

PERMIT ACTIONS COMPLETED

County	Name of Source/Project /Site and Type of Same	Date of Action	Action
Coos	Coos Co. Solid Waste Dept. Beaver Hill Incinerator & Disposal Site Existing municipal waste landfill.	6/3/87	Permit renewed.
Lake	Fremont Lumber Company Fremont Sawmill-Lakeview Fill Site Existing industrial waste landfill.	6/3/87	Permit amended.
Clatsop	Seaside Sanitary Serv., Inc. Seaside Transfer Station Existing municipal waste TS.	6/4/87	Permit amended.
Columbia	Longview Fiber Company Clatskanie Log Yard Existing industrial waste landfill.	6/4/87	Permit amended.
Deschutes	Deschutes Co. Public Works Dept. Alfalfa Disposal Site Existing municipal waste landfill.	6/4/87	Permit amended.
Wasco	Mountain Fir Lmbr. Co. Tygh Valley Log Yard Lndfl. Existing industrial waste landfill.	6/4/87	Permit amended.
Washington	CT & H Company Lee Babcock Project Lndfl.	6/8/87	Letter authorization issued.
Lincoln	Wheeler Manufacturing Co. Toledo Mill Landfill Existing industrial waste landfill.	6/16/87	Permit amended.

MAR.6 (5/79) SB6807.B

County	Name of Source/Project /Site and Type of Same	Date of Action	Action
Marion	Marion County Macleay Transfer Station Existing municipal waste transfer station.	6/17/87	Permit revoked.
Malheur	Malheur County Harper Landfill Existing municipal waste landfill.	6/22/87	Permit application withdrawn.
Malheur	Malheur County Willowcreek Landfill Existing municipal waste landfill.	6/22/87	Permit application withdrawn.
Clackamas	Estacada Lumber Company Park Lumber Division Lndfl. Existing industrial waste landfill.	6/23/87	Closure permit issued.
Multnomah	ESCO Corporation ESCO Sauvie Island Existing industrial waste landfill.	6/23/87	Permit issued.
Yamhill	Boise Cascade Corp. Willamina Veneer Mill Landfill. Existing industrial waste landfill.	6/23/87	Permit issued.

DATE	WASTE TYPE	SOURCE	DISPOSE ANNUALLY
01-JUN-87	SODIUM HYDROXIDE SLUDGE	STEEL INVESTMENT FOUNDRIES	13 CU YD
01-JUN-87	POTASSIUM/SODIUM HYDROXIDE SLUDGE	STEEL INVESTMENT FOUNDRIES	33 CU YD
01-JUN-87	LEADED TANK BOTTOMS	ENV. SERVICES CONTRACTORS	385 CU YD
10-JUN-87	2,4 D CONTAMINATED SOLID WASTE	RCRA SPILL CLEANUP	15 CU YD
17-JUN-87	DIP TANK SLUDGE	WOOD PRESERVING	5 CU YD
17-JUN-87	PCB ITEMS	PCB REMOVAL & CLEANUP ACTIVITY	2.5 CU YD
17-JUN-87	PCB TRANSFORMERS DRAINED	PCB REMOVAL & CLEANUP ACTIVITY	1 CU YD
17-JUN-87	PCB TRANSFORMERS	PCB REMOVAL & CLEANUP ACTIVITY	1 CU YD
17-JUN-87	PCB CONTAMINATED SOLIDS	PCB REMOVAL & CLEANUP ACTIVITY	6 CU YD
17-JUN-87	WASTE FLAMMABLE PAINT	RCRA SPILL CLEANUP	0.54 CU YD
17-JUN-87	PCB CONTAMINATED SOLIDS	PCB REMOVAL & CLEANUP ACTIVITY	20 CU YD
17-JUN-87	WASTE PENTACHLOROPHENOL	WOOD PRESERVING	3.51 CU YD

12 Request(s) approved for generators in Oregon

01-JUN-87	CREOSOTE CONTAMINATED SPILL MATERIAL	RCRA SPILL CLEANUP	124.2 CU YD
01-JUN-87	LAB PACK - POISON B	HW TREAT/STORE/DISPOSE FCLTY	27 CU YD
01-JUN-87	LAB PACK - ORM-A	COLLEGES & UNIVERSITIES	0.27 CU YD
01-JUN-87	LAB PACK - POISON B	COLLEGES & UNIVERSITIES	0.27 CU YD
01-JUN-87	ETHYLENE GLYCOL	RESEARCH & DEVELOPMENT LABS	3 CU YD
08-JUN-87	ASPHALT/CONCRETE/CONSTRUCTION DEBRIS	NON-SUPERFUND SITE CLEANUP	13.5 CU YD
08-JUN-87	CRUSHED FLUORESCENT TUBES	HW TREAT/STORE/DISPOSE FCLTY	5.4 CU YD
08-JUN-87	CHROMIUM CONTAMINATED SOIL	WEAVING MILLS, WOOL	30 CU YD
08-JUN-87	PCB SOLIDS	PCB REMOVAL & CLEANUP ACTIVITY	0.54 CU YD
08-JUN-87	LAB PACK - ORM-B	OTHER GOVERNMENT AGENCY	0.27 CU YD

DATE	WASTE TYPE	SOURCE	DISPOSE ANNUALLY
08-JUN-87	LAB PACK - OXIDIZER	OTHER GOVERNMENT AGENCY	0.54 CU YD
08-JUN-87	LAB PACK - CORROSIVE BASE	OTHER GOVERNMENT AGENCY	0.54 CU YD
08-JUN-87	LAB PACK - ORM-E	OTHER GOVERNMENT AGENCY	0.54 CU YD
08-JUN-87	LAB PACK - FLAMMABLE	OTHER GOVERNMENT AGENCY	0.54 CU YD
08-JUN-87	LAB PACK - CORROSIVE ACID	OTHER GOVERNMENT AGENCY	0.54 CU YD
08-JUN-87	DIELDRIN CONTAMINATED SOIL	WEAVING MILLS, WOOL	30 CU YD
09-JUN-87	SOLIDIFIED PAINTS, RESINS, ADHESIVES	HW TREAT/STORE/DISPOSE FCLTY	648 CU YD
09-JUN-87	KYMENE GEL	COMMERCIAL PRINTING, SCREEN	15 CU YD
10-JUN-87	LAB PACK - FLAMMABLE LIQUID	OTHER GOVERNMENT AGENCY	13.5 CU YD
10-JUN-87	LAB PACK - WATERBASED PAINT	OTHER GOVERNMENT AGENCY	13.5 CU YD
16-JUN-87	LAB PACK - POISON B	OTHER GOVERNMENT AGENCY	10.8 CU YD
17-JUN-87	LAB PACK -	PRIMARY PRODUCTION OF ALUMINUM	3 CU YD
17-JUN-87	PCB CONTAMINATED SOIL	SUPERFUND SITE CLEANUP	15000 CU YD
17-JUN-87	INSULATION CONTAMINATED WITH CAUSTIC	PAPER MILLS(NO BUILDING PAPER)	5 CU YD
17-JUN-87	PAINT	PAINTING CONTRACTOR	27 CU YD
17-JUN-87	ALUMINA-SILICON-BORAN CARBIDE	SEMICONDUCTORS	11 CU YD
17-JUN-87	ALKALINE METAL CLEANER	OTHER INDUS. ORGANIC CHEMICALS	2.7 CU YD
17-JUN-87	PCB CONTAMINATED SOLIDS	PCB REMOVAL & CLEANUP ACTIVITY	150 CU YD
24-JUN-87	HAZARDOUS WASTE SOLID NOS	NON-SUPERFUND SITE CLEANUP	200 CU YD

29 Request(s) approved for generators in Washington

41 Requests granted - Grand Total

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Noise Control Program (Reporting Unit) — July, 1987 (Month and Year)

SUMMARY OF NOISE CONTROL ACTIONS

Source Category	New Actions Initiated Mo	New Actions Initiated FY	Final Actions Completed Mo	Final Actions Completed FY	Actions Pending Mo	Actions Pending Last Mo
Industrial/ Commercial	12	121	3	80	246	237
Airports			1	7	2	2

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Noise Control Program (Reporting Unit) — July, 1987 (Month and Year)

FINAL NOISE CONTROL ACTIONS COMPLETED

County	Name of Source and Location	Date	Action
Multnomah	Hayden Island Sewage Treatment Plant, Portland	6/87	In compliance
Lincoln	Tradewinds Ocean Sports Fishing Charters, Depoe Bay	6/87	In compliance
Marion	Classic Car Wash Woodburn	6/87	In compliance
Washington	Gilbert Airport 4 mi. NW of North Plains	6/87	Boundary approved

CIVIL PENALTY ASSESSMENTS

DEPARTMENT OF ENVIRONMENTAL QUALITY
1987

CIVIL PENALTIES ASSESSED DURING MONTH OF JUNE, 1987:

Name and Location of Violation	Case No. & Type of Violation	Date Issued	Amount	Status
Otto L. Laursen Milwaukie, Oregon	AQOB-NWR-87-36 Open burned prohibited materials while burning residential yard debris.	6/5/87	$50	Paid 6/17/87.
Leif H. Underdahl Marilyn Underdahl dba/Columbia American Plating Co. Portland, Oregon	HW-NWR-87-37 5 minor violations of the hazardous waste generator regulations.	6/5/87	$500	Paid 7/1/87.
Medford Corporation dba/Delah Timber White City, Oregon	AQOB-SWR-87-44 Open burned industrial wood waste.	6/16/87	$200	Paid 6/30/87.
Pacific Coatings, Inc. Portland, Oregon	AQ-NWR-87-40 Emitted odorous matter from a job paint line operation.	6/24/87	$500	Contested 7/10/87.
Kendle Willingham Douglas County	OS-SWR-87-39 Installed 2 holding tanks without being licensed and without obtaining a permit.	6/24/87	$400	Trying to serve.

VAK:b
GB6811

June, 1987
DEQ/EQC Contested Case Log

ACTIONS	LAST MONTH	PRESENT
Preliminary Issues	0	0
Discovery	0	0
Settlement Action	1	1
Hearing to be scheduled	1	0
Department reviewing penalty	0	0
Hearing scheduled	1	3
HO's Decision Due	1	0
Briefing	0	0
Inactive	4	4
SUBTOTAL of cases before hearings officer.	8	8
HO's Decision Out/Option for EQC Appeal	2	1
Appealed to EQC	4	5
EQC Appeal Complete/Option for Court Review	0	0
Court Review Option Taken	0	0
Case Closed	2	1
TOTAL Cases	14	15

15-AQ-NWR-87-178	15th Hearing Section case in 1987 involving Air Quality Division violation in Northwest Region jurisdiction in 1987; 178th enforcement action in the Department in 1987.
$	Civil Penalty Amount
ACDP	Air Contaminant Discharge Permit
AG1	Attorney General 1
AQ	Air Quality Division
AQOB	Air Quality, Open Burning
CR	Central Region
DEC Date	Date of either a proposed decision of hearings officer or a decision by Commission
ER	Eastern Region
FB	Field Burning
HW	Hazardous Waste
HSW	Hazardous and Solid Waste Division
Hrng Rfrl	Date when Enforcement Section requests Hearing Section schedule a hearing
Hrngs	Hearings Section
NP	Noise Pollution
NPDES	National Pollutant Discharge Elimination System wastewater discharge permit.
NWR	Northwest Region
OSS	On-Site Sewage Section
P	Litigation over permit or its conditions
Prtys	All parties involved
Rem Order	Remedial Action Order
Resp Code	Source of next expected activity in case
SS	Subsurface Sewage (now OSS)
SW	Solid Waste Division
SWR	Southwest Region
T	Litigation over tax credit matter
Transcr	Transcript being made of case
Underlining	New status or new case since last month's contested case log
WQ	Water Quality Division
WVR	Willamette Valley Region

CONTES.B

June 1987

DEQ/EQC Contested Case Log

Pet/Resp Name	Hrng Rqst	Hrng Rfrrl	Hrng Date	Resp Code	Case Type & No.	Case Status
WAH CHANG	04/78	04/78		Prtys	16-P-WQ-WVR-78-2849-J NPDES Permit Modification	Current permit in force. Hearing deferred.
WAH CHANG	04/78	04/78		Prtys	03-P-WQ-WVR-78-2012-J NPDES Permit Modification	Current permit in force. Hearing deferred.
McINNIS ENTERPRISES, LTD., et al.	09/20/83	09/22/83		Prtys	56-WQ-NWR-83-79 WQ Civil Penalty of $14,500	Hearing deferred.
McINNIS ENTERPRISES, LTD., et al.	10/25/83	10/26/83		Prtys	59-SS-NWR-83-33290P-5 SS license revocation	Hearing deferred.
FUNRUE, Amos	03/15/85	03/19/85	06/20/85	Resp.	05-AQ-FB-84-141 Civil Penalty of $500	Final order to be issued.
DANT & RUSSELL, INC.	05/31/85	05/31/85	03/21/86	Prtys	15-HW-NWR-85-60 Hazardous waste disposal Civil Penalty of $2,500	Settlement action.
BRAZIER FOREST PRODUCTS	11/22/85	12/12/85	02/10/86	Dept	23-HSW-85 Declaratory Ruling	EQC issued declaratory ruling July 25, 1986. Department of Justice to draft final order reflecting EQC action.
NULF, DOUG	01/10/86	01/13/86	05/05/86	Dept	01-AQFB-85-02 $500 Civil Penalty	Nulf appealed decision imposin $300 civil penalty.

June 1987

DEQ/EQC Contested Case Log

Pet/Resp Name	Hrng Rqst	Hrng Rfrrl	Hrng Date	Resp Code	Case Type & No.	Case Status
VANDERVELDE, ROY	06/06/86	06/10/86	11/06/86	DEQ	05-WQ-WVR-86-39 $5,500 Civil Penalty	DEQ's brief on appeal to EQC to be filed.
MALLORIE'S DAIRY, INC.	09/08/86	09/08/86	04/10/87	Prtys	08-AQOB-WVR-86-92 $1,050 Civil Penalty	Decision upholding penalty issued 6/18/87.
~~M-&-W-FARMS, INC.~~		~~12/28/86~~	~~02/20/87~~	Hrgs	~~12-AQ-FB-86-11~~ $300 civil penalty	No appeal of dismissal. Case closed.
RICHARD KIRKHAM dba, WINDY OAKS RANCH		01/07/87	03/04/87	Resp	1-AQ-FB-86-08 $680 civil penalty	Appealed to EQC.
PAUL D. HOWELL dba, HOWELL ENTERPRISES	04/30/87	05/04/87	08/03/87	Hrgs/ Prtys	2-AQ-SWR-87-17 $5,000 asbestos penalties	Hearing scheduled.
KURT ANTONI dba CASCADE SEPTIC TANK SERVICE	05/29/87	05/29/87	07/06/87	Prtys	3-OS-NWR-87-33 $500 civil penalty	Hearing scheduled.
MERIT USA, INC.	05/30/87	06/10/87	07/30/87		4-WQ-NWR-87-27 $3500 civil penalty (oil)	Hearing scheduled.

NEIL GOLDSCHMIDT
GOVERNOR

Environmental Quality Commission

811 SW SIXTH AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item C, August 28, 1987, EQC Meeting

TAX CREDIT APPLICATIONS

Director's Recommendations

It is recommended that the Commission take the following action:

1. Issue tax credit certificate for pollution control facility:

Appl. No.	Applicant	Facility
T-1881	Portland General Electric-Riverview Substation	Oil spill control system
T-1882	Portland General Electric-North Fork Hydroelectric Plant	Oil spill control system
T-1886	Les Schwab Warehouse Center, Inc.	Resource recovery facility
T-2069	Marwyn Naegeli	Manure holding facility

2. Revoke Pollution Control Facility Certificate 1080, issued to Naumes Orchards of Oregon, Incorporated, and reissue to Wild River Orchards, Incorporated.

Fred Hansen

R. Harrower:p
(503) 229-6484
August 5, 1987
MP954

NEIL GOLDSCHMIDT
GOVERNOR

Environmental Quality Commission

811 SW SIXTH AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

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Fred Hansen

R. Harrower:p
(503) 229-6484
August 5, 1987
MP954

Proposed August 28, 1987 Totals:

Air Quality	$ - 0 -
Water Quality	109,140.65
Hazardous/Solid Waste	434,355.00
Noise	- 0 -
	$ 543,495.65

1987 Calendar Year Totals not including Tax Credits Certified at this EQC meeting.

Air Quality	$ 1,017,695.63
Water Quality	1,400,732.28
Hazardous/Solid Waste	121,444.00
Noise	- 0 -
	$ 2,539,871.91

MP954

Application No. T-1881

State of Oregon
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT

---

1. Applicant

Portland General Electric Company
121 S.W. salmon Street
Portland, OR 97204

The applicant owns and operates an electric utility company with substations throughout Oregon.

Application was made for tax credit for a water pollution control facility.

2. Description of Facility

The facility is an oil spill containment system at the Riverview Substation in Portland, Oregon. The facility consists of an oil/water separator with an oil stop valve, and earthwork.

Claimed Facility Cost: $4,922.09

3. Procedural Requirements

The facility was completed after December 31, 1983, so it is governed by ORS 468.150 through 468.190 in effect on January 1, 1984, and by OAR 340-16-015 (effective July 13, 1984; amended March 21, 1985).

The facility met all statutory deadlines in that:

a. The request for preliminary certification was filed April 15, 1985, less than 30 days before construction commenced on April 22, 1985. However, according to the process provided in OAR 340-16-015(1)(b), the application was reviewed by DEQ staff and the applicant was notified that the application was complete and that construction could commence.

b. The request for perliminary certification was approved before application for final certification was made.

c. Construction of the facility was substantially completed on May 30, 1985 and the application for final certification was found to be complete on May 5, 1987 within 2 years of substantial completion of the facility.

4. Evaluation of Application

a. The facility is eligible because the principal purpose of the facility is to comply with a requirement imposed by the federal Environmental Protection Agency to prevent water pollution.

This prevention is accomplished by the containment of industrial waste as defined in ORS 468.700.

In accordance with federal law, electric utility companies must provide oil spill containment facilities at substations where oil filled equipment is utilized.

Prior to installation of the claimed facility, there were no means to contain oil spills. To comply with the federal requirements, the applicant installed oil spill containment facilities. The perimeter of the substation was ditched and sloped towards a new oil/water separator with an oil stop valve. With this system in place, all drainage from the substation is treated prior to entering the Willamette River.

b. Analysis of Eligible Costs

There is no return on investment for this facility. One hundred (100) percent of the cost of the facility is allocated to pollution control.

5. Summation

a. The facility was constructed in accordance with all regulatory deadlines.

b. The facility is eligible for final tax credit certification in that the principal purpose of the facility is to comply with a requirement imposed by the federal Environmental Protection Agency to prevent water pollution and accomplishes this purpose by the containment of industrial waste as defined in ORS 468.700.

c. The facility complies with DEQ statutes and rules.

d. The portion of the facility cost that is properly allocable to pollution control is 100%.

6. Director's Recommendation

Based upon the findings in the Summation, it is recommended that a Pollution Control Facility Certificate bearing the cost of $4,922.09 with 100% allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-1881.

L. Patterson:y
MY5626
(503)229-5374
August 13, 1987

Application No. T-1882

State of Oregon
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT

---

1. Applicant

Portland General Electric Company
121 S.W. Salmon St.
Portland, OR 97204

The applicant owns and operates the North Fork hydroelectric plant near Estacada, Oregon.

Application was made for tax credit for a water pollution control facility.

2. Description of Facility

The facility consists of an oil/water separator, piping, sumps, oil level alarms, and a concrete spill containment pad.

Claimed Facility Cost: $91,753.56
(Accountant's Certification was provided).

3. Procedural Requirements

The facility was completed after December 31, 1983, so it is governed by ORS 468.150 through 468.190 in effect on January 1, 1984, and by OAR 340-16-015 (effective July 13, 1984; amended March 21, 1985).

The facility met all statutory deadlines in that:

a. The request for preliminary certification was filed February 10, 1983 more than 30 days before construction commenced in July 1983.

b. The request for preliminary certification was approved before application for final certification was made.

c. Construction of the facility was substantially completed on August 30, 1986 and the application for final certification was found to be complete on May 11, 1987 within 2 years of substantial completion of the facility.

4. Evaluation of Application

a. The facility is eligible because the principal purpose of the facility is to comply with a requirement imposed by the federal Environmental Protection Agency to control water pollution.

This control is accomplished by containment of industrial waste as defined in ORS 468.700.

Prior to installation of the claimed facilities, there were no oil spill containment devices at the hydroelectric facility. Any release of insulating oils from the transformers could have entered the Clackamas River. Oil level alarms were placed on the transformers to warn operators of any potential oil releases from the transformers. A concrete spill containment slab was poured around the existing transformer foundations to contain all drippage and area runoff, and convey it to a new oil/water separator. Any loss of oil would now be contained in the separator until cleanup crews arrived on-site.

b. Analysis of Eligible Costs

There is no return on investment from this facility. One hundred (100) percent of the cost of the facility is allocated to pollution control.

5. Summation

a. The facility was constructed in accordance with all regulatory deadlines.

b. The facility is eligible for final tax credit certification in that the principal purpose of the facility is to comply with a requirement imposed by the federal Environmental Protection Agency to control water pollution and accomplishes this purpose by containment of industrial waste as defined in ORS 468.700.

c. The facility complies with DEQ statutes and rules.

d. The portion of the facility cost that is properly allocable to pollution control is 100 %.

6. Director's Recommendation

Based upon the findings in the Summation, it is recommended that a Pollution Control Facility Certificate bearing the cost of $91,753.56 with 100 % allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-1882.

L. D. Patterson
WC2275
(503) 229-5374
August 5, 1987

Application No. T-1886

State of Oregon
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT

---

1. Applicant

Les Schwab Warehouse Center, Inc.
Les Schwab Production Center
Madras Highway
Prineville, OR 97754

The applicant owns and operates a tire retreading and distribution center at Prineville, Oregon.

Application was made for tax credit for a solid waste resource recovery facility.

2. Description of Facility

The facility consists of an incinerator fueled by waste tires, a heat recovery boiler and air pollution equipment.

Claimed Facility Cost: $ 434,355.00
(Accountant's Certification was provided).

3. Procedural Requirements

The facility was completed after December 31, 1983, so it is governed by ORS 468.150 through 468.190 in effect on January 1, 1984, and by OAR 340-16-015 (effective July 13, 1984; amended March 21, 1985).

The facility met all statutory deadlines in that:

a. The request for preliminary certification was filed August 2, 1985 more than 30 days before installation commenced on June 1, 1986.

b. The request for preliminary certification was approved before application for final certification was made.

c. Installation of the facility was substantially completed on June 1, 1987 and the application for final certification was found to be complete on June 23, 1987 within 2 years of substantial completion of the facility.

4. Evaluation of Application

a. The facility is eligible because:

The principal purpose of the facility is to comply with a requirement imposed by the Department to reduce solid waste. The requirement is to comply with a Department issued Solid Waste Disposal Permit (for tire storage).

The facility burns reject tire casings and converts the heat to 120 pound steam. The steam produced is used in the tire retreading plant, producing up to 90% of required energy (average annual energy savings - $72,650).

This reduction is accomplished by the use of a resource recovery process.

b. Analysis of Eligible Costs

Eligible costs consist of the following major categories:

Burner	234,253
Boiler	77,438
Baghouse	52,832
Cover	43,987
Foundation	14,008
Conveyor	11,837
Total Cost	434,355

The applicant showed an average annual cash flow of minus $26,524. The figure is based on a five year projection of energy recovered ($363,272) and operating costs including labor, electricity, water and maintenance ($495,894). This creates a five year deficit of $132,622. This only included labor and electricity costs versus energy recovery.

Avoided disposal costs were not included. Department staff estimates that $.50 per tire is a conservative cost for disposal. This is based on experience at the Roseburg landfill where stockpiled tires were shredded by a mobile shredder for $.38 per tire. Les Schwab's Solid Waste Disposal Permit allows for disposal of shredded tires on site. Shredded tires can be landfilled for $.10 - $.12 per tire which is equivelent to $1.80 per cubic yard.

If avoided cost of disposal at $.50 per tire casing is included in the income the following calculations can be made:

15,000 tire casings per month
X 12 multiply by 12 months
180,000
$ X .50 multiply by $.50
$ 90,000
-26,524 minus the 26,524 perceived loss
$ 63,476 average annual cash flow

$\frac{434,355}{63,476} = 6.84$ Return on investment factor

The applicant indicated that the facility had a projected life of five years. Verification of this life has been requested and will be supplied to the Department. Using table one of OAR 340-16-030, for a five-year life, any number above 5 equals a return on investment of zero. Therefore, the facility is 100% allocable to pollution control.

The facility is in compliance with all Department rules.

Based on an analysis of HB2023 from the 1987 Legislative Session, this facility would not be eligible for tax credit after September 27, 1987, since energy recovery facilities are excluded from eligibility. However, under HB2022 (waste tire legislation), this facility and any other facility which burns tires may be eligible for a subsidy for utilization of waste tires.

5. Summation

a. The facility was constructed in accordance with all regulatory deadlines.

b. The facility is eligible for final tax credit certification in that:

The principal purpose of the facility is to comply with a requirement to reduce solid waste contained in a Department Solid Waste Disposal Permit.

This reduction is accomplished by the use of a resource recovery process.

c. The facility complies with DEQ statutes and rules.

d. The principal purpose of the facility is to utilize material that would otherwise be solid waste by burning these materials for their heat content.

The end product of the utilization is a usable source of power.

The Oregon law regulating solid waste imposes standards at least substantially equivalent to the federal law.

e. The portion of the facility cost that is properly allocable to pollution control is 100%.

6. Director's Recommendation

Based upon the findings in the Summation, it is recommended that a Pollution Control Facility Certificate bearing the cost of $434,355.00 with 100% allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-1886.

Steve Greenwood:f
(503) 229-5792
SF2252
July 24, 1987

Application No. T-2069

State of Oregon
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT

---

1. Applicant

Marwyn Naegeli
175 Wilson River Loop Road, N.
Tillamook, OR 97141

The applicant owns and operates a dairy farm in Tillamook, Oregon.

Application was made for tax credit for a water pollution control facility.

2. Description of Facility

The facility is a manure control system consisting of a 95.8' X 15.5' X 6' solids storage area, a 27.4' X 100.5' roof over an existing manure accumulation slab, concrete curbing, and building gutters.

Claimed Facility Cost: $12,465.00
(Accountant's Certification was provided).

The Accountant certified a facility cost of $12,465.00. The U.S. Department of Agriculture Stabilization and Conservation Service reimbursed the applicant $9,349.00. This amount will be subtracted by the applicant from the amount of tax credit for which he is eligible when he files his State Income Tax Form.

3. Procedural Requirements

The facility was completed after December 31, 1983, so it is governed by ORS 468.150 through 468.190 in effect on January 1, 1984, and by OAR 340-16-015 (effective July 13, 1984 amended; March 21, 1985).

The facility met all statutory deadlines in that:

a. The request for preliminary certification was filed March 4, 1986 more than 30 days before construction commenced on September 9, 1986.

b. The request for preliminary certification was approved before application for final certification was made.

c. Construction of the facility was substantially completed on November 11, 1986 and the application for final certification was found to be complete on May 12, 1986 within 2 years of substantial completion of the facility.

4. Evaluation of Application

a. The facility is eligible because the sole purpose of the facility is to control a substantial quantity of water pollution.

This control is accomplished by elimination of industrial waste as defined in ORS 468.700. Industrial waste includes liquid and solid substances which may cause pollution of the waters of the state.

Prior to installation of control facilities, manure was spread on land throughout the year, which frequently resulted in these materials entering Tillamook Bay via local ditches. The new manure solids holding area allows for storage of animal manure during wet weather conditions. The application of manure to land during the drier summer months has greatly reduced contamination of field runoff. Concrete curbing has been installed around the edge of the manure collection slabs for containment. A roof was constructed over an existing manure accumulation slab to minimize the collection of rainwater in the contaminated area. In addition, gutters have been installed on the animal confinement buildings to collect clean runoff from the roofed buildings and divert it outside of the manure collection area. This provides more holding capacity for manure in the storage area.

The claimed facility provides no return on investment. It should be understood that manure was spread on land prior to installation of the control facilities. The timing of the land application can now be controlled to minimize contamination of storm runoff. The sole purpose of this facility is to control wastes from the farm operation to reduce the contamination of the Tillamook Bay Drainage Basin.

The Department conducted water quality surveys in Tillamook Bay during 1979 - 1980. The surveys concluded that dairy operations were a major cause of high bacterial contamination in the drainage basin which threatened the oyster industry. The Department required the development of a Tillamook Bay Drainage Basin Agricultural Non-Point Source Pollution Abatement Plan which was incorporated into the North Coast Basin Water Quality Management Plan by the Environmental Quality Commission on August 28, 1981. This plan requires the control of animal waste from farm operations in order to reduce water pollution.

b. Analysis of Eligible Costs

One hundred percent (100%) of the facility cost is allocable to pollution control. There is no return on investment from this facility.

5. Summation

a. The facility was constructed in accordance with all regulatory deadlines.

b. The facility is eligible for final tax credit certification in that the sole purpose of the facility is to control a substantial quantity of water pollution and accomplishes this purpose by the elimination of industrial waste as defined in ORS 468.700.

c. The facility complies with DEQ statutes and rules.

d. The portion of the facility cost that is properly allocable to pollution control is 100%.

6. Director's Recommendation

Based upon the findings in the Summation, it is recommended that a Pollution Control Facility Certificate bearing the cost of $12,465.00 with 100% allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-2069.

L.D. Patterson:f
WF2291
(503) 229-5374
August 4, 1987

State of Oregon
Department of Environmental Quality

REISSUANCE OF POLLUTION CONTROL FACILITY CERTIFICATION

1. Certificate issued to:

Naumes Orchards of Oregon, Incorporated
P.O. Box 996
Medford, OR 97501

The Certificates were issued for seven Orchard Rite Wind machines.

2. Summation:

In May of 1980, the EQC issued pollution control facility Certificate 1080 to Naumes Orchards of Oregon, Incorporated. Naumes sold these facilities to Wild River Orchards, Incorporated in December of 1986. They now request that the remaining tax credits associated with this sale be reissued to Wild River Orchards, Incorporated.

3. Director's Recommendation:

It is recommended that Certificate Number 1080 be revoked and reissued to Wild River Orchards, Incorporated; the certificate to be valid only for the time remaining from the date of the first issuance.

R. Harrower:p
229-6484
August 5, 1987
MP954.A

Naumes Orchards of Oregon, Inc.
P.O. Box 996
Medford, Oregon 97501

June 22, 1987

Sherry Chew
Department of Enviromental Quality
P.O. Box 1760
Portland, Oregon 97207

Dear Ms. Chew,

This is to notify you of the transfer of seven (7) Orchard Rite Wind Machines which were certified for Pollution Control Facility Credit. In accordance with IRC section 337, Naumes Orchards of Oregon, Inc., sold its Oregon properties to Wild River Orchards, Inc., on December 31, 1986. Accordingly, Naumes Orchards of Oregon, Inc. revokes the original certification (#1080). Any unclaimed balance should be transferred to Wild River Orchards, Inc.

Enclosed please find copies of the Notice of Election and the Pollution Control Facility Certificate (#1080) issued to Naumes Orchards of Oregon, Inc. on May 16, 1980. Under the provisions of ORS 316.097(8), subsequent to the revocation of the original certification, a new certificate may be issued to Wild River Orchards, Inc., for the unclaimed balance of the tax credit.

Following is a schedule of the original credit granted and the balance still available to the transferee.

Pollution Control Facility Credit available to transferee under provisions of ORS 316.097(8):

Total cost of facility		$ 119,000
Percentage of cost allocable to pollution control by certificate #1080		80%
Maximum credit allowed (7.143% for 10 years)		$ 85,000
Less credits taken by tranfer		
1980	$849	
1981-1986	-0-	$ 849
Credit available for transfer		$ 84,151

Sincerely,

Naumes Orchards of Oregon, Inc.

Lynn Green

Lynn Green
Controller

Wild River Orchards, Inc.
P.O. Box 996
Medford, OR 97501

March 25, 1987

Sherry Chew
Department of Environmental Quality
P.O. Box 1760
Portland, OR 97207

Dear Ms. Chew,

This is to notify you of the transfer of seven (7) Orchard Rite Wind Machines which were certified for Pollution Control Facility Credit. In accordance with IRC section 337, Naumes Orchards of Oregon, Inc., sold its Oregon properties to Wild River Orchards, Inc., on December 31,1986.

Enclosed please find copies of the Notice of Election and the Pollution Control Facility Certificate (#1080) issued to Naumes Orchards of Oregon, Inc., on May 16, 1980. Under the provisions of ORS 316.097 (8), subsequent to the revocation of the original certification, a new certificate may be issued to Wild River Orchards, Inc., for the unclaimed balance of the tax credit.

Following is a schedule of the original credit granted, and the balance still available to the transferee.

Pollution Control Facility Credit available to transferee under provisions of ORS 316.097 (8):

Total cost of facility		$ 119,000
Percentage of cost allocable to pollution control by certificate number 1080		80%
Maximum credit allowed (7.143% for 10 years)		$ 85,000
Less credits taken by transferor		
1980	$849	
1981-1986	-0-	$ 849
Credit available for transfer		$ 84,151

Sincerely,

Wild River Orchard, Inc.

Lynn Green

Lynn Green
Controller

LG/CT
encl.

Certificate No. 1060

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Date of Issue 5/16/80

Application No. T-1192

POLLUTION CONTROL FACILITY CERTIFICATE

Issued To:	Location of Pollution Control Facility:
Naumes Orchards of Oregon, Inc. Box 996 Medford, OR 97501	Corner of Vilas Road and McLaughlin Drive Medford, Oregon
As: ☐ Lessee ☒ Owner	

Description of Pollution Control Facility:

Seven (7) Orchard Rite Wind Machines for frost protection, Tower serial no. GPT 004, 80024, 80025, 80008, 60008, 79231 and 79230.

Type of Pollution Control Facility: ☒ Air ☐ Noise ☐ Water ☐ Solid Waste ☐ Hazardous Waste ☐ Used Oil

Date Pollution Control Facility was completed: 2/29/80 Placed into operation: 2/29/80

Actual Cost of Pollution Control Facility: $ 119,000.00

Percent of actual cost properly allocable to pollution control: 80% or more

Based upon the information contained in the application referenced above, the Environmental Quality Commission certifies that the facility described herein was erected, constructed or installed in accordance with the requirements of ORS 468.175 and subsection (1) of ORS 468.165, and is designed for, and is being operated or will operate to a substantial extent for the purpose of preventing, controlling or reducing air, water or noise pollution or solid waste, hazardous wastes or used oil, and that it is necessary to satisfy the intents and purposes of ORS Chapters 454, 459, 467 and 468 and rules adopted thereunder.

Therefore, this Pollution Control Facility Certificate is issued this date subject to compliance with the statutes of the State of Oregon, the regulations of the Department of Environmental Quality and the following special conditions:

1. The facility shall be continuously operated at maximum efficiency for the designed purpose of preventing, controlling, and reducing the type of pollution as indicated above.
2. The Department of Environmental Quality shall be immediately notified of any proposed change in use or method of operation of the facility and if, for any reason, the facility ceases to operate for its intended pollution control purpose.
3. Any reports or monitoring data requested by the Department of Environmental Quality shall be promptly provided.

NOTE—The facility described herein is not eligible to receive tax credit certification as an Energy Conservation Facility under the provisions of Chapter 512, Oregon Law 1979, if the person issued the Certificate elects to take the tax credit relief under ORS 316.097 or 317.072.

Signed _____

Title Joe B. Richards, Chairman

Approved by the Environmental Quality Commission on the 16th day of May, 19 80.

NEIL GOLDSCHMIDT
GOVERNOR

Environmental Quality Commission

811 SW SIXTH AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item D, August 28, 1987, EQC Meeting

Request for Authorization to Conduct a Public Hearing Concerning Proposed Amendments to the Hazardous Waste Management Rules, OAR Chapter 340, Division 100, 102 and 104.

Background

This is the second in a series of proposed rulemakings which the Department has scheduled over the next two years. The Department is proposing the adoption, by reference, of a group of new federal hazardous waste management rules. The Department began this series with the adoption of another group of new federal rules on May 29, 1987.

The U.S. Environmental Protection Agency (EPA), under authority of the Resource Conservation and Recovery Act of 1976 (RCRA), has developed a national program for the management of hazardous waste. RCRA places the program within the federal province, but also includes provisions for EPA to authorize a state program to operate in lieu of the federal program. On January 31, 1986, EPA granted the State of Oregon Final Authorization to manage the base RCRA program (i.e., that part of the program in existence prior to the Hazardous and Solid Waste Amendments of 1984).

On November 8, 1984, the President signed into law a set of comprehensive amendments to RCRA, entitled the Hazardous and Solid Waste Amendments of 1984 (HSWA). These amendments require EPA to make extensive changes to the federal hazardous waste management rules, during the period from November 1984 through May 1990. States are required to make similar changes to their rules, to maintain authorization for the base RCRA program and to be eligible for additional authorization to implement HSWA-related regulations.

Pursuant to HSWA, EPA has promulgated and is continuing to promulgate a large number of new regulations and amendments to existing regulations. Also, EPA periodically makes amendments to the base RCRA program rules. The Department intends to propose the adoption of these new regulations and amendments in groups or "clusters", approximately once each six months. EPA is encouraging states to use this approach and has established regulatory deadlines by which states must adopt specific rule clusters.

In accordance with these requirements, the Department now requests authorization to conduct a public hearing, concerning the adoption of a group of these new federal rules and the repeal of one existing state rule which conflicts with a new federal rule. A draft hearing notice, Statement of Need, and Statement of Land Use Consistency are attached. The Commission is authorized to adopt hazardous waste management rules by ORS 466.020 and is authorized to take any action necessary to maintain Final Authorization for the RCRA program by Chapter 540, Oregon Laws 1987 (Senate Bill 116, 1987 Oregon Legislature).

Discussion

The Department is proposing the adoption, by reference, of the HSWA Codification Rule, amendments to the federal rules concerning the listing of materials as hazardous waste, regulations concerning the burning of hazardous waste fuels and used oil fuel in boilers and industrial furnaces, and regulations concerning tanks used to store or treat hazardous wastes. Some of these federal rules have been amended by EPA (primarily corrections), since they were first promulgated. These amendments appear in later issues of the Federal Register. To be as up to date with the federal rules as possible and to not knowingly adopt new rules containing errors or omissions, the Department has included these amendments in this package of rules proposed to be adopted by reference.

The Department is also proposing to repeal OAR 340-104-191, concerning hazardous waste tanks and to amend OAR 340-102-034 which refers to 340-104-191. These existing state rules conflict with the new federal rules.

In order to maintain authorization for the RCRA program, the state must adopt all of these federal rules or equivalent rules, within specified timeframes ranging from July 1, 1988 to July 1, 1990. Most of these rules are HSWA requirements and, as explained below, are already in effect in Oregon, but currently administered and enforced by EPA. The Department believes this dual regulation is undesirable. For this reason and to better protect public health, safety and the environment, the Department believes that these federal rules should be adopted by the state as soon as possible. Each of the proposed new rules is discussed separately below. The title of the new federal rule or federal rule amendment and the date EPA published it in the Federal Register are underlined. A brief summary of each new rule or rule amendment follows. Those rules which contain, in whole or in part, amendments to the base RCRA program are specifically identified.

HSWA Codification Rule (Federal Register, July 15, 1985).

Prior to HSWA, a state with Final Authorization, such as Oregon, administered its hazardous waste program in lieu of the federal program. When new, more stringent federal requirements were promulgated, the state was obligated to enact equivalent requirements within specified time frames. However, the new federal requirements did not take effect in the authorized state until they were adopted by the state.

In contrast, new federal requirements and prohibitions, adopted pursuant to HSWA, take effect across the nation without regard to whether a state has an authorized RCRA program or not. States must still adopt HSWA provisions as state law to retain Final Authorization. However, EPA is directed to enforce these requirements until the state adopts them and EPA has granted authorization for the state to manage these new parts of the program.

One such set of HSWA regulations is the HSWA Codification Rule. This rule incorporates into the existing federal regulations those parts of the HSWA statute that are immediately effective (i.e., self-implementing provisions mandated by Congress). The rule covers a long list of provisions, including the following:

1. The ban on placement of bulk liquid hazardous waste and nonhazardous liquids in landfills;

2. The requirement for double liners and leachate collection systems at hazardous waste surface impoundments and landfills;

3. The requirement to institute corrective action (i.e., cleanup) at permitted facilities;

4. The ban on disposal of hazardous waste in certain salt dome formations, caves and underground mines;

5. The ban on the use of materials mixed with dioxins or other hazardous waste for dust suppression;

6. The authority to add conditions to a permit, beyond those specifically provided for in the regulations, as deemed necessary to protect public health and the environment;

7. The ban on burning of fuel containing hazardous waste in cement kilns located within the boundaries of any city with a population greater than 500,000; and

8. The requirement that generators, and owners or operators of treatment, storage and disposal facilities, certify that they have a waste minimization program.

The state has been delayed in adopting this rule by reference, because statutory authority for several of these provisions was lacking or unclear. With the passage of Senate Bill 116 by the 1987 Legislature, clear authority to adopt all of these provisions by rule now exists.

Correction to the HSWA Codification Rule Concerning the Paint Filter Liquids Test (Federal Register, May 28, 1986).

This federal rule makes a technical correction to the July 15, 1985 HSWA Codification Rule described above. EPA is correcting errors it made in the July 15, 1985 rule, by removing the designation of "reserved", from the

paragraph of the regulation under which bulk hazardous and containerized liquid wastes are prohibited from disposal in a landfill. EPA states that the term "reserved" had been inadvertently used.

The correction also reinserts language, into the July 15, 1985 rule, requiring the use of the Paint Filter Liquids Test, to determine whether or not free liquids are present in a waste that will be landfilled. This requirement was originally promulgated by EPA on April 30, 1985 and has been in effect continuously since June 14, 1985. EPA's omission of this requirement from the HSWA Codification Rule was unintentional.

Technical Corrections to the HSWA Codification Rule (Federal Register, August 8, 1986).

This federal rule makes another amendment to the July 15, 1985 HSWA Codification Rule. The amendment concerns the waste minimization reporting requirement for generators of hazardous waste.

One of the provisions of HSWA requires generators of hazardous waste to include a description of their efforts to minimize the volume and toxicity of waste generated, on required periodic reports. However, in the July 15, 1985 HSWA Codification Rule, EPA inadvertently made the requirement applicable only to generators who ship their wastes off-site for treatment, storage or disposal. EPA is now correcting that rule by making the requirement also applicable to generators who manage their wastes on-site.

Burning of Hazardous Waste Fuel and Used Oil Fuel in Boilers and Industrial Furnaces (Federal Register, November 29, 1985).

These federal regulations prohibit the burning, in nonindustrial boilers, of both hazardous waste fuel and of used oil that does not meet specification levels for certain hazardous contaminants and flash point. They also provide administrative controls to keep track of marketing and burning activities. These controls include notification to the Department of waste-as-fuel activities, use of a manifest or, for used oil, an invoice system for shipments, and recordkeeping. Hazardous waste fuels, including processed or blended hazardous waste fuels, are also subject to storage requirements.

Currently, the Department does not regulate hazardous waste fuels or used oil fuels. Adoption of these federal regulations by reference has been delayed, because clear statutory authority was lacking. With the passage of Senate Bill 116, authority to adopt these regulations is now clear.

Technical Corrections to the November 29, 1985 Rules Concerning Burning of Hazardous Waste Fuel and Used Oil Fuel in Boilers and Industrial Furnaces (Federal Register, April 13, 1987).

These federal regulations clarify and make corrections to the November 29, 1985 federal rules described above. EPA is correcting several typographical errors and omissions and providing clarification on the following subjects:

1. Clarifies which producers, markets and burners of hazardous waste fuel must notify the Department of their activity;

2. Clarifies which burners of used oil fuel must notify the Department;

3. Clarifies that tanks used to blend hazardous waste fuels, along with all other hazardous waste fuel storage tanks, are subject to the hazardous waste storage rules;

4. Clarifies the exemption of coke and coal tar produced from coal tar decanter sludge by the iron and steel industry; and

5. Clarifies the definition of the term "marketer" as used in these rules.

Additional Listed Hazardous Wastes (Federal Registers, October 23, 1985, February 13, 1986, and February 25, 1986).

EPA has determined that the wastes listed below may cause either carcinogenic, teratogenic, adverse reproductive or other chronic, toxic effects in laboratory animals or humans. Accordingly, these federal regulations add those wastes to the lists of materials designated as hazardous wastes, as follows:

1. Adds six wastes generated during the production of dinitrotoluene (DNT), toluenediamine (TDA), and toluene disocyanate (TDI) to the "K" list in 40 CFR 261.32. Also, adds two compounds (O - and p - toluidine) to the list of commercial chemical products which are hazardous wastes when discarded (i.e., the "U" list in 40 CFR 261.33). (October 23, 1985 Federal Register);

2. Adds three wastes generated during the production of ethylene dibromide (EDB) to the "K" list in 40 CFR 261.32 (February 13, 1986 Federal Register); and

3. Adds four spent solvents and still bottoms from the recovery of these solvents to the "F" list in 40 CFR 261.31. The solvents are 1,1,2-trichloroethane; benzene; 2-ethoxyethanol and 2-nitropropane. Also, adds one of these solvents (2-ethoxyethanol) to the "U" list (i.e., discarded commercial chemical products) in 40 CFR 261.33. (February 25, 1986 Federal Register.)

Ten Percent Solvent Mixtures (Federal Register, December 31, 1985).

These federal regulations redefine the listing of spent solvents as hazardous waste (EPA hazardous waste numbers F001 through F005), to include mixtures containing ten percent or more (by volume) of listed solvent. Previously, the federal rules covered only the technical grade, practical grade or pure form of the solvents. Accordingly, there was a major loophole in the federal regulations which potentially allowed waste mixtures containing substantial amounts of spent solvent to escape regulation. EPA is now attempting to close that loophole.

These federal regulations do not conflict with and will be a good complement to the existing state mixture rules in OAR 340-101-033. The state rules pertain to mixtures containing listed manufacturing process wastes or unused commercial chemical products ("P" or "U" - listed wastes in 40 CFR 261.33). The new federal regulations pertain to spent solvents ("F" - listed wastes in 40 CFR 261.31).

Revised Standards for Hazardous Waste Storage and Treatment Tank Systems (Federal Register, July 14, 1986).

These new federal regulations contain a mixture of new HSWA requirements and amendments to the base RCRA program rules. EPA is significantly expanding the requirements to be met by persons who store or treat hazardous wastes in tanks. A summary of these new requirements is as follows:

1. Secondary containment systems and leak detection systems are mandated for new tank systems installed after January 12, 1987;

2. Secondary containment and leak detection are also required for existing tanks, in accordance with various compliance schedules, based upon the type of waste managed and the age of the tanks;

3. The term "new tank system" is defined to include not only newly manufactured tanks, but also existing tanks if reinstalled and used as replacements for existing hazardous waste tanks. The term also includes existing tanks which have not previously been used to store or treat hazardous waste, but which are converted to that use after the effective date of the regulations;

4. Periodic tank system integrity assessments are required for all tanks not equipped with secondary containment;

5. In the event a leak is detected, in any component of a tank system that is underground or that is not readily available for visible inspection, the new regulations require that the component be provided with secondary containment before the tank system is returned to service;

6. Design and installation standards for new tanks systems are established, as well as inspection, corrosion protection, operating and monitoring requirements for all tank system; and

7. Closure, post-closure and financial assurance requirements for tank systems are expanded.

There are several exemptions to these new rules, as follows:

1. The new requirements do not apply to small quantity generators (i.e., generators of between 100 and 1,000 kg/mo), as long as they store no more than 6,000 kg of waste or store any waste more than 180 days

(270 days if the waste is ultimately to be shipped off-site for more than 200 miles). Instead, these generators must comply with the previous federal tank rules;

2. The new requirements do not apply to a wastewater treatment unit regulated under Section 402 of the federal Clear Water Act (i.e., a NPDES permit).

3. The requirements do not apply to tank systems that are integrally tied to reclamation operations that are considered part of a closed-loop reclamation process, provided that hazardous materials are not accumulated over 12 months without being reclaimed and that the reclamation process does not involve controlled flame combustion; and

4. The owner/operator of a tank system may petition for a variance from the secondary containment requirement, if he/she can demonstrate (a) that an alternative design or operating practice will provide equivalent protection; or (b) that if a release does occur, there will be no substantial threat to human health or the environment. Note: the second variance is not available for new underground tanks.

Oregon rules (OAR 340-104-191) currently require secondary containment, but not leak detection, for new tanks installed after January 1, 1985. Previously, this rule was more stringent than the federal requirements. Now, however, the federal rules have become more stringent and comprehensive. In order to maintain RCRA authorization, the state cannot retain regulations which are less stringent than the federal rules. Also, the Department believes that these more comprehensive federal regulations provide better protection of public health, safety and the environment than the current state rules. Accordingly, in addition to proposing the adoption of the new federal rules, the Department is also proposing the repeal of OAR 340-104-191 and the amendment of OAR 340-102-034 which refers to 340-104-191.

Corrections to the July 14, 1986 Regulations for Hazardous Waste Storage and Treatment Tanks (Federal Register, August 15, 1986).

This federal rule corrects typographical and other minor administrative errors which EPA made in the new federal tanks rules described above.

Amendments to the Rules Concerning Identification and Listing of Hazardous Waste (Federal Register, August 6, 1986).

These amendments by EPA correct typographical errors in 57 existing entries in the federal lists of commercial chemical products which are hazardous wastes when discarded (i.e., the "P" list and "U" list in 40 CFR 261.33), and in the list of hazardous constituents (i.e., Appendix VIII of 40 CFR, Part 261). The amendments also add Chemical Abstracts Service (CAS) registry numbers to all listings, as an identification aid. These are amendments to the base RCRA program rules.

Summation

1. The State of Oregon currently has final authorization to operate a comprehensive hazardous waste management program, in lieu of a federally-operated program.

2. In order to maintain final authorization, federal law requires that the state adopt new federal requirements and prohibitions, within specified time frames, and that the state not retain regulations that are less stringent than the new federal regulations.

3. EPA has recently promulgated a series of such new regulations. The Department is proposing to adopt a group of these new federal rules by reference. The Department is also proposing to repeal an existing state rule, which is less stringent than one of the new federal rules, and to amend another state rule which refers to the less stringent state rule. Authorization to conduct a public hearing on these matters is requested.

4. The Commission is authorized to adopt hazardous waste management rules by ORS 466.020 and is authorized to take any action necessary to maintain RCRA authorization by Chapter 540, Oregon Laws 1987 (Senate Bill 116, 1987 Oregon Legislature).

Director's Recommendation

Based upon the Summation, it is recommended that the Commission authorize the Department to conduct a public hearing, to take testimony on these proposed amendments to the hazardous waste management rules, OAR Chapter 340, Divisions 100, 102 and 104.

Fred Hansen

Attachments
I. Statement of Need for Rulemaking
II. Statement of Land Use Consistency
III. Draft Hearing Notice
IV. Draft Rules, OAR 340, Divisions 100, 102 and 104
V. Federal Registers (Chronological Order)

Bill Dana:f
ZF2280
229-6015
August 11, 1987

Attachment I
Agenda Item D
8/28/87 EQC Meeting

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION
OF THE STATE OF OREGON

IN THE MATTER OF AMENDING OAR CHAPTER 340, DIVISIONS 100, 102 and 104	)))	STATEMENT OF NEED FOR RULEMAKING

STATUTORY AUTHORITY:

ORS 466.020 requires the Commission to:

(1) Adopt rules to establish minimum requirements for the treatment storage, and disposal of hazardous wastes, minimum requirements for operation, maintenance, monitoring, reporting and supervision of treatment, storage and disposal sites, and requirements and procedures for selection of such sites.

(2) Classify as hazardous wastes those residues resulting from any process of industry, manufacturing, trade, business or government or from the development or recovery of any natural resources, which may, because of their quantity, concentration, or physical chemical or infectious characteristics:

(a) Cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitating reversible illness; or
(b) Pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.

(3) Adopt rules pertaining to hearings, filing of reports, submission of plans and the issuance of licenses.

(4) Adopt rules pertaining to generators, and to the transportation of hazardous waste by air and water.

NEED FOR THE RULES:

The State of Oregon is currently authorized, by the federal government, to manage the comprehensive hazardous waste management program mandated by Congress under the Resource Conservation and Recovery Act (RCRA). In order to maintain authorization, the state must adopt new federal rules and repeal any existing state rules which are less stringent, within specified time frames. Loss of authorization would result in a federally-operated program in the state. The Oregon Legislature supports state authorization and has granted the Department and the Commission authority to take any action necessary to maintain Oregon's authorization.

ZF2280.1

PRINCIPAL DOCUMENTS RELIED UPON:

New federal hazardous waste management rules published in the Federal Register on July 15, 1985; October 23, 1985; November 29, 1985; December 31, 1985; February 13, 1986; February 25, 1986; May 28, 1986; July 14, 1986; August 6, 1986; August 15, 1986; and April 13, 1987. Existing State rules, OAR Chapter 340, Divisions 100, 102 and 104.

FISCAL AND ECONOMIC IMPACT:

The new, more stringent federal regulations will increase the costs of hazardous waste management in this state, including costs to small businesses. However, any increased costs associated with these new standards will occur irrespective of the Department's proposed rule amendments. The new standards for hazardous waste generators, and for owners and operators of hazardous waste management facilities, have already been promulgated and are currently administered by the U.S. Environmental Protection Agency (EPA). In the event that the state does not also adopt these new standards, EPA will continue to enforce and administer them in Oregon.

ZF2280.1

Attachment II
Agenda Item D
8/28/87 EQC Meeting

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION
OF THE STATE OF OREGON

IN THE MATTER OF AMENDING OAR CHAPTER 340, DIVISIONS 100, 102 AND 104	)))	LAND USE CONSISTENCY

The proposal described appears to be consistent with all statewide planning goals. Specifically, the rules comply with Goal 6 because they modify existing rules in a manner that ensures the safe management of hazardous waste generation, storage, transportation, treatment and disposal, and thereby provide protection for air, water and land resource quality.

The rules comply with Goal 11 by promoting hazardous waste reduction at the point of generation, beneficial use, recycling, treatment, and by controlling disposal site operations. They also intend to assure that current and long-range waste disposal needs will be accommodated.

Public comment on this proposal is invited and may be submitted in the manner described in the accompanying Public Notice of Rules Adoption.

It is requested that local, state and federal agencies review the proposal and comment on possible conflicts with their programs affecting land use and with statewide planning goals within their jurisdiction. The Department of Environmental Quality intends to ask the Department of Land Conservation and Development to mediate any apparent conflicts thereby brought to its attention.

ZF2280.2

Attachment III
Agenda Item D
8/28/87 EQC Meeting

Oregon Department of Environmental Quality

A CHANCE TO COMMENT ON...

Public Hearing

Date Prepared: Sep. 1, 1987
Hearing Date: Oct. 2, 1987
Comments Due: Oct. 7, 1987

WHO IS AFFECTED:

Persons who manage hazardous waste, including generators, and owners and operators of hazardous waste treatment, storage and disposal facilities. Also, persons who market or burn fuels containing or derived from hazardous waste or used oil.

WHAT IS PROPOSED:

The Department of Environmental Quality (DEQ) proposes to amend OAR Chapter 340, Divisions 100, 102 and 104, to include recently promulgated federal requirements. This is necessary to assure equivalence to the federal program and maintain Final Authorization, from the federal government, to manage a comprehensive hazardous waste management program in Oregon.

WHAT ARE THE HIGHLIGHTS:

- Additions to the lists of materials designated as hazardous wastes.
- New regulations concerning the marketing and burning of fuels derived from or containing hazardous waste or off-specification used oil.
- New regulations concerning hazardous waste storage and treatment tanks and the repeal of an existing state rule that conflicts with the new regulations.
- New regulations banning the disposal of bulk liquids in hazardous waste landfills, banning the disposal of hazardous waste in certain geologic formations, banning the use of materials mixed with dioxins or other hazardous waste for dust control and banning the burning of hazardous waste in certain cement kilns.
- New regulations concerning the cleanup (corrective action) of continuing and past releases of contaminants, to the environment, from permitted hazardous waste management facilities.
- New regulations requiring generators and owner/operators of hazardous waste management facilities to certify that they have instituted a waste minimization program.

811 S.W. 6th Avenue
Portland, OR 97204

11/1/86

FOR FURTHER INFORMATION:

Contact the person or division identified in the public notice by calling 229-5696 in the Portland area. To avoid long distance charges from other parts of the state, call 1-800-452-4011.

ZF2280.3

HOW TO COMMENT:

A Public Hearing is scheduled for:

9:00 a.m.
Friday, October 2, 1987
DEQ's Portland Office
811 S.W. Sixth Ave.
4th Floor Conference Room

Written comments should be submitted at the public hearing or sent to DEQ, Hazardous and Solid Waste Division, Attn: Bill Dana, 811 S.W. 6th, Portland, Oregon 97204, by October 7, 1987.

WHAT IS THE NEXT STEP:

After the public hearing, DEQ will evaluate the comments, prepare a response to comments and make a recommendation to the Environmental Quality Commission in December 1987. The Commission may adopt the amendments as proposed, adopt modified amendments as a result of the testimony received or decline to adopt any amendments.

For more information, or to receive a copy of the proposed rule amendments, call Bill Dana at (503) 229-6015 or toll-free at 1-800-452-4011 in the State of Oregon.

ZF2280.3

Attachment IV
Agenda Item D
8/28/87 EQC Meeting

Before the Environmental Quality Commission of the State of Oregon

In the Matter of Amending) Proposed Amendments
OAR 340, Divisions 100, 102 AND 104)

Unless otherwise indicated, material enclosed in brackets [ ] is proposed to be deleted and material that is underlined is proposed to be added.

1. Rule 340-100-002 is proposed to be amended as follows:

Adoption of United States Environmental Protection Agency Hazardous Waste Regulations.

340-100-002 (1) Except as otherwise modified or specified by OAR Chapter 340, Divisions 100 to 106, the rules and regulations governing the management of hazardous waste, including its generation, transportation by air or water, treatment, storage and disposal, prescribed by the United States Environmental Protection Agency in Title 40 Code of Federal Regulations, Part 260 to 266, 270 and Subpart A of 124, amendments thereto promulgated prior to [May 1, 1985] July 1, 1986, and amendments listed below in section (2) of this rule are adopted and prescribed by the Commission to be observed by all persons subject to ORS 466.005 to 466.080, and 466.090 to 466.215.

(2) In addition to the regulations and amendments promulgated prior to [May 1, 1985] July 1, 1986, as described in section (1) of this rule, the following amendments to Title 40 Code of Federal Regulations, Part 260 to 266, 270 and Subpart A of 124, as published in volumes [50 and] 51 and 52 of the Federal Register (FR), are adopted and prescribed by the Commission to be observed by all persons subject to ORS 466.005 to 466.080, and 466.090 to 466.215:

[(a) Technical corrections to the definition of solid waste, in 50 FR 33542-43 (August 20, 1985).]

[(b) Amendments applicable to generators of between 100 kg (220 lbs) and 1,000 kg (2,200 lbs) of hazardous waste in a calendar month, in 51 FR 10174-76 (March 24, 1986).]

[(c) Amendments pertaining to closure and post-closure care and financial responsibility for hazardous waste management facilities, in 51 FR 16443-59 (May 2, 1986).]

[(d) Amendments clarifying the listing for spent pickle liquor from steel finishing operations, in 51 FR 19322 (May 28, 1986) and 51 FR 33612 (September 22, 1986).]

(a) [(e)] Amendments pertaining to liability coverage for hazardous waste management facilities, in 51 FR 25354-56 (July 11, 1986).

(b) Revised standards for hazardous waste storage and treatment tank systems, in 51 FR 25470-86 (July 14, 1986).

(c) Amendments to the rules concerning identification and listing of hazardous waste, in 51 FR 28298-310 (August 6, 1986).

(d) Technical corrections to the HSWA final codification rule, in 51 FR 28556 (August 8, 1986).

(e) Corrections to the revised standards for hazardous waste storage and treatment tank systems, in 51 FR 29430-31 (August 15, 1986).

(f) Amendments clarifying the listing for spent pickle liquor from steel finishing operations, in 51 FR 33612 (September 22, 1986).

(g) Technical corrections to the rules concerning burning of hazardous waste fuel and used oil fuel in boilers and industrial furnaces, in 52 FR 11821-22 (April 13, 1987).

2. Rule 340-102-034 is proposed to be amended as follows:

Accumulation Time.

340-102-034 In addition to the requirements of 40 CFR 262.34, a generator may accumulate hazardous waste on-site for 90 days or less without a permit provided that[:] ,

[(1)] If storing in excess of 100 containers, the waste is placed in a storage unit that meets the requirements of 40 CFR 264.175[; and] .

[(2) If storing in tanks, the tank unit complies with rule 340-104-101.]

3. Rule 340-104-191 is proposed to be deleted as follows:

[Design of Tanks]

[340-104-191 (1) Owners and operators of facilities subject to the requirements of 40 CFR 264.191 shall also comply with the requirements of section (2) of this rule.

(2) For tanks installed after January 1, 1985 tanks and related appurtenances, including but not limited to pipes, valves, backflow prevention devices, gauges, or pumps within 5 feet of the tank, must have secondary containment that:

(a) Is sufficiently impervious to contain leaks, spills and accumulated precipitation until the collected material is detected and removed;

(b) Has sufficient capacity to hold the entire volume of the largest tank; and

(c) Prevents run-on into the containment system unless there is sufficient excess capacity in addition to that required by subsection (2)(b) of this rule to contain it.]

[(Comment: it is intended that the appurtenance containment return any leakage to the main tank containment.)]

ATTACHMENT V IS TOO VOLUMINOUS TO REPRODUCE. COPIES ARE AVAILABLE FOR INSPECTION AT DEQ OFFICES AROUND THE STATE. CONTACT BILL DANA AT 229-5913 IN PORTLAND OR AT 1-800-452-4011 STATEWIDE FOR FURTHER INFORMATION.

ZF2280.C

NEIL GOLDSCHMIDT
GOVERNOR

Environmental Quality Commission

811 SW SIXTH AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Fred Hansen, Director

Subject: Agenda Item No. E, August 28, 1987, EQC Meeting

Request for Authorization to Hold a Public Hearing on Proposed Redesignation of the Salem area to Attainment for Ozone, and Proposed Revision of the State Implementation Plan.

BACKGROUND

The Clean Air Act of 1977 required States to submit plans to demonstrate how they will attain and maintain compliance with national ambient air standards for those areas designated as "nonattainment". The Salem area was designated nonattainment for ozone in June 1979 based on measured violations of the ambient air quality standard for ozone in 1977 and 1978.

The Environmental Quality Commission adopted an ozone control strategy for the Salem Nonattainment Area in June 1979. This strategy was approved by the Environmental Protection Agency (EPA) in June 1980. A revised strategy was adopted by the Commission in September 1980 and approved by EPA in April 1982.

Ambient ozone levels in the Salem area have improved significantly since 1977. No exceedances of the standard have been recorded since 1981. Compliance is also projected for future years. It therefore appears appropriate to redesignate the Salem area as attainment for ozone.

Authority for the Commission to Act

ORS Chapter 468.020 gives the Commission authority to adopt necessary rules and standards; ORS 463.305 authorizes the Commission to prepare and develop a comprehensive plan for air pollution control.

NEIL GOLDSCHMIDT
GOVERNOR

Environmental Quality Commission

811 SW SIXTH AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Fred Hansen, Director

Subject: Agenda Item No. E, August 28, 1987, EQC Meeting

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BACKGROUND

The Clean Air Act of 1977 required States to submit plans to demonstrate how they will attain and maintain compliance with national ambient air standards for those areas designated as "nonattainment". The Salem area was designated nonattainment for ozone in June 1979 based on measured violations of the ambient air quality standard for ozone in 1977 and 1978.

The Environmental Quality Commission adopted an ozone control strategy for the Salem Nonattainment Area in June 1979. This strategy was approved by the Environmental Protection Agency (EPA) in June 1980. A revised strategy was adopted by the Commission in September 1980 and approved by EPA in April 1982.

Ambient ozone levels in the Salem area have improved significantly since 1977. No exceedances of the standard have been recorded since 1981. Compliance is also projected for future years. It therefore appears appropriate to redesignate the Salem area as attainment for ozone.

Authority for the Commission to Act

ORS Chapter 468.020 gives the Commission authority to adopt necessary rules and standards; ORS 463.305 authorizes the Commission to prepare and develop a comprehensive plan for air pollution control.

ALTERNATIVES AND EVALUATION

Ozone can be both protection and pollution in our environment. In the stratosphere, ozone protects the earth from the harmful effects of ultraviolet radiation. At ground level, ozone is an air pollutant with undesirable effects on people, plants, and materials. It is the ground level ozone that is addressed by the Salem ozone control strategy.

Ozone is a highly reactive compound of oxygen and the main component of photochemical oxidants or smog. In high concentrations it can cause difficulty in breathing, chest pain, chest and nasal congestion, coughing, eye irritation, nausea, and/or headaches. Ozone can reduce plant growth and crop yield. It can affect a variety of materials, resulting in fading of paint and fabric and accelerated aging and cracking of synthetic rubbers and similar materials.

Ozone is formed by photochemical reactions in the atmosphere between hydrocarbons or volatile organic compounds (VOC) and nitrogen oxides (NO_x) in the presence of direct sunlight and warm temperatures. The highest concentrations of ozone generally occur downwind of urban areas. The Salem ozone data has been collected near Turner, about eight miles south of Salem.

Reducing VOC emissions is the accepted method of controlling ground level ozone concentrations. The major sources of VOC emissions are motor vehicles, gasoline transport/storage/marketing, and industrial coating and degreasing operations.

VOC Emission Trend

VOC emissions from stationary and mobile sources in the Salem area have decreased substantially since the 1977 base year used for strategy development. VOC emission inventories are summarized in Table 1.

Table 1. Salem Nonattainment Area Volatile Organic Compound Emission Inventories.

	Volatile Organic Compounds Emissions(Tons/Year)						
Source Category	1977	1980	1981	1982	1983	1984	1985
Stationary Sources	1924	2026	2030	1711	1637	1671	1686
Mobile Sources	6080	5115	4806	4652	4364	4217	4016
Total	8004	7141	6836	6363	6001	5888	5702

Highway motor vehicle VOC emissions have steadily decreased each year due to the Federal Motor Vehicle Emission Control Program (federal new car program). Highway motor vehicle emissions are expected to continue to decrease for the next several years.

Stationary source emissions of VOC in the Salem area have decreased by more than 28% during the 1977-85 period. The stationary source VOC emission reductions are primarily due to lower petroleum marketing and storage emissions as a result of DEQ regulations for bulk storage plants and service stations. These regulations require recycle or capture of gasoline vapors during storage and transport.

Ambient Ozone Trend

Ambient ozone levels in the Salem area are summarized in Table 2. No exceedances of the 0.12 ppm one-hour average ozone standard have been recorded in the Salem area since 1981. Because up to one exceedance per year is allowed by the standard, Salem ambient ozone levels have been in compliance with the standard since 1979.

Table 2. Summary of Ambient Ozone Levels in the Salem Area from 1979 to 1986.

Year	Ozone Levels (ppm, hourly average) Maximum	Second High	Number of Days Over 0.12 ppm
1979	0.14	0.11	1
1980	0.09	0.08	0
1981	0.13	0.12	1
1982	0.08	0.08	0
1983	0.11	0.11	0
1984	0.11	0.10	0
1985	0.12	0.11	0
1986	0.11	0.10	0

VOC Airshed Capacity

The Salem area is considered a rural ozone nonattainment area. This means that ozone levels in Salem are the result of not only local VOC emissions but also upwind VOC emissions (in this case from the Portland area). The Salem and Portland ozone control strategies have reduced VOC emissions below the level required for attainment for the ozone standard.

Salem has been in attainment with the ozone standard since 1979. Since that time both Portland and Salem area VOC emissions have continued to decline. The Portland ozone strategy adopted by the Commission in January, 1986 indicates that Portland-Vancouver VOC emissions will be kept about 20% below 1980 levels in order to meet the ozone standard in the Portland area. Salem area VOC emissions in 1980 (about 7000 tons) thus provide a conservative estimate of the total annual Salem airshed capacity for VOC. Because the current VOC emission rate is somewhat below 6000 tons/year, a growth cushion of more than 1000 tons/year can be identified for new or expanding VOC sources in the Salem area. This growth cushion is expected to increase each year as highway vehicle emissions continue to decrease.

The Salem VOC airshed capacity should be adequate for normal growth and development through at least the year 2000. Most new VOC sources emit less than 40 tons/year. It is very unusual for a new VOC source to emit more than 200 tons/year. Only seven existing VOC sources in Oregon emit more than 1000 tons/year (paper coating plants or resin manufacturers in all cases).

Redesignation Alternatives

There appear to be at least two alternatives regarding the ozone attainment status of the Salem area. These two alternatives are:

1. The Commission could retain the ozone nonattainment status for the Salem area and the Department could continue to administer the new source review program under the existing rules. This requires major new or modified sources to install equipment capable of meeting the lowest achievable emission rate (LAER).

2. The Commission could redesignate the Salem area as attainment for ozone and the Department could administer the new source review program within the available airshed capacity. Major new or modified sources would be required to install best available control technology (BACT).

The first alternative could be challenged by the public, local government or industry since several consecutive years of ozone monitoring indicate compliance with the ozone standard in the Salem area. Only three years of compliance with the standard are required for redesignation.

Redesignation of the Salem area, as outlined in the second alternative, would make it easier and less expensive for industries with significant VOC emissions to locate or expand in the Salem area. New or expanded industries would be required to provide for best available control technology (BACT) rather than the more stringent lowest achievable emission rate (LAER).

BACT requires the maximum practical control of emissions, taking into account energy and economic factors. BACT must always be at least as stringent as the New Source Performance Standards (NSPS) identified by EPA and the Department. LAER is more stringent than BACT or NSPS and is defined as the lowest emission rate allowed or achieved anywhere, without regard to cost or energy use.

The Department recommends the second alternative. Under this alternative, the Department recommends that the Commission revise the State Implementation Plan, replacing the existing Salem ozone attainment strategy with a new ozone maintenance strategy. This is similar to the action taken by the Commission on the Medford ozone strategy in January 1985 and

approved by EPA in June 1986. The proposed revision is included as Attachment 2. This alternative would allow the Department to review new or expanding VOC sources and insure that proposed VOC increases would not exceed the airshed capacity.

SUMMATION

1. The Salem area is currently designated as an ozone nonattainment area.

2. The current Salem ozone strategy was adopted by the Commission in September 1980 and approved by EPA in April 1982.

3. No exceedances of the 0.12 ppm one-hour average ozone standard have been recorded in the Salem area since 1981. Because up to one exceedance per year is allowed by the standard, Salem ambient ozone levels have been in compliance with the standard since 1979.

4. The Department has reviewed the ambient ozone data and VOC emission trends in the Salem and upwind Portland areas and concluded that Salem ozone levels should remain well below the ozone standard if Portland VOC emissions remain below 1980 levels (as projected in the Portland ozone strategy) and Salem VOC emissions do not exceed 7000 tons per year (approximate 1980 emission inventory).

5. It appears appropriate to redesignate the Salem area as attainment for ozone.

6. The Department has prepared a proposed ozone maintenance strategy for the Salem area which should insure the maintenance of the ozone standard in future years.

DIRECTOR'S RECOMMENDATION

Based on the Summation, it is recommended that the Commission authorize a public hearing to take testimony on:

1. The proposed redesignation of the Salem area as attainment for ozone; and

2. The proposed replacement of the Salem ozone attainment strategy (Section 4.5 of the State Implementation Plan) with an ozone maintenance strategy as a revision to the State Implementation Plan.

Fred Hansen

Attachments: 1. Draft Public Hearing Notice.

2. Draft Statements of Need for Rulemaking, Fiscal and Economic Impact, and Land Use Consistency.

3. Proposed Salem Ozone Maintenance Strategy as a Revision to the State Implementation Plan.

Merlyn Hough:CDJ
AD1176
229-6446
August 11, 1987

Oregon Department of Environmental Quality

A CHANCE TO COMMENT ON...

Proposed Redesignation of the Salem Area as Attainment for Ozone and Revision of the State Clean Air Act Implementation Plan

Date Prepared: August 1, 1987
Hearing Date: October 16, 1987
Comments Due: October 21, 1987

WHO IS AFFECTED:

Residents, industries, and local governments of the Salem area.

WHAT IS PROPOSED:

The Department of Environmental Quality is proposing to amend OAR 340-20-047, the Oregon Clean Air Act State Implementation Plan, by revising the ozone control strategy for the Salem Ozone Nonattainment Area, and redesignating the area as attainment for ozone.

WHAT ARE THE HIGHLIGHTS:

Major elements of the rule change include:

- o Redesignating the Salem area as being in compliance with the State and Federal ambient air standards for ozone.
- o Revising the ozone strategy from an "attainment strategy" to a "maintenance strategy".
- o Recognizing a 7000 ton per year airshed capacity for Volatile Organic Compounds in the Salem area.

HOW TO COMMENT:

Copies of the complete proposed rule package may be obtained from the Air Quality Division in Portland (811 S.W. Sixth Avenue) or the regional office nearest you. For further information contact Merlyn Hough at 229-6446 (call toll-free, 1-800-452-4011).

A public hearing will be held before a hearings officer at:

11:00 A.M.
October 16, 1987
DEQ Willamette Valley Region
895 Summer St. NE
Salem, OR 97310

Oral and written comments will be accepted at the public hearing. Written comments may be sent to the DEQ Air Quality Division, 811 SW 6th Ave., Portland, OR 97204, but must be received by no later than October 21, 1987.

811 S.W. 6th Avenue
Portland, OR 97204

FOR FURTHER INFORMATION:

Contact the person or division identified in the public notice by calling 229-5696 in the Portland area. To avoid long distance charges from other parts of the state, call 1-800-452-4011.

WHAT IS THE NEXT STEP:

After public hearing the Environmental Quality Commission may adopt rule amendments identical to the proposed amendments, adopt modified rule amendments on the same subject matter, or decline to act. The adopted rules will be submitted to the U. S. Environmental Protection Agency as part of the State Clean Air Act Implementation Plan. The Commission's deliberation should come in December 1987 as part of the agenda of a regularly scheduled Commission meeting.

A Statement of Need, Fiscal and Economic Impact Statement, and Land Use Consistency Statement are attached to this notice.

AA3978

RULEMAKING STATEMENTS

for

Proposed Redesignation of the Salem Area as Attainment
for Ozone and Revision of the State Clean Air Implementation Plan

Pursuant to ORS 183.335, these statements provide information on the intended action to amend a rule.

STATEMENT OF NEED:

Legal Authority

This proposal amends OAR 340-20-047. It is proposed under authority of ORS Chapter 468, including Section 305 which authorizes the Environmental Quality Commission to adopt a general comprehensive plan for air pollution control.

Need for the Rule

The Salem Area is currently designated as a nonattainment area for ozone based on violations of the ambient air ozone standard in 1977, and 1978. The area has been in continuous compliance with the ozone standard since 1979 and is expected to remain in compliance in future years.

Principal Documents Relied Upon

Clean Air Act as Amended (PL 95-95) August 1977.
EPA Control Technology Guidelines.
DEQ Updated Emission Inventories.
DEQ Ambient Monitoring Data for Ozone and Precursors.
EPA Users Manual for Kinetic Model and Ozone Isopleth Plotting Package.
EPA Guideline for Use of City-Specific EKMA in Preparing Ozone SIPs.

FISCAL AND ECONOMIC IMPACT STATEMENT:

The proposed rule change would affect industries locating or expanding in the Salem area. The proposed redesignation as an ozone attainment area would make it easier and less expensive for industries and small businesses with significant VOC emissions to locate or expand in the Salem area.

LAND USE CONSISTENCY STATEMENT:

The proposed rule appears to affect land use and appears to be consistent with the Statewide Planning Goals.

With regard to Goal 6 (air, water, and land resources quality) the rules are designed to enhance and preserve air quality in the affected area and are considered consistent with the goal.

Goal 11 (public facilities and services) is deemed unaffected by the rule. The rule does not appear to conflict with other goals.

Public comment on any land use issue involved is welcome and may be submitted in the same fashions as are indicated for testimony in this notice.

It is requested that local, state, and federal agencies review the proposed action and comment on possible conflicts with their programs affecting land use and with Statewide Planning Goals within their expertise and jurisdiction.

The Department of Environmental Quality intends to ask the Department of Land Conservation and Development to mediate any apparent conflict brought to our attention by local, state, or federal authorities.

AA3979

4.5.0 SALEM AREA MAINTENANCE PLAN FOR OZONE

4.5.0.1 Introduction

Salem was designated as a nonattainment area for ozone in June 1979 based on measured exceedances of the ozone standard in 1977 and 1978. The Environmental Quality Commission adopted an ozone control strategy for Salem in June 1979. This strategy was approved by the Environmental Protection Agency (EPA) in June 1980. A revised strategy based on EPA rural ozone policy was adopted by the Commission in September 1980 and approved by EPA in April 1982.

Ambient ozone levels in the Salem area have improved significantly since 1977. The Salem area has been in continuous compliance with the ambient ozone standard since 1979.

The Salem ozone strategy has been revised from an attainment strategy to a maintenance strategy. The maintenance strategy is designed to ensure that compliance with the ozone standard is maintained in the Salem area in future years.

4.5.0.2 Summary

Ozone is a colorless and potentially toxic gas associated with photochemical smog. It is formed by photochemical reactions in the atmosphere between oxides of nitrogen and volatile organic compounds (VOC) in the presence of direct sunlight and warm temperatures. Reducing VOC emissions is the accepted method of lowering ozone levels.

VOC emissions from stationary and mobile sources in the Salem area has decreased substantially since the 1977 base year. These VOC emission decreases have been primarily due to the following measures:

1. Highway motor vehicle VOC emissions have decreased each year due to the Federal Motor Vehicle Emission Control Program (federal new car program).

2. Stationary source VOC emissions decreased substantially from 1977 to 1985 due to new VOC control requirements for several industrial and commercial source categories.

Future VOC emission increases will be controlled as a result of the new source review (NSR) and plant site emission limit (PSEL) rules. The Salem ozone strategy has an estimated 7000 tons per year VOC Airshed Capacity. This provides significant room for new or expanding VOC Sources in the Salem area because VOC emissions have been less than 6000 tons per year during 1984-86 and continue to decrease due to the federal new car program.

4.5.1 AMBIENT AIR QUALITY

4.5.1.1 Identification of Study Area

The Salem city limits were designated a Nonattainment Area for ozone in March, 1978. The original Nonattainment Area was expanded by the Mid-Willamette Valley Council of Governments to include the area within the Salem Area Transportation Study boundary. A description of the SATS boundary is contained in the appendix to the Oregon State Implementation Plan.

4.5.1.2 Ambient Monitoring Data

The Salem area ozone monitor is located downwind of the city at Cascade Jr. High in Turner. Since 1982, the monitor has operated during the summer ozone season only.

Ambient ozone levels in the Salem area are summarized in Table 4.5-1. The Salem area has been in continuous compliance with the 235 microgram per cubic meter (0.12 ppm) ozone standard since 1979.

Table 4.5-1 Summary of Ambient Ozone Levels in Salem From 1979 to 1986.

Year	Ozone Levels (ppm hourly average) Maximum	Second Highest	Number of Days Over 0.12 ppm
1979	0.14	0.11	1
1980	0.09	0.18	0
1981	0.13	0.12	1
1982	0.08	0.08	0
1983	0.11	0.11	0
1984	0.11	0.10	0
1985	0.12	0.11	0
1986	0.11	0.10	0

4.5.2 EMISSION INVENTORY

Annual VOC emission inventories are summarized in Table 4.5-2. The highway emissions are based on EPA Mobile 3 emission factors and the point source emissions are based on specific industrial production/emission information for each year.

Table 4.5-2. Salem Volatile Organic Compound Emission Inventories

Source Category	Volatile Organic Compounds Emissions (Tons Per Year) 1977	1980	1981	1982	1983	1984	1985
Stationary Sources	1924	2026	2030	1711	1637	1671	1686
Mobile Sources	6080	5115	4806	4652	4369	4217	4016
Total	8004	7141	6836	6363	6001	5888	5702

Highway motor vehicle VOC emissions have decreased substantially since 1977 due to the Federal Motor Vehicle Emission Control Program (federal new car program). Highway motor vehicle VOC emissions are expected to continue to decrease for the next several years.

Stationary source VOC emissions in the Salem area have decreased by more than 28% during the 1977-1985 period. The VOC emission reductions are primarily due to lower petroleum marketing and storage emissions as a result of DEQ regulations for bulk storage plants and service stations.

4.5.3 CONTROL STRATEGY

4.5.3.1 VOC Control Measures

The primary control measure for the reduction of transportation VOC emissions in the Salem area has been the federal new car program.

Industrial and commercial VOC emissions have been reduced as a result of VOC rules adopted by the Environmental Quality Commission in December 1978 with subsequent revisions. These VOC rules affect gasoline marketing up to the service station underground tanks, prohibit the use of cutback asphalt; control paper coating operations, small degreasers and cold cleaners; and affect roof coating contractors. The level of control required is consistent with Reasonably Available Control Technology (RACT) as defined by EPA in its Control Technology Guideline documents. The industrial and commercial VOC rules are summarized in Table 4.5-3.

Table 4.5-3. Summary of Industrial and Commercial VOC Control Rules.

Rule (OAR)	Source Category	Compliance Date
340-22-180	Degreasers	04/01/80
340-22-110	Service Station Loading (Stage I)	04/01/81
340-22-120	Gasoline Delivery Trucks	04/01/81
340-22-130	Bulk Gasoline Terminals	07/31/81
340-22-120	Gasoline Bulk Plants	07/31/81
340-22-220	Dry Cleaners (Perchloroethylene)	01/01/82
340-22-170	Paper and Can Coating	12/31/82
340-22-170	Metal Coating	12/31/82
340-22-140	Cutback Asphalt	04/01/79
340-22-160	Liquid Storage, Second Seals	12/31/81
340-22-210	Printing, Flexographic	07/01/82
340-22-200	Flatwood Coating	12/31/82

4.5.3.2 New Source Review

The new source review rules are contained in Oregon Administrative Rules (OAR) 340-20-220 to 275. The new source review rules require major new or modified VOC point sources locating in an attainment area to:

1. Provide best available control technology;
2. Demonstrate that the source would not cause violations of any PSD air quality increments or any state or federal ambient air quality standards; and
3. Demonstrate that the source would not impact a designated nonattainment area greater than the significant air quality impact levels.

New or modified VOC sources which would emit 40 tons or more of VOC per year are considered major sources and are subject to the new source review rules.

4.5.3.3 Plant Site Emission Limits

Plant site emission limits rules are contained in OAR 340-20-300 to 320. These rules establish a baseline allowable emission rate for existing VOC point sources. These rules do not allow significant growth of stationary source emissions unless a growth margin is available or an offset can be obtained.

4.5.3.4 VOC Airshed Capacity

Salem area is considered a rural ozone nonattainment area. This means that ozone levels in Salem are the result of not only local VOC emissions but also upwind VOC emissions (in this case from the Portland area). The Salem and Portland ozone control strategies have reduced VOC emissions below the level required for attainment for the ozone standard.

Salem has been in attainment with the ozone standard since 1979. Since that time both Portland and Salem area VOC emissions have continued to decline. The Portland ozone strategy adopted by the Commission in January 1986 indicates that Portland-Vancouver emissions will be kept about 20% below 1980 levels in order to meet the ozone standard in the Portland area. Salem area VOC emissions in 1980 (about 7000 tons) thus provide a conservative estimate of the total annual Salem airshed capacity for VOC. Because the current VOC emission rate is somewhat below 6000 tons/year, a growth cushion of more than 1000 tons/year can be identified for new or expanding VOC sources in the Salem area. This should provide for normal growth and development through at least the year 2000.

The actual VOC airshed capacity may be considerably larger than 7000 tons/year. The Department will reassess the airshed capacity in future years if the VOC emission inventory approaches 7000 tons/year or if ozone concentrations approach the ambient standard.

4.5.4 RULES AND REGULATIONS

The Oregon Revised Statutes (ORS) Chapter 468 authorizes the Oregon Environmental Quality Commission to adopt programs necessary to meet and maintain state and federal ambient air quality standard. The mechanisms for implementing these programs are the Oregon Administrative Rules (OAR). Pertinent rules were discussed previously and are summarized in Table 4.5-5.

Table 4.5-5. Summary of Rules Pertinent to the Salem Ozone Control Strategy.

Rule (OAR)	Subject
340-20-220 to 275	New Source Review
340-20-300 to 320	Plant Site Emission Limits
340-22-100 to 220	General VOC Emission Standards

4.5.5 PROGRESS MONITORING

The Salem area is expected to remain in compliance with the ambient ozone standard in future years. DEQ will review ambient ozone data on a quarterly basis and VOC emission inventories on an annual basis to ensure that compliance with the ambient ozone standard is maintained.

4.5.6 PUBLIC NOTICE AND HEARING

A public hearing on the Salem ozone maintenance strategy was held in Salem in October 1987. The public hearing notice was issued 30 days prior to the hearing.

The public hearing notice was distributed for local and state agency review by the A-95 State Clearinghouse 60 days prior to the adoption of the Salem ozone maintenance strategy.

NEIL GOLDSCHMIDT
GOVERNOR

Environmental Quality Commission

811 SW SIXTH AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item F, August 28, 1987, EQC Meeting

Proposed Adoption of Amendments to the Water Quality Standards Regulation, OAR 340, Chapter 41: Mixing Zone Policy, Toxic Substances Standards, and Total Dissolved Solids Standards

Background

ORS 468.735 provides that the Environmental Quality Commission, by rule, may establish standards of quality and purity for waters of the state. Present water quality standards contained in Oregon Administrative Rules (OAR Chapter 340, Division 41) were adopted in December 1976. The Commission adopted revisions to these standards in September 1979, July 1985, and added the nuisance aquatic growth rule in March 1986.

On July 19, 1985, the Environmental Quality Commission considered Agenda Item I: Proposed Adoption of Amendments to Water Quality Standards Regulation. The Department recommended adoption of corrections and revisions to beneficial use tables contained in the water quality regulations. The Department also proposed that issue papers be prepared by 1986 for additional rule amendments to the water quality standards, in response to requests received from the public.

During the Spring of 1986, Department staff prepared three issue papers as directed by the Commission for: 1) an Antidegradation Policy which provides the foundations for water quality protection and defines a process for evaluating activities that may cause water quality degradation; 2) a Mixing Zone Policy which defines the process for determining the physical limits and conditions of an area within receiving waters that could serve as a zone to dilute wastewaters and that could exceed water quality standards; and, 3) Toxic Substances Standards which list the levels of toxic substances that may not be exceeded in waters of the state. The issue papers examined the current water quality rules, discussed why the current rules were not adequate, proposed amendments to the rules, and described how the new language would clarify and strengthen those water quality standards.

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The issue papers and proposed rule amendments were presented to the Environmental Quality Commission on June 13, 1986. Agenda Item H: Request for authorization to conduct public hearings on proposed amendments to the Water Quality Standards regulation, OAR 340, Chapter 41: Antidegradation Policy, Mixing Zone Policy, and Toxic Substances Standards, was approved by the Commission. The hearings were held in Portland, Eugene, Medford, Bend, and LaGrande during July 21-24, 1986. Thirty-two respondents provided oral and/or written testimony on the proposed amendments.

Since the hearings, a water quality standards committee consisting of Water Quality and Regional Operations Division staff, met several times to review and discuss the public testimony in detail, and to evaluate the issues presented with respect to the Department's current water quality authority and regulatory programs. In addition, staff attended state, regional, and national workshops to develop final rule language and to construct a framework for implementing the rules. Final rule language for the Mixing Zone Policy and for the Toxic Substances Standards was drafted to address public testimony concerns and to incorporate recommendations from the water quality standards committee that would clarify Department procedures. However, revision of the Antidegradation Policy has been an on-going process that will require more interagency and public review before final language and an implementation plan can be drafted and presented to the Commission.

On July 17, 1987, the Environmental Quality Commission requested a delay on Agenda Item G: Proposed Adoption of Amendments to the Water Quality Standards Regulation, OAR 340, Chapter 41: Mixing Zone Policy, Toxic Substances Standards, and Total Dissolved Solids Standards. This delay was intended to allow more time for the public to review the staff report and the recommended final rule language.

Final rule language is presented in Attachments A for Mixing Zones, B for Toxic Substances, and C for Total Dissolved Solids. Attachment D includes the Hearing Officer's Report and Summary of Testimony. The Department then divided the testimony for each proposed rule into separate sections and responded in detail to issues raised during the hearings process. Staff evaluations and responses to testimony are presented in Attachments E for Mixing Zones, and F for Toxic Substances. Attachment G includes the June 13, 1986 EQC Staff Report and Issue Papers.

The following summary outlines the purpose and goals for each of the standards, briefly compares the current rule with the proposed rules, discusses the major issues raised during the public hearings regarding the proposed rule revisions, presents a response to those issues, and describes how the final rule language strengthens the policies and standards for protecting waters of the state.

A. Mixing Zones

Introduction

A mixing zone is defined as a portion of a receiving waterbody that serves as a zone of initial dilution where wastewaters and receiving waters mix, and where water quality standards may be suspended. However, outside the mixing zone, the water quality standards must be met and beneficial uses must be protected. The intent of the current policy (OAR 340-41* _ (4)) is to state when a mixing zone is defined and how it is established, but does not provide clear enough guidance or state precise conditions that must be met within or outside the mixing zone. (*Specific basin rule references are included in Attachment A.) The Department examined the current policy and suggested language clarifications and additional provisions. The essential elements of the current policy were retained, but new provisions were added to the proposed amendments that would improve the policy and describe the intent and implementation procedures more clearly.

The principal elements of the current mixing zone policy included provisions that would allow the Department to:

- Suspend water quality standards within the mixing zone;
- Assign mixing zones adjacent to a discharge in a wastewater discharge permit; and
- Protect aquatic life, aesthetics, and other beneficial uses.

The goal of the proposed rule revisions was to retain those elements, and add sections to:

- Define the procedure for how mixing zones are designated;
- Outline the information an applicant should provide in requesting a proposed discharge;
- Define when biomonitoring may be required to protect aquatic life;
- Define when mixing zone limits may be changed;
- Define conditions within mixing zones relating to chronic and acute toxicity;

- Prohibit overlapping mixing zones and conditions that would block fish passage to the extent possible; and

- Define aesthetic conditions that should be preserved within the mixing zone.

Major Issues from Hearings

During the hearings process and subsequent meetings, several respondents expressed concerns about the following issues:

1. They questioned the prohibition of chronic toxicity within the mixing zone since water quality standards should be allowed to be less restrictive and since the methodology for measuring chronic toxicity has not been nationally standardized and therefore may not be enforceable;

2. They believed that preserving all aesthetic conditions within the mixing zone was inappropriate and unnecessary;

3. They requested a definition of "important species" within a biological community that should be protected within a mixing zone; and

4. They requested amending the rule to include the specific frequency of bioassay tests that will be required by the Department in wastewater discharge permits.

Response to Testimony

The Department evaluated the concerns raised in the testimony, and determined appropriate language changes to provide clarification yet retain consistency with the intent of the rule.

Specifically, the following changes were made:

1. Chronic Toxicity: The proposed language prohibited both acute (short-term exposure) and chronic (long-term exposure) toxicity within the mixing zone. Many respondents agreed that acute toxicity should be prohibited within the mixing zone, but questioned prohibiting chronic toxicity within the mixing zone since the intent of the mixing zone is to allow for some dilution and mixing of wastes. Water quality standards may not be met in the zone thereby creating the potential for sublethal conditions to exist within the zone. If any sublethal effects did occur, they would be restricted to a small area within the mixing zone and would probably not affect aquatic life outside the mixing zone. Based on

an evaluation of the intent of the policy, the Department believes that retaining the provision for prohibiting acute toxicity within the mixing zone is important to prevent lethal conditions. However, the Department accommodated the public comments relating to chronic toxicity restrictions within the mixing zone, and believes that revising the language to prohibit chronic toxicity outside the mixing zone should allow for adequate protection of most aquatic life, yet allow for the necessary dilution of wastes within the mixing zone.

If chronic toxicity tests indicate that sublethal conditions may be present outside the mixing zone, the Department will require the evaluation of the extent of the impact to the indigenous biological communities within the receiving waters, review the testing methodologies used, and recommend site-specific follow-up actions as necessary.

2. Aesthetics: Since the mixing zone is not intended to be an area of total degradation, the proposed language stated that general aesthetic conditions should be preserved to protect beneficial uses outside the mixing zone. However, allowing mixing of wastes within the mixing zone may create some conditions that violate the aesthetic standards. These conditions may only be prevented with additional treatment requirements. Therefore, the Department revised the explicit definitions of aesthetic conditions to be preserved, and deleted references to color, odor, taste and turbidity since acceptable levels of these conditions may be present within the mixing zone and not impair downstream beneficial uses. The presence of scum, debris, and materials that form objectionable deposits or that create nuisance conditions will not be allowed.

3. Important Aquatic Species: When mixing zone limits are defined, the indigenous biological community should not be adversely affected, especially when "important species" are present that may be economically important, that may be ecologically vital, unique, or threatened, or that may have some tribal significance such as those protected by Indian Treaty Rights. The Department revised the reference to "important species", as was requested in the testimony, by including a definition of the general criteria that may be applied to evaluate the presence or absence of an important species on a site-specific basis.

4. Biomonitoring: The Department proposed language that allows biomonitoring to be conducted as needed to assure protection of aquatic life. Although respondents requested that the Department define the specific frequency of testing in the rule, the Department believes that it would be more

appropriate to include the frequency of testing as a specific permit condition to allow consideration of site specific receiving water and effluent characteristics.

The final rule language is presented in Attachment A, and a detailed response to the testimony is presented in Attachment E. A list of rule references for each basin is also included in Attachment A.

B. Toxic Substances

Introduction

The control of toxic substances is crucial to maintain water quality and to protect the public and the environment from unreasonable risks resulting from exposure to toxic substances. The Department revised the current toxic substances rule in response to requests from the public and EPA to incorporate the most up-to-date information and references available for controlling these substances.

Standards for toxics are currently addressed in two rules, Pesticides and Other Toxic Substances (OAR 340-41-*__(2)(p)) and Dissolved Chemical Substances (OAR 340-41-*__(2)(o)) for each basin. (*Specific basin rule references are included in Attachment B.) In the current Pesticides and Other Toxic Substances rule, the criteria values for Toxic Substances were referenced in the EPA publication Quality Criteria for Water (1976). These criteria values could not be exceeded unless supporting data showed conclusively that the criteria values were not appropriate. In the current Dissolved Chemical Substances rule, a list of inorganic substances and numeric criteria were provided. However, the criteria values for both inorganic and organic toxic substances in both rules were out of date. A new publication, Quality Criteria for Water (1986) includes the most recent criteria values for toxic substances. Since the same EPA regulatory document applies to the toxics contained in both rules, the Department combined the two rules and created one rule (OAR 340-41-*__(2)(p)) that would address all toxic substances. In addition, the Department wanted to clarify language relating to site specific exceptions for enforcing criteria values and to add a provision for bio-assessments to address protection of aquatic life.

Specifically, the proposed rule for Toxic Substances (OAR 340-41-*__(2)(p)) for each basin included the following provisions:

- Discharge of any toxic substance would be prohibited in any quantity that may be harmful to aquatic life or human health;

- The most recent criteria published by EPA would serve as the numeric standard or guide concentrations to control toxic priority pollutants, unless data from scientifically defensible studies supported an exception; and

- Biomonitoring would be utilized to determine the toxicity of complex effluents, substances without published criteria, or when a chemical specific approach may not be appropriate.

Major Issues from Hearing

Respondents supported the proposed rule language, but suggested the following changes:

1. They requested that a list or chart identifying the toxic pollutants and the associated criteria values for acute and chronic toxicity for aquatic life and human health be included in the rule.

2. They requested a definition of "scientifically valid" studies, when using them would be appropriate for defining criteria values, and who was responsible for providing that information.

3. They suggested that a provision to control nonpoint sources as well as point sources of toxic substances should be added to the rule.

Response to Testimony

The Department evaluated the testimony and incorporated the requested changes in the final rule language as follows:

1. Criteria Values: The Department included a chart of the criteria values provided by EPA in the Quality of Criteria (1986) as part of the rule (Table 20). These values are used as the best available guidance numbers to protect most aquatic life from acute and chronic toxicity in both marine and fresh waters. They represent receiving water values not to be exceeded (not effluent standards), although site specific environmental factors are always considered before applying the criteria values in permits or evaluating violations of these values since receiving water quality characteristics are variable. The choice of criteria used

as the standard depends on the designated use to be protected. In the case of a multiple use water body, the criteria protecting the most sensitive use will be adopted and applied as the standard.

Table 20 also includes guidance values for the protection of human heath, which are based on whether the substances have carcinogenic, toxic or organoleptic properties. Criteria for suspect or proven carcinogens are presented as concentrations in water or tissues with a range of incremental risks to humans (i.e., concentrations that may cause one case of cancer per 1,000,000 people is reported as 10^{-6} risk value). Criteria for non-carcinogens represent levels at which exposure to a single substance would not produce adverse effects on human health.

2. Scientifically Valid Studies: The Department included a provision that accepts results from "scientifically valid" studies to set appropriate standards if no published numeric criteria values exist. Scientifically valid studies are those where data have been systematically collected, statistically analyzed and are scientifically defensible based on replication and sound experimental methodology.

3. Nonpoint Sources: The final rule language also includes reference to toxic substances from nonpoint sources, as respondents requested.

To fulfill the requirements for the new Clean Water Act of 1987, each state must review its toxic substances standards and prepare a "Toxics Reduction and Elimination Plan" during 1987-1988. If the proposed final rule language for toxic substances is adopted, as presented in Attachment B, it will provide a solid foundation for the Department to initiate the development of a Toxics Reduction Plan. The final rule language and rule references for each basin are included in Attachment B, and a detailed response to public testimony is presented in Attachment F.

C. Total Dissolved Solids

Introduction

Since Quality Criteria for Water (1986) included criteria that applied to both Pesticides and Other Organic Toxic Substances, and Dissolved Chemical Substances, the Department combined the two rules into one rule for Toxic Substances, so one reference set of criteria could be cited. However, the standards for Total Dissolved Solids which are currently part of the Dissolved Chemical Substance rule, are not included in Quality Criteria for Water (1986) and must be addressed separately.

The Department has renamed the "Dissolved Chemical Substances" rule (OAR 340-41-*__(2)(o)) to "Total Dissolved Solids", but retained the rule references and current guidance values for each basin. Since no comments were received on total dissolved solids standards during the public hearing process, no changes were made to the values. The language for the rule and rule references for each basin are presented in Attachment C.

Alternatives and Evaluation

Alternatives available to the Environmental Quality Commission include either adopting the proposed amendments to the water quality standards as final rules, or retaining the water quality standards as they are presented in the current rules.

Although the Department already has broad authority to evaluate activities that affect water quality and to implement necessary actions to protect water quality, interpretation of the rules can be improved by providing specific language that more clearly outlines Department procedures and regulatory requirements. If any specific Department requirements are considered unreasonable, an applicant has the opportunity to appeal those requirements to the Commission.

The Commission must determine if the proposed amendments provide more adequate protection of water quality and beneficial uses and enhance the goals of the water quality program, or that they are unnecessarily burdensome or unreasonable.

The alternatives are as follows:

1. Adopt the Department's proposed amendments to the water quality standards as final rules.

   This alternative would provide a clarification of the procedures and requirements necessary for controlling water quality conditions relating to mixing zones and toxic substances.

   The Department believes that the final rule language incorporates many of the suggestions offered by the public in testimony, and includes critical evaluation by Department staff. The language is consistent with state statutes and fulfills EPA requirements to be consistent with the goals of the Clean Water Act.

2. Do not adopt the proposed amendments to the water quality standards as final rules, and retain the current water quality standards.

   If this alternative was adopted, the water quality standards would be outdated and not be based on the most current toxic substances criteria. In addition, requests from the public to provide a more

comprehensive approach to evaluating and defining mixing zones would not be acknowledged or addressed.

Summation

1. During the 1984 public hearing process, several proposals for standards revisions were received from the public.

2. The Commission requested that the Department prepare issue papers for public review on the mixing zone policy and the toxic substances standards.

3. Issue papers and proposed amendments to the rules were presented at the June 13, 1986 Commission meeting. The Commission authorized the Department to conduct public hearings on the proposed amendments to the rules. Public hearings were held in July 1986 in five locations around the state.

4. Final rule language was drafted to be consistent with federal and state laws, and to incorporate comments received during public hearings. The language is presented in Attachments A through C.

Director's Recommendation

Based upon the findings in the Summation, it is recommended that the Commission adopt the final rule language as presented in:

1. Attachment A for the Mixing Zone Policy.

2. Attachment B for the Toxic Substances Standards.

3. Attachment C for the Total Dissolved Solids Standards.

Fred Hansen

Attachments: (7)

A. Final Rule Language for Mixing Zone Policy
B. Final Rule Language for Toxic Substances
C. Final Rule Language for Total Dissolved Solids
D. Hearing Officers Report and Summary of Testimony
E. Response to Testimony on Mixing Zone Issues
F. Response to Testimony on Toxic Substances Issues
G. June 13, 1986 EQC Staff Report and Issue Papers

K.U. Wolniakowski:h
WH2206
229-6018
August 4, 1987

ATTACHMENT A

FINAL RULES LANGUAGE

FOR

THE MIXING ZONE POLICY

ATTACHMENT A

FINAL RULES LANGUAGE FOR THE MIXING ZONE POLICY

Current Mixing Zone Policy to be deleted. The principal elements of the current Mixing Zone Policy have also been included in the proposed final rule, but because of reorganization, language clarifications and additional requirements, the current rule will be deleted in its entirety and replaced by new language. Rule references for each basin appear as a footnote (*) at the end of the final rule.

340-41-*__

(4) Mixing Zones:

[(a) The Department may suspend the applicability of all or part of the water quality standards set forth in this rule, except those standards relating to aesthetic conditions, within a defined immediate mixing zone of specified and appropriately limited size adjacent to or surrounding the point of waste water discharge.

(b) The sole method of establishing such mixing zones shall be by the Department defining same in a waste discharge permit.

(c) In establishing mixing zones in a waste discharge permit, the Department:

(A) May define the limits of the mixing zone in terms of distance from the point of the waste water discharge or the area or volume of the receiving water or any combination thereof;

(B) May set other less restrictive water quality standards to be applicable in the mixing zone in lieu of the suspended standards;

(C) Shall limit the mixing zone to that which in all probability will:

(i) Not interfere with any biological community or population of any important species to a degree which is damaging to the ecosystem; and

(ii) Not adversely affect other beneficial uses disproportionately.]

Final Mixing Zone policy to be adopted as rule OAR 340-41-*__(4). Specific rule references for each basin are included as a footnote (*) at the end of the final rule.

340-41-*__

(4) Mixing Zones

(a) The Department may allow a designated portion of a receiving water to serve as a zone of initial dilution for wastewaters and receiving waters to mix thoroughly and this zone will be defined as a mixing zone.

(b) The Department may suspend all or part of the water quality standards, or set less restrictive standards, in the defined mixing zone, provided that the following conditions are met:

(A) The water within the mixing zone shall be free of:

(i) Materials in concentrations that will cause acute (96HLC50) toxicity to aquatic life. Acute toxicity is measured as the lethal concentration that causes 50 percent mortality of organisms within a 96-hour test period.

(ii) Materials that will settle to form objectionable deposits.

(iii) Floating debris, oil, scum, or other materials that cause nuisance conditions.

(iv) Substances in concentrations that produce deleterious amounts of fungal or bacterial growths.

(B) The water outside the boundary of the mixing zone shall:

(i) Be free of materials in concentrations that will cause chronic (sublethal) toxicity. Chronic toxicity is measured as the concentration that causes long-term sublethal effects, such as significantly impaired growth or reproduction in aquatic organisms, during a testing period based on test species life cycle. Procedures and end points will be specified by the Department in waste water discharge permits.

(ii) Meet all other water quality standards under normal annual low flow conditions.

(c) The limits of the mixing zone shall be described in the waste water discharge permit. In determining the location, surface area, and volume of a mixing zone area, the Department may use appropriate mixing zone guidelines to assess the biological, physical, and chemical character of receiving waters, and effluent, and the most appropriate placement of the outfall, to protect instream water quality, public health, and other beneficial uses. Based on receiving water and effluent characteristics, the Department shall define a mixing zone in the immediate area of a waste water discharge to:

(A) be as small as feasible;

(B) avoid overlap with any other mixing zones to the extent possible and be less than the total stream width as necessary to allow passage of fish and other aquatic organisms;

(C) minimize adverse effects on the indigenous biological community especially when species are present that warrant special protection for their economic importance, tribal significance, ecological uniqueness, or for other similar reasons as determined by the Department;

(D) not threaten public health;

(E) minimize adverse effects on other designated beneficial uses outside the mixing zone.

(d) The Department may request the applicant of a permitted discharge for which a mixing zone is required, to submit all information necessary to define a mixing zone, such as:

(A) type of operation to be conducted;

(B) characteristics of effluent flow rates and composition;

(C) characteristics of low flows of receiving waters;

(D) description of potential environmental effects;

(E) proposed design for outfall structures.

(e) The Department may, as necessary, require mixing zone monitoring studies and/or bioassays to be conducted to evaluate water quality or biological status within and outside the mixing zone boundary.

(f) The Department may change mixing zone limits or require the relocation of an outfall if it determines that the water quality

within the mixing zone adversely affects any existing beneficial uses in the receiving waters.

* Rule References by Basin:

Basin	Mixing Zone Rules
North Coast	340-41-205(4)
Mid Coast	340-41-245(4)
Umpqua	340-41-285(4)
South Coast	340-41-325(4)
Rogue	340-41-365(4)
Willamette	340-41-445(4)
Sandy	340-41-485(4)
Hood	340-41-525(4)
Deschutes	340-41-565(4)
John Day	340-41-605(4)
Umatilla	340-41-645(4)
Walla Walla	340-41-685(4)
Grande Ronde	340-41-725(4)
Powder	340-41-765(4)
Malheur River	340-41-805(4)
Owyhee	340-41-845(4)
Malheur Lake	340-41-885(4)
Goose and Summer Lakes	340-41-925(4)
Klamath	340-41-965(4)

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ATTACHMENT B

FINAL RULE LANGUAGE

FOR

TOXIC SUBSTANCES STANDARDS

ATTACHMENT B

FINAL RULE LANGUAGE FOR TOXIC SUBSTANCES STANDARDS

The Current Pesticides and Other Organic Toxic Substances rule to be deleted. Rule references for each basin appear as a footnote (*) at the end of the final rule.

OAR 340-41-*__(2)(p)

["Pesticides and other organic toxic substances shall not exceed those criteria contained in the 1976 edition of the EPA publication "Quality Criteria for Water". These criteria shall apply unless supporting data shows conclusively that beneficial uses will not be adversely affected by exceeding a criterion by a specific amount or that a more stringent criterion is warranted to protect beneficial uses."]

Final toxic substances standards to be adopted as rule OAR 340-41-*__(2)(p). Specific rule reference for each basin are included as a footnote (*) at the end of the final rule.

OAR 340-41-__*(2)(p) Toxic Substances

(A) Toxic substances shall not be introduced above natural background levels in the waters of the state in amounts, concentrations, or combinations which may be harmful, may chemically change to harmful forms in the environment, or may bioaccumulate to levels that adversely affect public health, safety, or welfare; aquatic life; or other designated beneficial uses.

(B) Levels of toxic substances shall not exceed the most recent criteria values for organic and inorganic pollutants established by EPA and published in Quality Criteria for Water (1986). A list of the criteria is presented in Table 20.

(C) The criteria in (B) shall apply unless data from scientifically valid studies demonstrate that the most sensitive designated beneficial uses will not be adversely affected by exceeding a criterion or that a more restrictive criterion is warranted to protect beneficial uses, as accepted by the Department on a site specific basis. Where no published EPA criteria exist for a toxic substance, public health advisories and other published scientific literature may be considered and used, if appropriate, to set guidance values.

(D) Bio-assessment studies such as laboratory bioassays or instream measurements of indigenous biological communities, shall be conducted, as the Department deems necessary, to monitor the toxicity of complex effluents, other suspected discharges or chemical substances without numeric criteria, to aquatic life. These studies, properly conducted in accordance with standard

testing procedures, may be considered as scientifically valid data for the purposes of (C). If toxicity occurs, the Department shall evaluate and implement measures necessary to reduce toxicity on a case-by-case basis.

* Rule References by Basin:

Basin	Toxic Substances
North Coast	340-41-205(p)
Mid Coast	340-41-245(p)
Umpqua	340-41-285(p)
South Coast	340-41-325(p)
Rogue	340-41-365(p)
Willamette	340-41-445(p)
Sandy	340-41-485(p)
Hood	340-41-525(p)
Deschutes	340-41-565(p)
John Day	340-41-605(p)
Umatilla	340-41-645(p)
Walla Walla	340-41-685(p)
Grande Ronde	340-41-725(p)
Powder	340-41-765(p)
Malheur River	340-41-805(p)
Owyhee	340-41-845(p)
Malheur Lake	340-41-885(p)
Goose and Summer Lakes	340-41-925(p)
Klamath	340-41-965(p)

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TABLE 20
340-41-__(2)(p)
(Applicable to all basins)

WATER QUALITY CRITERIA SUMMARY

The concentration for each compound listed in this chart is a criteria or guidance value not to be exceeded for the protection of aquatic life and human health. Specific descriptions of each compound and an explanation of criteria values are included in Quality Criteria for Water (1986). Selecting values for regulatory purpose will depend on the most sensitive beneficial use to be protected, and what level of protection is necessary to prevent acute or chronic toxicity.

			Concentration in Micrograms Per Liter For Protection of Aquatic Life				Concentration in Units Per Liter For Protection of Human Health		
COMPOUND NAME (OR CLASS)	PRIORITY POLLUTANT	CARCINOGEN	FRESH ACUTE CRITERIA	FRESH CHRONIC CRITERIA	MARINE ACUTE CRITERIA	MARINE CHRONIC CRITERIA	WATER AND FISH INGESTION	FISH CONSUMPTION ONLY	DRINKING WATER M.C.L.
ACENAPTHENE	Y	N	*1,700.	*520.	*970.	*710.			
ACROLEIN	Y	N	*68.	*21.	*55.		320.ug	780.ug	
ACRYLONITRILE	Y	Y	*7,550.	*2,600.			0.058ug**	0.65ug**	
ALDRIN	Y	Y	3.0		1.3		0.074ng**	0.079ng**	
ALKALINITY	N	N		20,000.					
AMMONIA	N	N	CRITERIA ARE pH AND TEMPERATURE DEPENDENT--SEE DOCUMENT						
ANTIMONY	Y	N	*9,000.	*1,600.			146.ug	45,000.ug	
ARSENIC	Y	Y					2.2ng**	17.5ng**	0.05mg
ARSENIC (PENT)	Y	Y	*850.	*48.	*2,319.	*13.			
ARSENIC (TRI)	Y	Y	360.	190.	69.	36.			
ASBESTOS	Y	Y					30Kf/L**		
BACTERIA	N	N	FOR PRIMARY RECREATION AND SHELLFISH USES-SEE DOCUMENT						1/100ml
BARIUM	N	N					1.mg		1.0mg
BENZENE	Y	Y	*5,300.		*5,100.	*700.	0.66ug**	40.ug**	
BENZIDINE	Y	Y	*2,500.				0.12ng**	0.53ng**	
BERYLLIUM	Y	Y	*130.	*5.3			6.8ng**	117.ng**	
BHC	Y	N	*100.		*0.34				
CADMIUM	Y	N	3.9+	1.1+	43.	9.3	10.ug		0.010mg
CARBON TETRACHLORIDE	Y	Y	*35,200.		*50,000.		0.4ug**	6.94ug**	
CHLORDANE	Y	Y	2.4	0.0043	0.09	0.004	0.46ng**	0.48ng**	
CHLORINATED BENZENES	Y	Y	*250.	*50.	*160.	*129.	488.ug		
CHLORINATED NAPHTHALENES	Y	N	*1,600.		*7.5				
CHLORINE	N	N	19.	11.	13.	7.5			
CHLOROALKYL ETHERS	Y	N	*238,000.						
CHLOROETHYL ETHER (BIS-2)	Y	Y					0.03ug**	1.36ug**	
CHLOROFORM	Y	Y	*28,900.	*1,240.			0.19ug**	15.7ug**	
CHLOROISOPROPYL ETHNER (BIS-2)	Y	N					34.7ug	4.36mg	
CHLOROMETHYL ETHER (BIS)	Y	N					.00000376ng**	0.00184ug**	
CHLOROPHENOL 2	Y	N	*4,380.	*2,000.					
CHLOROPHENOL 4	N	N			*29,700.				
CHLOROPHENOXY HERBICIDES (2,4,5,-TP)	N	N					10.ug		
CHLOROPHENOXY HERBICIDES (2,4-D)	N	N					100.ug		
CHLORPYRIFOS	N	N	0.083	0.041	0.011	0.0056			
CHLORO-4 METHYL-3 PHENOL	N	N	*30.						
CHROMIUM (HEX)	Y	N	16.	11.	1.100	50.	50.ug		0.05mg
CHROMIUM (TRI)	N	N	1,700.+	210.+	*10,300.		179.mg	3,433.mg	0.05mg
COLOR	N	N	NARRATIVE STATEMENT -- SEE DOCUMENT						

TABLE 20
WATER QUALITY CRITERIA SUMMARY (continued)

COMPOUND NAME (OR CLASS)	PRIORITY POLLUTANT	CARCINOGEN	Concentration in Micrograms Per Liter For Protection of Aquatic Life: FRESH ACUTE CRITERIA	FRESH CHRONIC CRITERIA	MARINE ACUTE CRITERIA	MARINE CHRONIC CRITERIA	Concentration in Units Per Liter For Protection of Human Health: WATER AND FISH INGESTION	FISH CONSUMPTION ONLY	DRINKING WATER M.C.L.
COPPER	Y	N	18.+	12.+	2.9	2.9			
CYANIDE	Y	N	22.	5.2	1.	1.	200.ug		
DDT	Y	Y	1.1	0.001	0.13	0.001	0.024ng**	0.024ng**	
DDT METABOLITE (DDE)	Y	Y	*1,050.		*14.				
DDT METABOLITE (TDE)	Y	Y	*0.06		*3.6				
DEMETON	Y	N		0.1		0.1			
DIBUTYLPHTHALATE	Y	N					35.mg	154.mg	
DICHLOROBENZENES	Y	N	*1,120.	*763.	*1,970.		400.ug	2.6mg	
DICHLOROBENZIDINE	Y	Y					0.01ug**	0.020ug**	
DICHLOROETHANE 1,2	Y	Y	*118,000.	*20,000.	*113,000.		0.94ug**	243.ug**	
DICHLOROETHYLENES	Y	Y	*11,600.		*224,000.		0.033ug**	1.85ug**	
DICHLOROPHENOL 2,4	N	N	*2,020.	*365.			3.09mg		
DICHLOROPROPANE	Y	N	*23,000.	*5,700.	*10,300.	*3,040.			
DICHLOROPROPENE	Y	N	*5,060.	*244.	*790.		87.ug	14.1mg	
DIELDRIN	Y	Y	2.5	0.0019	0.71	.0019	0.071ng**	0.076ng**	
DIETHYLPHTHALATE	Y	N					350.mg	1.8g	
DIMETHYLPHENOL 2,4	Y	N	*2,120.						
DIMETHYLPHTHALATE	Y	N					313.mg	2.9g	
DINITROTOLUENE 2,4	N	Y					0.11ug**	9.1ug**	
DINITROTOLUENE	Y	N					70.ug	14.3mg	
DINITROTOLUENE	N	Y	*330.	*230.	*590.	*370.			
DINITRO-O-CRESOL 2,4	Y	N					13.4g	765.ug	
DIOXIN (2,3,7,8-TCDD)	Y	Y	*0.01	*0.00001			0.000013ng**	0.000014ng**	
DIPHENYLHYDRAZINE	Y	N					42.ng**	0.56ug**	
DIPHENYLHYDRAZINE 1,2	Y	N	*270.						
DI-2-ETHYLHEXYLPHTHALATE	Y	N					15.mg	50.mg	
ENDOSULFAN	Y	N	0.22	0.056	0.034	0.0087	74.ug	159.ug	
ENDRIN	Y	N	0.18	0.0023	0.037	0.0023	1.ug		0.0002mg
ETHYLBENZENE	Y	N	*32,000.		*430.		1.4mg	3.28mg	
FLUORANTHENE	Y	N	*3,980.		*40.	*16.	42.ug	54.ug	
GASSES, TOTAL DISSOLVED	N	N	NARRATIVE STATEMENT -- SEE DOCUMENT						
GUTHION	N	N		0.01		0.01			
HALOETHERS	Y	N	*360.	*122.					
HALOMETHANES	Y	Y	*11,000.		*12,000.	*6,400.	0.19ug**	15.7ug**	
HEPTACHLOR	Y	Y	0.52	0.0038	0.053	0.0036	0.28ng**	0.29ng**	
HEXACHLOROETHANE	N	Y	*980.	*540.	*940.		1.9ug	8.74ug	
HEXACHLOROBENZENE	Y	N					0.72ng**	0.74ng**	
HEXACHLOROBUTADIENE	Y	Y	*90.	*9.3	*32.		0.45ug**	50.ug**	
HEXACHLOROCYCLOHEXANE (LINDANE)	Y	Y	2.0	0.08	0.16				0.004mg
HEXACHLOROCYCLOHEXANE-ALPHA	Y	Y					9.2ng**	31.ng**	
HEXACHLOROCYCLOHEXANE-BETA	Y	Y					16.3ng**	54.7ng**	
HEXACHLOROCYCLOHEXANE-GAMA	Y	Y					18.6ng**	62.5ng**	
HEXACHLOROCYCLOHEXANE-TECHNICAL	Y	Y					12.3ng**	41.4ng**	
HEXACHLOROCYCLOPENTADIENE	Y	N	*7.	*5.2	*7.		206.ug		
IRON	N	N		1,000.			0.3mg		

TABLE 20
WATER QUALITY CRITERIA SUMMARY (continued)

COMPOUND NAME (OR CLASS)	PRIORITY POLLUTANT	CARCINOGEN	Concentration in Micrograms Per Liter For Protection of Aquatic Life: FRESH ACUTE CRITERIA	FRESH CHRONIC CRITERIA	MARINE ACUTE CRITERIA	MARINE CHRONIC CRITERIA	Concentration in Units Per Liter For Protection of Human Health: WATER AND FISH INGESTION	FISH CONSUMPTION ONLY	DRINKING WATER M.C.L.
ISOPHORONE	Y	N	*117,000.		*12,900.		5.2mg	520.mg	
LEAD	Y	N	82.+	3.2+	140.	5.6	50.ug		0.05mg
MALATHION	N	N		0.1		0.1			
MANGANESE	N	N					50.ug	100.ug	
MERCURY	Y	N	2.4	0.012	2.1	0.025	144.ng	146.ng	0.002mg
METHOXYCHLOR	N	N		0.03		0.03	100.ug		0.1mg
MIREX	N	N		0.001		0.001			
MONOCHLOROBENZENE	Y	N					488.ug		
NAPHTHALENE	Y	N	*2,300.	*620.	*2,350.				
NICKEL	Y	N	1,400.+	160+	75	8.3	13.4ug	100.ug	
NITRATES	N	N					10.mg		10.mg
NITROBENZENE	Y	N	*27,000.		*6,680.		19.8mg		
NITROPHENOLS	Y	N	*230.	*150.	*4,850.				
NITROSAMINES	Y	Y	*5,850.		*3,300,000		0.8ng**	1240.ng**	
NITROSODIBUTYLAMINE N	Y	Y					6.4ng**	587.ng**	
NITROSODIETHYLAMINE N	Y	Y					0.8ng**	1,240.ng**	
NITROSODIMETHYLAMINE N	Y	Y					1.4ng**	16,000.ng**	
NITROSODIPHENYLAMINE N	Y	Y					4,900.ng**	16,100.ng**	
NITROSOPHYRROLIDINE N	Y	Y					16.ng**	91,900.ng**	
OIL AND GREASE	N	N	NARRATIVE STATEMENT — SEE DOCUMENT						
OXYGEN DISSOLVED	N	N	WARMWATER AND COLDWATER CRITERIA MATRIX — SEE DOCUMENT						
PARATHION	N	N	0.065	0.013					
PCB's	Y	Y	2.0	0.014	10.	0.03	0.079ng**	0.079ng**	
PENTACHLORINATED ETHANES	N	N	*7,240.	*1,100.	*390.	*281.			
PENTACHLOROBENZENE	N	N					74.ug	85.ug	
PENTACHLOROPHENOL	Y	N	***20.	***13.	13.	*7.9	1.01mg		
pH	N	N		6.5-9		6.5-8.5			
PHENOL	Y	N	*10,200.	*2,560.	*5,800.		3.5mg		
PHOSPHORUS ELEMENTAL	N	N				0.1			
PHTHALATE ESTERS	Y	N	*940.	*3.	*2,944.	*3.4			
POLYNUCLEAR AROMATIC HYDROCARBONS	Y	Y			*300.		2.8ng**	31.1ng**	
SELENIUM	Y	N	260.	35.	410.	54.	10.ug		0.01mg
SILVER	Y	N	4.1+	0.12	2.3		50.ug		0.05mg
SOLIDS DISSOLVED AND SALINITY	N	N					250.mg		
SOLIDS DISSOLVED AND TURBIDITY	N	N	NARRATIVE STATEMENT — SEE DOCUMENT						
SULFIDE-HYDROGENSULFIDE	N	N		2.0		2.0			
TEMPERATURE	N	N	SPECIES DEPENDENT CRITERIA — SEE DOCUMENT						
TETRACHLORINATED ETHANES	Y	N	*9,320.						
TETRACHLOROBENZENE 1,2,4,5	Y	N					38.ug	48.ug	
TETRACHLOROETHANE 1,1,2,2	Y	Y		*2,400.	*9,020.		0.17ug**	10.7ug**	
TETRACHLOROETHANES	Y	N	*9,320.						
TETRACHLOROETHYLENE	Y	Y	*5,280.	*840.	*10,200.	*450.	0.8ug**	8.85ug**	
TETRACHLOROPHENOL 2,3,5,6	Y	N				*440.			
THALLIUM	Y	N	*1,400.	*40.	*2,130.		13.ug	48.ug	
TOLUENE	Y	N	*17,500.		*6,300.	*5,000.	14.3mg	424.ug	

TABLE 20
WATER QUALITY CRITERIA SUMMARY (continued)

COMPOUND NAME (OR CLASS)	PRIORITY POLLUTANT	CARCINOGEN	Concentration in Micrograms Per Liter For Protection of Aquatic Life: FRESH ACUTE CRITERIA	FRESH CHRONIC CRITERIA	MARINE ACUTE CRITERIA	MARINE CHRONIC CRITERIA	Concentration in Units Per Liter For Protection of Human Health: WATER AND FISH INGESTION	FISH CONSUMPTION ONLY	DRINKING WATER M.C.L.
TOXAPHENE	Y	Y	0.73	0.0002	0.21	0.0002	0.71ng**	0.73ng**	0.0005mg
TRICHLORINATED ETHANES	Y	Y	*18,000.						
TRICHLOROETHANE 1,1,1	Y	N			*31,200.		18.4mg	1.03g	
TRICHLOROETHANE 1,1,2	Y	Y		*9,400.			0.6ug**	41.8ug**	
TRICHLOROETHYLENE	Y	Y	*45,000.	*21,900.	*2,000.		2.7ug**	80.7ug**	
TRICHLOROPHENOL 2,4,5	N	N					2,600.ug		
TRICHLOROPHENOL 2,4,6	Y	Y		*970.			1.2ug**	3.6ug**	
VINYL CHLORIDE	Y	Y					2.ug**	525.ug**	
ZINC	Y	N	120.+	110+	95	86			

g = grams
mg = milligrams
ug = micrograms
ng = nanograms
f = fibers

Y = YES
N = NO

M.C.L. = MAXIMUM CONTAMINANT LEVEL

\+ = Hardness Dependent Criteria (100 mg/L used)
* = Insufficient Data to Develop Criteria
Value Presented is the L.O.E.L. -- Lowest Observed Effect Level
** = Human Health Criteria for Carcinogens Reported for Three Risk Levels. Value Presented is the 10-6 Risk Level which means the probability of one cancer case per one million people at the stated concentration
*** = pH Dependent Criteria (7.8 pH used)

ATTACHMENT C

FINAL RULE LANGUAGE

FOR

TOTAL DISSOLVED SOLIDS

ATTACHMENT C

FINAL RULE LANGUAGE FOR TOTAL DISSOLVED SOLIDS

Current Dissolved Chemical Substances Guide Concentration to be deleted:
Rule references for each basin appear as a footnote (*) at the end of the final rule.

OAR 340-41-___* (2)(o)

["Dissolved Chemical Substances:] Guide concentrations listed below shall not be exceeded unless otherwise specifically authorized by DEQ upon such conditions as it may deem necessary to carry out the general intent of this plan to protect the beneficial uses set forth in rule: 340-41-__: (mg/1)

[(A)	Arsenic(As)	0.01
(B)	Barium(Ba)	1.0
(C)	Boron(Bo)	0.5
(D)	Cadmium(Cd)	0.003
(E)	Chromium(Cr)	0.02
(F)	Copper(Cu)	0.005
(G)	Cyanide(Cr)	0.005
(H)	Fluoride(F)	1.0
(I)	Iron(Fe)	0.1
(J)	Lead(Pb)	0.05
(K)	Manganese(Mn)	0.05
(L)	Phenols(total)	0.001
(M)	Total Dissolved Solids-Columbia River	
(N)	Total Dissolved Solids - other	
(O)	Zinc(Zn)	0.01"]

Final rule to be adopted for Total Dissolved Solids by basin.

Total Dissolved Solids: Guide concentrations listed below shall not be exceeded unless otherwise specifically authorized by DEQ upon such conditions as it may deem necessary to carry out the general intent of this plan to protect the beneficial uses set forth in rule 340-41-__:

340-41-205(2)(o)	(A)	Columbia River -- 500.0 mg/L
	(B)	All Other Freshwaters and Tributaries -- 100.0 mg/L
340-41-245(2)(o)	(A)	100.0 mg/L
340-41-285(2)(o)	(A)	500.0 mg/L
340-41-325(2)(o)	(A)	100.0 mg/L
340-41-365(2)(o)	(A)	500.0 mg/L
340-41-445(2)(o)	(A)	Columbia River -- 500.0 mg/L
	(B)	Willamette River and Tributaries -- 100.0 mg/L
340-41-485(2)(o)	(A)	Main Stem Columbia River (River Miles 120 to 147) -- 200.0 mg/L
	(B)	All Other Basin Waters -- 100.0 mg/L
340-41-525(2)(o)	(A)	200.0 mg/L
340-41-565(2)(o)	(A)	500.0 mg/L

340-41-605(2)(o)	(A)	Columbia River -- 200.0 mg/L
	(B)	John Day River and Tributaries -- 500.0 mg/L
340-41-645(2)(o)	(A)	Columbia River -- 200.0 mg/L
340-41-685(2)(o)	(A)	200.0 mg/L
340-41-725(2)(o)	(A)	Main Stem Grande Ronde River -- 200.0 mg/L
	(B)	Main Stem Snake River -- 750.0 mg/L
340-41-765(2)(o)	(A)	Main Stem Snake River -- 750.0 mg/L
340-41-805(2)(o)	(A)	Snake River -- 750.0 mg/L
340-41-845(2)(o)	(A)	Snake River -- 750.0 mg/L

* Rule References by Basin:

Basin	Dissolved Chemical Substances Rule
North Coast	340-41-205(o)
Mid Coast	340-41-245(o)
Umpqua	340-41-285(o)
South Coast	340-41-325(o)
Rogue	340-41-365(o)
Willamette	340-41-445(o)
Sandy	340-41-485(o)
Hood	340-41-525(o)
Deschutes	340-41-565(o)
John Day	340-41-605(o)
Umatilla	340-41-645(o)
Walla Walla	340-41-685(o)
Grande Ronde	340-41-725(o)
Powder	340-41-765(o)
Malheur River	340-41-805(o)
Owyhee	340-41-845(o)

KUW:h
WH2110

ATTACHMENT D

HEARING OFFICER'S REPORT

AND

SUMMARY OF ORAL

AND

WRITTEN TESTIMONY

ATTACHMENT D

HEARING OFFICER'S REPORT

Hearing Officer's Report for Public Hearings on the Proposed Revisions to the Water Quality Standards, Held July 21 to July 24, 1986, in Portland, Eugene, Medford, Bend, and La Grande

The Department held five public hearings around the state between July 21 and 24, on proposed amendments to water quality standards. The Department sent public notices of the hearing on June 18, 1986 and over 500 copies of the issue papers to those individuals on the DEQ water quality standards mailing list, local and state government agencies, as well as other persons who expressed an interest in the issues. In addition, the public hearing notice was published in the Secretary of States Bulletin on June 15, 1986, and in local and state newspapers prior to the hearing.

The first hearing was held in Portland at DEQ, 522 SW 5th Ave. The hearing convened at 9:00 a.m. on July 21, 1986. Mr. Tom Lucas, Water Quality Planning Manager, served as the Hearings Officer. Prior to receipt of testimony, Ms. Krystyna Wolniakowski, author of the water quality standards report, presented an overview of the water quality standards revision process and discussed the proposed amendments.

Following the presentation and brief question and answer period, the Hearings Officer opened the record to receive oral and written testimony. Mr. Lucas reminded everyone to fill out the witness registration sheets if they wished to speak, and announced that the record would be open until August 8, 1986. Eight people provided oral testimony. The hearing was adjourned at 10:15 a.m.

The remaining hearings followed the same format as the Portland hearing, with Mr. Lucas serving as the Hearing's Officer, and Ms. Wolniakowski presenting the proposed rules, with a question and answer period prior to conveneing the hearing. The second hearing was held in Eugene at the Lane County Courthouse, South Harris Hall, Public Service Building, 125 E. 8th Ave. at 7:00 p.m. on July 21, 1986. The majority of time was spent on questions and answers regarding DEQ water quality permit processes, and whether the Willamette River was polluted with toxic substances. One person provided oral testimony. The hearing was adjourned at 7:45 p.m.

The third hearing was held in Medford at the Jackson County Courthouse Auditorium, 10 S. Oaksdale, at 1:00 p.m. on July 22, 1986. Six people provided oral testimony. The hearing was adjourned at 2:15 p.m.

The fourth hearing was held in Bend at the City Council Chambers in City Hall, 710 N.W. Wall St., at 1:00 on July 23, 1986. Three people attended to ask questions, but no one testified. The hearing was adjourned at 1:20 p.m.

The final hearing was held in La Grande at Eastern Oregon State College, Room 309, Hoke Hall, 8th and K St., at 7:30 p.m. on July 24, 1986. No one attended. The hearing was adjourned at 8:00 p.m.

RESPONDENTS

Testimony No.	Organization	Oral	Written
1.	COLUMBIA RIVER YACHTING ASSO. Don Church	x	
2.	NW MARINE TRADE ASSOC. Rey Young	x	
3.	OREGON FEDERATION OF BOATERS A.F. "Al" Gwinner, President	x	x
4.	CITY OF PORTLAND Bill Gaffi	x	
5.	CITY OF PORTLAND Brown and Caldwell Consultants Dan P. Norris	x	x
6.	OREGON ENVIRONMENTAL COUNCIL John Charles, Executive Director	x	x
7.	ASSOCIATED OREGON INDUSTRIES Tom Donaca, General Counsel	x	x
8.	NW PULP AND PAPER ASSOCIATION Terry Boner Energy and Environmental Analyst	x	x
9.	1000 FRIENDS OF OREGON Paul Ketcham, Senior Land Use Planner		x
10.	UNIFIED SEWERAGE AGENCY Stanton LeSieur Assistant General Manager		x
11.	U.S. FOREST SERVICE John F. Butruille Deputy Region Forester		x
12.	OREGON STATE UNIVERSITY Dr. Robert G. Anthony, Professor		x
13.	PORTLAND GENERAL ELECTRIC Dr. Lolita Carter Environmental Scientist		x
14.	OREGON STATE SENATE Dr. John Kitzhaber, Senate President		x

Testimony No.	Organization	Oral	Written
15.	STATE PARKS AND RECREATION DIVISION John E. Lilly, Assistant Administrator		x
16.	SIERRA CLUB -- OREGON CHAPTER Carol Lieberman, Issues Coordinator		x
17.	EPA RESEARCH LABORATORY Dr. D. Phil Larsen Team Leader for Aquatic Ecology		x
18.	NORTHRUP SERVICES Bob Hughes, Environmental Scientist		x
19.	COLUMBIA RIVER INTER-TRIBAL FISH COM. S. Timothy Wapato, Executive Director		x
20.	Thomas B. Habecker		x
21.	EPA, REGION 10 Rick Albright Water Quality Standards Coordinator		x
22.	TIMBER AND WOOD PRODUCTS GROUP Victor J. Kollock Environmental Engineer		x
23.	WILDERNESS SOCIATY Jean C. Durning, Regional Director		x
24.	NATIONAL MARINE FISHERIES SERVICE Dale R. Evans, Division Chief		x
25.	CITY OF EUGENE Christine Andersen, Public Works Director		x
26.	EUGENE WATER AND ELECTRIC BOARD Douglas Wise, Water Supply Supervisor		x
27.	OREGON STATE SENATE Lenn Hannon, State Senator Jackson County District 26	x	x
28.	CITY OF ASHLAND Brian Almquist, City Administrator	x	x
29.	ROGUE VALLEY COUNCIL OF GOVERNMENTS Bob Johnson, Medford Councilman Eric Dittmer, Water Qualtiy Coordinator	x x	x x

Testimony No.	Organization	Oral	Written
30.	CITY OF MEDFORD Don Walker, City Engineer	x	
31.	Myra Irwin	x	
32.	CITY OF ASHLAND L. Gordon Medaris, Mayor		x

SUMMARY OF ORAL AND WRITTEN TESTIMONY

1. Don Church, Executive Vice President, Columbia River Yachting Association (Oral Testimony)

   Mr. Church wanted to go on record stating that a minimal amount of restrictions should be placed on boaters in relation to discharge of sewage from boats, since there were an inadequate amount of pump out stations located around the state in recreational boating areas.

2. Rey Young, Northwest Marine Trade Association (Oral Testimony)

   Mr. Young is representing over 900 members that sale and service over 15,000 boats under 65 feet in length. He expressed that the four pumping stations nearby are not adequate to service all the boats, so regulations should not be enforced unless more pumping stations are installed.

3. A.F. "Al" Gwinner, President and Executive Committeeman, Oregon Federal of Boaters, 7515 SW Miller Hill Road, Beaverton, OR 97007; 7/31/86 (Oral and Written Testimony)

   Requested a waiver from Coast Guard regulations enforcing marine sanitation device pumping. Since there are only 17 pump stations for 22,000 boats in the state, the enforcement of MSD regulations is unfair.

4. Bill Gaffi, City of Portland (Oral Testimony)

   Mr. Gaffi questioned whether a fiscal and economic analysis had been conducted on the proposed rules. The City of Portland retained Brown and Caldwell to evaluate the fiscal impact of the proposed rules.

5. Dan P. Norris, Executive Vice President, Brown and Caldwell Consulting Engineers, PO Box 11680, Eugene, OR 97440; 7/18/86 (Oral and Written Testimony)

   Mr. Norris provided suggestions for all three proposed rule amendments:

   Antidegradation: Mr. Norris supported the current policy and expressed concern that the proposed language eliminates flexibility in balancing inordinant economic effects on a community against the basic policy of maintaining surface water quality at present levels. He stated that a non-degradation policy for outstanding waters could be used to prohibit, for all time, any development either within, or upstream of any area that the state elects to designate as "exceptional waters of ecological or recreational significance."

   Mixing Zones: Mr. Norris supported the current rule for the mixing zone policy, but also expressed support of Version B over Version A if

a choice had to be made, since Version A appeared more lengthy and confusing. He offered the following language changes for 340-41-*__(4):

- Section (a) Delete "a stream" and insert "receiving water".
- Section (d) Delete D,E,F since these factors are controlled in the permit, and should not be readdressed in policy.
- Section (f) Delete "as necessary" and "at any time" and substitute "not more frequently than once every five years".
- Section (g) Delete "existing or potential" and insert "designated" so a discharger would not be subject to hypothetical future conditions.

Toxics:

- Section (A) Was appropriate;
- Section (B) Drinking water standards should only be applied where drinking water is a designated beneficial use;
- Section (C) Replace "show conclusively" with "indicate";
- Section (D) Bioassessments are expensive so if dischargers are to conduct the tests, the results should be acknowledged and discharge permits modified so the following sentence should be included "These studies, properly conducted, will be accepted as scientifically valid for the purposes of (C)."

6. John Charles, Executive Director, Oregon Environmental Council, 2637 SW Water Avenue, Portland, OR 97201; 8/8/86 (Oral and Written Testimony)

Mr. Charles provided comments on all three proposed rules:

Antidegradation: Mr. Charles supports the proposed language if a non-degradation standard is included for outstanding waters. However, he expressed concerns that the policy language did not adequately address nonpoint sources, nor does DEQ have the program in place to plan and implement nonpoint source controls. If the EQC wants to have a means of enforcing the antidegradation policy, the the Department must devise a way of implementing a nonpoint source program that requires rigorous source control by nonpoint sources, and not just best management practices. OEC offered their assistance to DEQ to draft

such a program. Mr. Charles also suggested that the criteria used as guidelines to allow water quality degradation in high quality waters should be formalized as part of the rule, rather than to serve as "in-house guidelines" to provide the public with a clear understanding of the decision process.

Mixing Zones: Mr. Charles suggested that Section (g) be changed to "The Department shall change a mixing zone designation or outfall location if it determines that the water quality within the mixing zone adversely affects any existing or potential beneficial uses in the receiving water". This language preserves both regulatory flexibility and environmental quality, and makes the mixing zone policy more consistent with the proposed language in the antidegradation policy. He pointed out that the antidegradation policy establishes an absolute floor below which water quality will not be allowed to drop and all beneficial uses must be protected, but the proposed mixing zone policy contradicts this by using language such as no "significant or disproportionate" effects on beneficial uses in the mixing zone. Mr. Charles supports Version A of the mixing zone policy.

Toxic Substances: Mr. Charles stated that OEC supports adoption of sections (A)-(C), but recommends the following changes to (D): "Bioassessment studies which include instream monitoring and laboratory bioassays shall be conducted, as the Department deems necessary, to monitor the toxic effects of complex effluents or other suspected discharges. If toxicity occurs, the Department shall [consider] undertake measures necessary to reduce or eliminate toxicity. [through permit modification]." This change will make measures mandatory, not discretionary. Adding "or eliminate" puts dischargers on notice that corrective measures will be required. Eliminating "through permit modification" is necessary to indicate that the policy will apply to both point and nonpoint sources.

7. Tom Donaca, General Counsel, Associated Oregon Industries, PO Box 12519, Salem, OR 97309; 7/21/86 (Oral and Written Testimony)

Mr. Donaca commented on the three proposed rules. In general, he was concerned that revising the current rules was not necessary, except to satisfy EPA, and any changes would only bring uncertainty to the regulatory process.

Antidegradation: Mr. Donaca thought adding the word "important" was unnecessary. He was uncertain about the inclusion of "(F) other state designated exceptional waters of ecological or recreational significance". He asked what is meant by the this statement, who designates these waters, what is the public involvement process, can an open ended provision be part of the policy, and if so, is that an unauthorized use of legislative power by an administrative agency? He

suggested that the words "and permanently" be added after "cumulatively" in the last paragraph.

Mixing Zones: Mr. Donaca suggested that subsection (D) through (F) be deleted from the proposed rules because those requirements prevent any degradation of water quality in the mixing zone, making mixing zone water quality meet water quality standards, which then defeats the purposes of a "mixing zone". A definition of "chronic toxicity" should be included in the rules and that "available and appropriate" test organisms be used to assure that the test species is representative of the receiving water rather than a species selected for its availability. Mr. Donaca also added that the language should clarify what is meant by "lowest flow conditions". He suggested that a distinction be made betwen normal annual low flows and those low flows that occur during droughts.

Toxic Substances: Mr. Donaca suggested that in the first line after "present" the phrase"above natural levels" be inserted. He also recommended that "or may become" be deleted. In section (B) the actual substances included in the Federal Register should be included in the rule. In section (C) "scientifically valid" should be defined, or delete it and replace with more information on what kind of studies would be appropriate to make the required showing.

Mr. Donaca concluded his testimony with concerns about the fiscal impact of the proposed rules and suggested that an economic impact analysis be completed.

8. Terry Boner, Energy and Environmental Analyst, Northwest Pulp and Paper Association, 1300 114th Avenue Southeast, Suite 110, Bellvue, WA 98004; 8/6/87 (Oral and Written Testimony)

Ms. Boner provided comments on the proposed rules for mixing zones and toxic substances:

Mixing Zones:

- Language in (d)(F) would result in a de facto elimination of the mixing zone, since this section requires water quality standards to be met within that zone. By deleting (d) altogether or revising it to read "be free of sufficient to cause", water quality conditions would be preserved but not require that rigorous effluent water quality standards be met.

- Chronic toxicity bioassays should not be required within the mixing zone because EPA does not require it, testing methods are not sufficiently developed to provide consistent results, chronic tests are too expensive ($6000 per test), and too many questions remain as to what species to use, what timeframe is appropriate, what are the endpoints? Ms. Boner stated that dischargers already

conduct acute bioassays as part of the NPDES permits since lethal pollutant levels are prohibited at the pipe, or a short distance of the discharge. A chronic bioassay requirement is therefore, inappropriate.

- Language in (f) should be changed to read "The Department may [as necessary] require mixing zone monitoring...to be conducted [at any time]...within [and outside] the mixing zone boundary if the Department can demonstrate that conditions within the mixing zone unreasonably affect any existing beneficial uses in the receiving waters." This would prevent the Department from requiring bioassays at whim.

- Language in (g) should be revised to read " The Department may change a mixing zone designation... within a mixing zone if it unreasonably and measurably affects any existing [or potential] beneficial uses in the receiving waters, and an economically feasible alternative exists." The environmental benefit as well as the economic cost can be taken into account in any decision to relocate or redesign outfalls.

- Ms. Boner emphasized the need for a public hearing process for any major modifications to the policy, once adopted.

Toxic Substances: Ms. Boner requested that the bioassessment requirement be removed from the language, and recommended the following revisions:

- "Bioassessment studies shall be conducted, as the Department deems necessary , to monitor the toxicity of complex effluents or other suspected toxic discharges to aquatic life. If the effluent meets the toxic substances criteria the cost of any bioassay shall be borne by the Department. If toxicity occurs, the Department shall consider measures necessary to reduce toxicity through permit modification."

- Section (A) "Toxic substances shall not be [present] introduced above background levels in the waters of the state at levels which are [or may become] injurious to public health, safety, or welfare..." This language would account for naturally high levels of toxics, and would eliminate trying to define what may be injurious in the future.

9. Paul Ketcham, Senior Land Use Planner, 1000 Friends of Oregon, 300 Willamette Building, 534 SW Third Avenue, Portland, OR 97204; 7/24/86 **(Written Testimony)**

Mr. Ketcham submitted testimony that outlined his concerns about the need to include the biological integrity mandate of the Federal Water Pollution Control Act in water quality standards. He stated that the

biological integrity mandate encompasses more than just the chemical and physical aspects of water quality, and includes aspects of habitat quality (substrate quality), stream structure, and pool volume. It was his observation that while water may be clear, the biological integrity of many streams appear to be significantly impaired for beneficial uses. Mr. Ketcham recommended that the Department strengthen the antidegradation policy by integrating the biological integrity mandate through appropriate amendments to the nonpoint source pollution program.

10. Stanton LeSieur, Assistant General Manager, Unified Sewerage Agency of Washington County, 150 N. First Avenue, Hillsboro, OR 97124; 7/31/86 (Written Testimony)

Mr. Lesieur commented on the three proposed rules:

Antidegradation: Mr. Lesieur supports the present policy and opposes any revisions because he believes that the proposed language would prevent the Department from evaluating discharges based on sound technical studies and adjusting discharges based upon correct water quality designations.

Mixing Zones: Mr. Lesieur supports Version B if (d)D-F are deleted. He also suggested changing "as necessary" and "at any time" to "no more frequently than one test during the life of the NPDES permit", to prevent arbitrary requests for expensive monitoring studies related to environmental effects of a mixing zone.

Toxic Substances: Mr. LeSieur recommended that "above natural background levels" be added after "present". He suggested that we review the standard for total dissolved chemical levels and believed that 100 mg/L may not be appropriate. He also requested that "scientifically valid studies" be defined. Mr. Lesieur concluded his testimony with a request that the Department conduct a more thorough economic impact analysis of the proposed rules.

11. John Butruille, Deputy Regional Forester, Forest Service, Pacific Northwest Region, 319 SW Pine, PO Box 3623, Portland, OR 97208; 7/24/86 (Written Testimony)

Mr. Butruille provided comments on the antidegradation policy. He supports the basic intent of the policy but was concerned about how it would be implemented. Specifically, how would the policy be applied to short term nonpoint sources in forested watersheds where the quality was consistently higher than existing standards, how would timber sale contracts which might temporarily change existing water quality be administered, and how would a series of temporary cumulative effects be measured to determine if a threshold had been exceeded? He expressed concern that with 73,000 miles of stream in the state and 1000 timber sales annually, predicting threshold levels

and tracking them without an extensive monitoring effort would be difficult.

12. Robert Anthony, Professor, Oregon State University, Department of Fisheries and Wildlife, Corvallis, OR 97331; 8/1/86 (Written Testimony)

Dr. Anthony supported the proposed revisions and stated that these standards would ultimately improve the quality of life and protect habitat for many fish and wildlife species. He recommended that a list of all the toxic substances be included from the EPA list with concentrations not to be exceeded. He also recommended adding selenium and mercury to the list since these heavy metals have a severe effect on wildlife.

13. Lolita Carter, Environmental Scientist, Portland General Electric, 121 SW Salmon Street, Portland, OR 97204; 8/5/86 (Written Testimony)

Dr. Carter expressed support for the standards review process but had concerns about specific requirements:

Antidegradation: Dr. Carter stated that several construction type activities that occur in waters of the state may cause cumulative effects but these effects are usually temporary.

Mixing Zones: Dr. Carter requested that acute bioassays should be:

- Conducted on a limited basis, such that if effluent has met the rules, then no further bioassays would be required unless concentrations of substances in the effluent have increased.
- Conducted only within the mixing zone.

Furthermore, she states that chronic bioassay methodolgy is too uncertain and would not be a valid regulatory requirement. She asked about what species would be used, test duration, testing variables, methodology, and whether the Department had the capability to establish chronic bioassay regulations that were equitable and not controversial.

Toxic Substances: Dr. Carter requested that a list of the toxics and maximum permissible concentrations be incorporated into the rule. She also stated that bioassays were not appropriate for basin standards regulation, and if the Department required them, then the Department should bear the costs.

14. John Kitzhaber, M.D., Senate President, Oregon State Senate, State Capitol, Salem 97310-1347; 8/6/86 (Written Testimony)

Dr. Kitzhaber provided comments on the Antidegradation Policy. Dr. Kitzhaber supports including State Scenic Waterways in order to

protect the water quality and maintain beneficial uses of these waters. He strongly encouraged expansion of the exceptional waters category to include Oregon river segments listed in Nationwide Rivers Inventory conducted by the Heritage Conservation and Recreation Service to aid in the protection of waters determined through comparative scientific evaluation to be of "exceptional recreational or ecological significance". He also supports inclusion of ODFW designated rivers for "wild fish" management to strengthen protection of instream fish habitat. Dr. Kitzhaber recommended that section (F) include federally designated waters, and that the word "exceptional" be changed to "outstanding" to include waters of both exceptional water quality, and those that are not of particularly high quality but deserving of protection. Dr. Kitzaber concluded by urging adoption of the proposed standards to preserve and protect water quality in Oregon's vitally important watersheds.

15. John E. Lilly, Assistant Administrator, Parks and Recreation Division, Department of Transportation, 525 Trade Street SE, Salem, OR 97310; 8/5/86 (Written Testimony)

Mr. Lilly supported the proposed revisions to the antidegradation policy, especially as it affects state scenic waterways and other outstanding natural resource waters.

16. Carol Lieberman, Issues Coordinator, Sierra Club, Oregon Chapter, 2506 NE Halsey, Portland, OR 97212; 8/7/86 (Written Testimony)

Ms. Lieberman expressed support and appreciation for the detailed issues analysis and proposed rules. She offered comments on all three proposed rules.

Antidegradation: Ms. Lieberman requested clarification of what level of water quality degradation triggers the antidegradation policy. She also requested that the criteria for allowing degradation be incorporated into the rule, and that a public evidentiary hearing based on a record be part of the decision process, where the burden of proof for justifying degradation lies with the proponent of the discharge or activity. In addition, she requested that the list of waters to which the more restricted degradation standard applies should be expanded to include those Oregon River segments included in the Nationwide Rivers Inventory by the Heritage Conservation and Recreation Service, and ODFW designated waters for wild trout management to protect productivity. Section (f) should be revised so that "designated" is repalced with "recognized", and such recognitions may be made by agencies as well as by legislative bodies. The section would then read "other high quality waters recognized by state, federal or local agencies for their exceptional ecological or recreational significance."

Mixing Zones: Ms. Lieberman expressed support for Version A since it clearly outlines the factors to be considered in defining a mixing zone, and supports provisions for monitoring and modification.

Toxic Substances: Ms. Lieberman generally supports the proposed standards but requested that advance publication of standards be published for the public in reviewing proposed toxic discharges.

17. D. Phil Larsen, EPA Laboratory, 200 SW 35th Street, Corvallis, OR 97333; 8/8/86 (Written Testimony)

Dr. Larsen provided comments on the antidegradation policy and toxic substances. Dr. Larsen supports the revisions but asked how anti-degradation applies to temporary disturbances in streams, and how high quality waters are defined. He also supported the provision for bioassessments and field monitoring for toxics, and requested that "EPA Health Advisories" for chemicals with insufficient data, be recognized as part of the standards.

18. Robert Hughes, Environmental Scientist, Northrup Services, 200 SW 35th Street, Corvallis, OR 97333; 8/12/86 (Written Testimony)

Mr. Hughes stated that he was impressed with how clearly the complex standards issues were covered and offered comments on the anti-degradation and mixing zone rules.

Antidegradation: Mr. Hughes suggested that the Department consider regional patterns and regional reference sites to develop objective measures for evaluating degradation or non-degradation of high quality waters. Specifically, he asked for definitions of terms such as "permanent", "high quality and outstanding resource waters", "necessary and justifiable economic and social development", "public", and " significant development". He asked if use designations were clear enough to determine if uses are fully protected. He also suggested adding National and State Forests and Rangelands to the list of outstanding waters.

Mixing Zones: Mr. Hughes supports adoption of Version A and described the James River discharge at Halsey in the Willamette as curently violating aesthetic and chronic toxicity standards by producing objectionable color and turbidity. He suggested that (f) read "The Department will require annual summer mixing zone monitoring studies and bioassays to be conducted to evaluate water quality or biological status within and outside the mixing zone boundary. Such monitoring studies will follow DEQ approved protocols and quality assurance procedures for site selection, sampling gear, collection methods, species ID and enumeration, data analysis, and reporting. Bioassays will be conducted on species native to the waters in question preferrably with species that are relatively common but sensitive to the discharge in question."

19. S. Timothy Wapato, Executive Director, Columbia River Inter-Tribal Fish Commision, 975 SE Sandy Boulevard, Suite 202, Portland, OR 97214; 8/8/86 (Written Testimony)

Mr. Wapato commented on the antidegradation policy. Mr. Wapato endorses the proposed rules to fully protect existing uses in all state waters, expand the exceptional waters category, and limit temporary disturbances that would result in adverse cumulative effects on beneficial uses. He commented that the proposed policy properly places the burden of proving the necessity of a reduction in water quality on the moving party, and mandates a cost/benefit analysis which provides a safeguard to the hazard of allowing cost/benefit analysis to undermine environmental protection. The CRITFC believes that instream monitoring, monitoring of point and nonpoint sources, and development of sedimentation and large organic debris criteria will be necesary to implement the policy.

Mr. Wapato asked for clarifications on what triggers the public involvement process required to permit reduction in water quality, and for definitions of "temporary disturbances". In order to prevent cumulative impacts, Mr. Wapato maintains that DEQ must have knowledge of, or be able to predict when and where activities will take place, which may require filing pre-activity plans so DEQ could stagger the timing and location of temporary disturbances. Mr. Wapato also described what the tribes consider full protection of existing uses in terms of their treaty rights to take fish. Their treaty right is a property right that entitles them to to that number of fish needed to satisfy their moderate living needs. Thus, full protection means that there must be no measureable impact on spawning, rearing, and passage capability of fish subject to treaty allocation. He concluded by emphasizing that the antidegradation policy must maintain a separation between the biological needs of fish and the economic needs of Oregon's communities.

20. Thomas B. Habecker, Route 3, Box 440, Cornelius, OR 97113; 8/6/86 (Written Testimony)

Mr. Habecker commented on the antidegradation and mixing zone rules.

Antidegradation: Mr. Habecker reuested that the antidegradation policy include the following additional components: groundwater protection, hydraulic coupling between groundwater and surface water, hydraulic coupling between wastewater and ground water, and retaining control of closed impoundments.

Mixing Zones: Mr. Habecker requested that the Department consider control of water quality where mixing zones have hydraulic coupling with groundwater.

21. Rick Albright, Water Quality Standards Coordinator, U.S. Environmental Protection Agency, Region 10, 1200 Sixth Avenue, Seattle, WA 98101; 8/11/86 (Written Testimony)

Mr. Albright strongly supported the proposed revisions and provided comments on all three proposed rules.

Antidegradation: The proposed language is consistent with EPA's national policy.

Mixing zones: Both versions are acceptable, and with either one, implementation guidelines need to be established. The Department needs to include a provision for prohibiting against multiple mixing zones overlapping or interacting to block migration of fish or other aquatic organisms.

Toxic Substances: Mr. Albright recommended that we add a provision to use published reports for toxic substances that do not have established criteria. He also requested that the wording for bioassessments be changed to include nonpoint sources.

22. Victor Kollock, Environmental Engineer, Timber and Wood Products Group, PO Box 8328, Boise, Idaho 83707; 8/7/86 (Written Testimony)

Mr. Kollock provided comments on the antidegradation policy. He requested clarification on who designates waters for special protection, what authority enables them to do so, how is the public involved in the designation process, and how will the state determine cumulative impacts of numerous short term disturbances. He also stated that a non-degradation clause for specially designated waters goes far beyond the federal policy and is inappropriate.

23. Jean Durning, Regional Director, Wilderness Society, 1424 Fourth Avenue, Room 822, Seattle, WA 98101; 8/8/86 (Written Testimony)

Ms. Durning offered comments on the antidegradation policy. She stated that the proposed rules should be amended to include verbatim the federal antidegradation policy. This would require the addition of the following sentence "Further, the State shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best mangement practices for nonpoint source control." She also recommended including a provision that if a Director needs to lower water quality for emergency purposes, that water quality will be adequate to maintain and protect existing beneficial uses fully. Ms. Durning commended the Department for considering the effects of cumulative impacts, but recommended that the provision be amended to include all surface water of the state. She also urged the adoption of a classification system to designate outstanding waters of the

state. Finally, she recommended that the Department address the issue of watershed restoration.

24. Dale R. Evans, Division Chief, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, 847 NE 19th Street, Suite 350, Portland, OR 97232-2279; 8/8/86 (Written Testimony)

Mr. Evans supports the proposed revisions to the rules.

25. Christine Andersen, City of Eugene Public Works Director; William Pye, Metropolitan Wastewater Manager; Dan Brown, City of Springfield Public Works Director, Eugene-Springfield Metro Water Pollution Control Facility, 410 River Avenue, Eugene, OR 97404; 8/1/86 (Written Testimony)

Comments were received on the mixing zone and toxic substances rules:

Mixing Zones: The requested clarifications on the status of emergency outfalls at wastewater treatment plants and stormwater outfalls, whether they would violate the provision against exposed outfalls. They support both versions of the policy if a provision was included on public notification if any changes to the policy would occur.

Toxic Substances: They requested clarification on acceptable bioassay procedures and when they will be required, as well as the steps that would be required if an effluent was found to be toxic.

26. Douglas Wise, Water Supply and Treatment Supervisor, Eugene Water and Electric Board, 500 E. 4th Avenue, Eugene, OR 97401; 7/23/86 (Written Testimony)

Mr. Wise supports the intent and language of the proposed amendments, but requested clarification on how to obtain information on what toxic substances are included in the standards, and how they are currently enforced using current DEQ methods and procedures.

27. Lenn Hannon, State Senator, Jackson County, District 26, Oregon State Senate, State Capitol, Salem, OR, 97310-1347; 7/21/86 (Oral and Written Testimony)

Senator Hannon expressed concern about how the antidegradation policy will apply to the cleaning out of drinking water impoundments that may cause residue to flow from a secondary stream into a major waterway designated for special protection. He urged the Department to work closely with local governments that may be adversely impacted by the proposed rules.

28. Brian Almquist, City Administrator, City of Ashalnd City Hall, Ashland, OR, 97520; 7/22/86 (Oral and Written Testimony)

Mr. Almquist commented on the antidegradation policy. Mr. Almquist described the drinking water reservoir situation in Ashland and requested clarification on how the proposed rule would impact Ashlands maintenance and operations on Ashland Creek since it eventually flows into the Rogue River, classified as a Wild and Scenic River. He stated that he would oppose the proposed rule if it prohibited or restricted Ashlands water supply operation.

29. Bob Johnson, Medford Councilman, and Eric Dittmer, Water Quality Coordinator, Rogue Valley Council of Governments, 155 S. Second Street, P.O. Box 3275, Central Point, OR, 97502; 7/25/86 (Oral and Written Testimony)

The RVCOG requested clarifications on the following issues:

- How will the policy be implemented?
- How is Bear Creek classified for water quality?
- Which beneficial uses receive priority?
- Since Bear Creek does not meet standards, can it be degraded?
- Can activities be grandfathered?
- Do all streamside residents have equal opinion rights?

The RVCOG strongly urged the Department to consider the fiscal impacts of the proposed rule, and to work closely with the local governments in implenting policies adopted.

30. Don Walker, City Engineer, City of Medford (Oral Testimony)

Antidegradation: Requested that the present antidegradation policy be retained until all the questions are answered that were brought up by the previous witnesses. Mr. Walker also requested that another meeting be held after the testimony is reviewed to give the City a chance to comment based on knowledge of how the antidegradation policy will be implemented.

Mixing Zones: Prefers Version B with the following deletions, change "measurably" and insert "significantly", in Section (C) because part (b) expressly states that water quality standards in the mixing zone may be suspended. If there is a long term water quality reduction in the mixing zone, then it is reasonable to assume that some biological impacts may occur. This provision is in direct conflict with the

mixing zone parameters. He also recommended that sections (D)-(F) be deleted because these are adequately addressed in the discharge permit and should not be part of the policy itself. In (f), Mr. Walker stated that conducting biomonitoring tests was very expensive. If DEQ requires these tests, then DEQ should bear all costs associated with these tests as part of the policy. In (g), he requested that the word "potential" be deleted because it places the discharger in the position of trying to meet some future unknown hypothetical use which is an undue hardship.

Toxic Substances: Recommended adopting the proposed language with the following changes: In (C), change "show conclusively" to "indicate" because it is nearly impossible to show impacts conclusively. In (D), include language that places the cost of biomonitoring on the DEQ, if they require it.

31. Myra Erwin, Resident, City of Ashland (Oral Testimony)

Antidegradation: Ms. Erwin requested that DEQ specify whether employment growth be temporary or permanent.

32. L. Gordon Medaris, Mayor, City of Ashland City Hall, Ashland, OR 97520; 8/6/86 (Written Testimony).

Mr. Medaris urged the Department to delay adoption of any rule-making until all the questions have been resolved on how the proposed antidegradation policy would affect the operation and maintenance of Reeder Reservoir, Ashlands drinking water reservoir.

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ATTACHMENT E

MIXING ZONE POLICY:

OVERVIEW AND RESPONSE TO TESTIMONY

A. Introduction

B. Proposed Rule

C. Major Issues

D. Response to Issues Raised during Public Testimony

E. Rule Revisions by Section

ATTACHMENT E

MIXING ZONE POLICY

Overview and Response to Testimony

A. INTRODUCTION

A mixing zone is defined as a portion of a stream or waterbody that serves as a zone of initial dilution where wastewater and receiving waters mix, and where numeric water quality may be legally exceeded. However, aesthetics and beneficial uses should be protected within the mixing zone, and water quality standards must be met outside the mixing zone boundary.

The Department modified the mixing zone policy to address:

1. How mixing zones are defined (Version A incorporates guidelines used to establish mixing zones, whereas Version B refers only to the criteria that should be considered, as necessary, to establish mixing zones. See Attachment G for detailed explanation).

2. What information an applicant with a proposed discharge must provide.

3. When biomonitoring may be required.

4. Under what conditions would a mixing zone designation be changes. Although the current policy prohibits acute toxicity in the mixing zone, the proposed rule amendment went one step further to also prohibit chronic toxicity in the mixing zone.

Acute toxicity is defined as the concentration of toxic substance that causes 50 percent mortality of test organisms within 96 hours. Chronic toxicity involves long-term sublethal effects where reproductive failure occurs or where growth and development are significantly impaired, over a given testing period (based on test organism life cycle).

The Department proposed these revisions to update the rules, and clarify both the intent and the procedures used for mixing zone designations.

B. PROPOSED RULE

The proposed rule that went to hearing is as follows:

340-41-*__(4) Mixing Zones:

(4) Mixing Zones

(a) The Department may allow a defined portion of a stream to serve as a zone of initial dilution for wastewaters and receiving waters to thoroughly mix.

(b) The Department may suspend all or part of the water quality standards, or set less restrictive standards in the defined mixing zone. However, the water quality in this zone must preserve aesthetic conditions at all times and must not adversely impair any designated beneficial uses. Water quality standards must be met at the mixing zone boundary even under the lowest flow conditions.

(c) In determining the location, surface area, and volume of a mixing zone area, the Department may refer to appropriate mixing zone guidelines to assess the biological, physical, and chemical character of receiving waters and effluent and the placement of the outfall, whenever necessary to protect instream water quality, public health, and other beneficial uses. Based on receiving water and effluent characteristics, the Department shall assign a mixing zone in the immediate area of waste water discharge on a case-by-case basis in the waste water discharge permit.

(d) The mixing zone shall:

(A) be as small as feasible;

(B) be less than the total stream width as necessary to allow passage of fish and other aquatic organisms;

(C) not measurably affect the indigenous biological community especially when important species are present;

(D) not threaten public health;

(E) not adversely affect other designated beneficial uses;

(F) and be free of:

(i) materials in concentrations that will cause acute (96HLC50) or chronic toxicity to aquatic life

(ii) materials that will settle to form objectionable deposits

(iii) floating debris, oil, scum, or other materials that cause nuisance conditions

(iv) substances in concentrations that produce objectionable color, odor, taste, or turbidity

(v) substances in concentrations that produce nuisance aquatic growth

(e) The Department may request the applicant of a permitted discharge for which a mixing zone is required, to submit all information necessary to define a mixing zone, such as:

(A) type of operation to be conducted;

(B) characteristics of effluent flow rates and composition;

(3) characteristics of low flows of receiving waters;

(4) description of potential environmental effects;

(5) proposed design for outfall structures.

(f) The Department may, as necessary, require mixing zone monitoring studies and/or bioassays to be conducted at any time to evaluate water quality or biological status within and outside the mixing zone boundary.

(g) The Department may change a mixing zone designation or outfall location if it determines that the water quality within the mixing zone unreasonably and measurably affect any existing or potential beneficial uses in the receiving waters.

C. MAJOR ISSUES

The major issues raised during the hearing process by several respondents were as follows:

1. They believed that the uncertainty of chronic toxicity testing methods would result in data that would be unreliable for regulatory purposes;

2. They stated that the requirement to preserve aesthetic conditions within the mixing zone was unnecessary and unreasonable; and

3. They recommended that the frequency of bioassay tests required by the Department should be explicitly stated in the rule.

D. RESPONSE TO ISSUES RAISED DURING PUBLIC TESTIMONY

1. Chronic Toxicity

The discharge of substances that may be acutely toxic to aquatic life is strictly prohibited even within the mixing zone. Acute toxicity is defined as the concentration of a substance that causes 50 percent mortality in 96 hours of exposure. Toxicity is measured by bioassaying representative aquatic organisms and observing their survival. However, toxicity effects may be chronic, where mortality does not occur, but reproductive failure, or abnormal growth does occur. The Department has been concerned about potential chronic toxicity effects within and outside the mixing zone, and included language to regulate it in the proposed rule.

Based on public testimony, review of the intent of the mixing zone policy, an evaluation of the effluents discharged into public waters, and the recognition that chronic toxicity testing is in the developmental stage, the Department will retain the provision prohibiting acute toxicity in the mixing zone, but revise chronic toxicity requirement to prohibit chronic toxicity outside the mixing zone in the rule. The Department will continue to conduct chronic toxicity tests on effluents and refine standardized testing procedures, if a problem is suspected. If a chronic toxicity problem exists outside the mixing zone, the Department will evaluate and address it on a case-by-case basis, and work with the discharger to determine if the chronic toxicity can be reduced through changes in treatment processes.

2. Aesthetic Quality

The current mixing zone policy states that standards for aesthetic conditions cannot be suspended in the mixing zone. The Department retained this provision in the proposed rule, but provided a more explicit definition of aesthetic quality conditions in section (F).

Several respondents expressed concern about "preserving" aesthetic quality conditions in the mixing zone and requested that aesthetics be entirely deleted from the policy. The Department believes that the purpose of the mixing zone is to dilute wastewater. It is not a zone of total degradation littered with debris or scum deposits. Debris, oils, and insoluable deposits cannot be diluted, and should not be present in receiving waters, within or outside the mixing zone, because beneficial uses outside the mixing zone may be disproportionately affected by the presence of these substances. However, the mixing zone may, on occasion, contain some acceptable levels of

odor, color, or turbidity, so reference to regulating these aesthetic conditions within the mixing zone was deleted. It is desirable, though, to minimize the occurrence of these conditions to protect beneficial uses outside the mixing zone.

3. Frequency of Biomonitoring

Several respondents were uncertain how often mixing zone studies or bioassays would be required under the proposed rules, and what the economic impact would be to the dischargers. For major dischargers, the Department requires bioassays to be conducted twice a year as part of the NPDES permit conditions. If a complaint is registered, or if a treatment process has changed during the permit period, the Department may require the tests more frequently. However, the Department conducts the tests, or requires the discharger to conduct the tests, only as often as is necessary for the purposes of aquatic life protection. A chemical composition analysis is not always indicative of toxicity potential, so bioassays assist in screening the effluents to assure that toxic conditions are not present in the mixing zone. If toxicity tests demonstrate acute mortality, or reproductive failure in chronic tests, the Department conducts as evaluation of the effluent to determine the cause, and confers with the discharger to reduce or eliminate the toxicity.

Although bioassays can be expensive, the requirement already in place for semi-annual testing is within reason for most major dischargers. It is unlikely that the final rules will significantly increase the fiscal impact to dischargers, based on review of the current requirements.

E. RULE REVISIONS BY SECTION

The following discussions compare the proposed rule language that went to hearing, with the final recommended rule language. The final recommended rule language is based on staff evaluation of testimony and requirements to be consistent with federal and state laws and Department policies. The [bracketed] phrases are those that will be eliminated from the proposed rule language, and the underlined phrases are those added, based on testimony. Explanations for the changes follow each section.

When the mixing zone policy went to hearing, two versions were proposed. Version A (see Attachment G) included a large list of factors to be considered in designating mixing zones. Based on testimony, and Department staff review, Version A will not be considered. The factors included in Version A are best used in a guidance manual rather than in a rule. Version B will be incorporated

into the standard and serve to guide the Department, while still retaining flexibility in designating mixing zones.

VERSION B

Section (a)

Proposed Rule Language:

(a) The Department may allow a designated portion of a stream to serve as a zone of initial dilution for wastewaters and receiving waters to thoroughly mix.

Final Rule:

(a) The Department may allow a [defined] designated portion of a [stream] receiving water to serve as a zone of initial dilution for wastewaters and receiving waters to mix thoroughly and this zone will be defined as a mixing zone.

Discussion:

The Department agrees that deleting "stream" and inserting "receiving water" recognizes that not all receiving waters are streams.

Section (b)

Proposed Rule Language:

(b) The Department may suspend all or part of the water quality standards, or set less restrictive standards in the defined mixing zone. However, the water quality in this zone must preserve aesthetic conditions at all times and must not adversely impair any designated beneficial uses. Water quality standards must be met at the mixing zone boundary even under the lowest flow conditions.

Final Rule:

(b) The Department may suspend all or part of the water quality standards, or set less restrictive standards in the defined mixing zone[.] , [However, the water quality in this zone must preserve aesthetic conditions at all times and must not adversely impair any designated beneficial uses. Water Quality standards must be met at the mixing zone boundary even under the lowest

flow conditions.] provided that the following conditions are met:

[F] (A) The water within the mixing zone shall be free of:

(i) Materials [or chronic] in concentrations that will cause acute (96HLC50) toxicity to aquatic life. Acute toxicity is measured as the lethal concentration that causes 50 percent mortality of organisms within a 96-hour test period;

(ii) Materials that will settle to form objectionable deposits;

(iii) Floating debris, oil, scum, or other materials that cause nuisance conditions;

[(iv) Substances in concentrations that produce objectionable color, odor, taste, or turbidity]

[v] (iv) Substances in concentrations that produce [nuisance aquatic growth] deleterious amounts of fungal or bacterial growths.

(B) The water outside the boundary of the mixing zone shall:

(i) Be free of materials in concentrations that will cause chronic (sublethal) toxicity. Chronic toxicity is measured as the concentration that causes long-term sublethal effects such as significantly impaired growth or reproduction of aquatic organisms during a testing period based on test species life cycle. Procedures and end points will be specified by the Department in the waste water discharge permits.

(ii) Meet all other water quality standards under normal annual low flow conditions.

Discussion:

"Lowest flow conditions" implied that standards must be met even under occasional drought conditions, several respondents stated. The intent of the language was to emphasize that standards should be met during the critical times of the year when flows are normally low (usually defined as 7Q10) due to out of stream uses and weather conditions. The revised language more accurately reflects the intent of this requirement.

In addition, reference to aesthetic conditions and other conditions within the mixing zone was revised. A part of Section (d) was inserted in Section (A) to better define conditions to be met within the mixing zone.

Many respondents agreed that acute toxicity should be prohibited within the mixing zone, but several questioned whether chronic toxicity should be prohibited within the mixing zone, given the limited methodologies available for conducting and evaluating chronic toxicity bioassays and the suspension of water quality standards in the mixing zone to allow for dilution of wastes. Prohibiting chronic toxicity outside mixing zone boundary would be adequate to protect downstream aquatic life, while realistically allowing the mixing zone to serve as a zone of dilution. If chronic toxicity outside a mixing zone does occur, the Department will evaluate whether the impacts to the indigenous biological community are significant, and if so, what site-specific follow-up measures might be necessary. Any bioassay tests, acute or chronic, need to utilize the most appropriate representative organisms to measure site-specific conditions. Definitions for acute and chronic tests are included in the rule.

Several comments were received that requested deletion of subsections to aesthetics since they believed these sections were too restrictive and defeated the purposes of a mixing zone. It is the policy of the Department to allow less restrictive standards in the mixing zone, but certain aesthetics conditions and public health should be protected as best as possible, to avoid total degradation of an area, and to minimize adverse effects to beneficial uses outside the mixing zone. Reference to regulating color, taste, odor, or turbidity in the mixing zone was deleted. These conditions must be acceptable outside of the mixing zone to meet standards.

Section (c)

Proposed Rule Language:

(c) In determining the location, surface area, and volume of a mixing zone, the Department may refer to appropriate mixing zone guidelines to assess the biological, physical, and chemical character of receiving waters, effluent, and the placement of the outfall, whenever necessary to protect instream water quality, public health, and other beneficial uses. Based on receiving water and effluent characteristics, the Department shall assign a mixing zone in the immediate area of waste water discharge on a case-by-case basis in the waste water discharge permit.

Final Rule:

(c) The limits of the mixing zone shall be described in the waste water discharge permit. In determining the location, surface area, and volume of a mixing zone area, the Department may [refer to] use appropriate mixing zone guidelines to assess the biological, physical, and chemical character of receiving waters, and effluent, and the most appropriate placement of the outfall [whenever necessary] to protect instream water quality, public health, and other beneficial uses. Based on receiving water and effluent characteristics, the Department shall [assign] define a mixing zone in the immediate area of a waste water discharge [on a case-by-case basis in the waste water discharge permit.] to:

(A) be as small as feasible;

(B) avoid overlap with any other mixing zones to the extent possible and be less than the total stream width as necessary to allow passage of fish and other aquatic organisms;

(C) [not measurably] minimize adverse [a] effects on the indigenous biological community especially when [important] species are present[;] that warrant special protection for their economic importance, tribal significance, ecological uniqueness, or for other similar reasons as determined by the Department;

(D) not threaten public health;

(E) [not] minimize adverse[ly] effects on other designated beneficial uses[;] outside the mixing zone.

Discussion:

(A) through (E) in Section (d) were inserted into section (c) for clarification in defining mixing zone. Respondents and Department staff believed that this section adequately indicates what factors should be considered in designating a mixing zone without specifically stating them in the standards. This language would enable the Department to make necessary updates, revisions, or modifications in the factors to be considered without Commission approval for each technical change. A more comprehensive guide to establishing mixing zones would be appropriate as a guidance document, and is currently being developed by the Department to serve as a tool to design and designate appropriate mixing zones. In addition, a provision for prohibiting multiple, overlapping mixing zones to the extent possible in Subsection (B) was included, as was requested in the testimony.

"Important species" are defined as those that could be either economically important or ecologically vital to a biological community. It could be an organism that is present with"endangered status", or a species, such as anadromous fish, that are protected by Indian Treaty Rights for their religious and economic significance. The Department included a definition of "important" in the rule for clarification.

Section (d)

Proposed Rule Language:

(d) The mixing zone shall:

(A) be as small as feasible;

(B) be less than the total stream width as necessary to allow passage of fish and other aquatic organisms;

(C) not measurably affect the indigenous biological community especially when important species are present;

(D) not threaten public health;

(E) not adversely affect other designated beneficial uses;

(F) and be free of:

(i) materials in concentrations that will cause acute (96HLC50) or chronic toxicity to aquatic life;

(ii) materials that will settle to form objectionable deposits;

(iii) floating debris, oil, scum, or other materials that cause nuisance conditions;

(iv) substances in concentrations that produce objectionable color, odor, taste, or turbidity; and

(v) substances in concentrations that produce nuisance aquatic growth.

Final Rule:

This section was revised with (A) through (E) inserted in Section (c), and (F)(i) through (v) inserted in Section (b) for clarification and better organization.

Section (e)

Proposed Rule Language:

(e) The Department may request the applicant of a permitted discharge for which a mixing zone is required, to submit all information necessary to define a mixing zone, such as:

(A) type of operation to be conducted;

(B) characteristics of effluent flow rates and composition;

(C) characteristics of low flows of receiving waters;

(D) description of potential environmental effects;

(E) proposed design for outfall structures.

Final Rule:

(d) Same as proposed rule language.

Discussion:

Since no comments were received on this section, the language will be retained as proposed, but Section (e) was changed to (d).

Section (f)

Proposed Rule Language:

(f) The Department may, as necessary, require mixing zone monitoring studies and/or bioassays to be conducted at any time to evaluate water quality or biological status within and outside the mixing zone boundary.

Final Rule:

(e) The Department may, as necessary, require mixing zone monitoring studies and/or bioassays to be conducted [at anytime] to evaluate water quality or biological status within and outside the mixing zone boundary.

Discussion:

The language will remain almost the same based on evaluation of the testimony received. One respondent requested that the Department place a time line on how often bioassays will be required (i.e., once every five years), and objected to studies conducted outside the

mixing zone. The Department usually requires bioassays to be conducted twice a year for major dischargers, and less often for minor dischargers, to assure protection of aquatic life. If a toxicity problem is suspected, the Department may request bioassays to be conducted more often. Reference to requiring studies to be conducted "at anytime" was deleted.

To conduct mixing zone studies, sampling outside of the mixing zone boundaries is necessary to determine background conditions, and compare with conditions within the mixing zone.

One respondent requested that the Department include very specific language on the protocol of monitoring and bioassay activities as part of the mixing zone rule. The Department believes that such specific language in the rule is not necessary, and is more appropriate within lab and field monitoring guidelines.

Section (f) was changed to (e) to reflect new numbering system.

Section (g)

Proposed Rule Language:

(g) The Department may change a mixing zone designation or outfall location if it determines that the water quality within the mixing zone unreasonably and measurably affect any existing or potential beneficial uses in the receiving waters.

Final Rule:

(f) The Department may change [a] mixing zone [designation] limits or require the relocation of an outfall [location] if it determines that the water quality within the mixing zone [unreasonably and measurably] adversely affects any existing [or potential] beneficial uses in the receiving waters.

Discussion:

The language was changed to provide more consistent terms with other parts of the rule, and to eliminate addressing hypothetical beneficial uses potentially designated in the future. Section (g) was changed to (f) to reflect new numbering system.

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WH2114

ATTACHMENT F

TOXIC SUBSTANCES STANDARD:

OVERVIEW AND RESPONSE TO TESTIMONY

A. Introduction

B. Proposed Rule

C. Major Issues

D. Response to Issues Raised during Public Testimony

E. Rule Revisions by Section

ATTACHMENT F

TOXIC SUBSTANCES STANDARDS

Overview and Response to Testimony

A. INTRODUCTION

The following overview describes the proposed rule amendments to the toxic substances standards, the major issues raised during the public hearing process, and a response to those issues. A comparison will be made between the proposed language, and the final recommended language that incorporates comments from the public and Department staff.

The control of toxic substances is crucial to maintain water quality standards and to protect the public and the environmental from unreasonable risks resulting from exposure to toxic substances. The Department revised the current toxic substances standards to incorporate the most up-to-date information and references available for controlling toxic substances.

The current toxics standards are addressed in two rules, Pesticides and other Toxic Substances (340-41-___(2)(p)) and Dissolved Chemical Substances (340-41-___(2)(o)). The Department combined the two rules and created one rule that addressed all toxic substances since the same EPA regulatory document applied to both. Quality Criteria for Water (1986) summarizes the aquatic life and human health toxicity limits, and establishes criteria or guidance values for pollutants.

B. PROPOSED RULE

The proposed rule that went to hearing is as follows:

340-41-__(2)(p) Toxic Substances

(A) Toxic substances shall not be present in the waters of the state at levels which are or may become injurious to public health, safety, or welfare; aquatic life; or other designated beneficial uses.

(B) Levels of toxic substances shall not exceed the most recent criteria values for organic and inorganic pollutants established by EPA and published in Quality Criteria for Water (1976), 40 CFR Parts 141-143 (1985) for drinking water; and the Federal Registers November 28, 1980, 45 FR 79318 for sixty-four pollutants, February 15, 1984, 49 FR 5831 for dioxin, and July 29, 1985, 50 FR 30784 for nine pollutants.

(C) These criteria shall apply unless data from scientifically valid studies show conclusively that beneficial uses will not be adversely affected by exceeding a criterion by a specific amount

or that a more restrictive criterion is warrented to protect beneficial uses.

(D) Bio-assessment studies shall be conducted, as the Department deems necessary, to monitor the toxicity of complex effluents or other suspected discharges to aquatic life. If toxicity occurs, the Department shall consider measures necessary to reduce toxicity through permit modification.

C. MAJOR ISSUES

Respondents supported the proposed rule language, with a few suggested wording changes:

1. They requested that a list of the toxic pollutants and criteria or guidance values be included in the rule.

2. They requested a definition of "scientifically valid" studies, how they would be applied in defining criteria values, and who would be responsible for providing that information.

3. They suggested provision for control of nonpoint sources of toxic substances as well as point sources.

4. They recommended a provision to undertake measures to reduce or eliminate toxicity, rather than just "consider" toxicity controls.

D. RESPONSE TO ISSUES RAISED DURING PUBLIC TESTIMONY

1. Criteria Values

When the proposed rules went to hearing, the EPA criteria lists were published in several Federal Register Notices and these were referenced in section (B) of the proposed language. Since the public hearings, EPA has summarized and consolidated the information from these publications into one document, Quality Criteria for Water (1986). In the final language, Quality Criteria for Water (1986) replaces the list of Federal Register publications.

The criteria values included in Quality Criteria for Water (1986) can be divided into two categories. The first category consists of priority pollutants for which EPA has published numeric criteria. EPA has published 26 aquatic life criteria and 123 human health criteria for the 126 priority pollutants on the list. These criteria are based on results from rigorous tests

conducted on many sensitive species, and are considered to be the best available scientific information. EPA requests that the states adopt these criteria as standards not to be exceeded in order to beneficial uses.

The second category consists of priority pollutants for which EPA has published recommended guidance values. These guidance values are based on fewer tests, rather than values derived based on a series of rigorous tests with many organisms. These values are meant to serve as guidelines, and should be evaluated on a site specific basis in conjunction with bio-assessment techniques, if they are used as enforceable standards.

2. Scientifically Valid Studies

If no numeric criteria or guidance values exist for a toxic substance of concern, the Department consults the EPA Water Quality Advisories for human health and aquatic life, and any site-specific "scientifically valid" studies, if available. These guidances values from these sources, in combination with biomonitoring, are used to establish appropriate limits for specific toxicants, as well as for whole effluent toxicity. The Department defines "scientifically valid" as those studies where data have been systematically collected and statistically analyzed, and the results are reproducible, defensible, and statistically significant.

If a numerical criteria value is challenged by a discharger as inappropriate for a permit based on site specific conditions, it is their responsibility to submit the necessary supporting evidence to the Department for review and evaluation. If the Department concurs, the criteria value may be adjusted conditional upon follow-up biomonitoring studies to assure full protection of beneficial uses.

3. Nonpoint Sources of Toxics

Several respondents expressed concern that the reduction or elimination of toxic substances should apply to both point and nonpoint sources. The proposed language stated that the Department would consider measures necessary to reduce toxicity through "permit modification", which implied point source control strategies. The Department has modified the language in the final rule by deleting the reference to permit modification, and inserting that toxicity reduction would be evaluated on a case-by-case basis. This revision would apply to both point and nonpoint sources.

4. Toxicity Evaluation and Reduction

The new Clean Water Act of 1987 passed by Congress mandates implementation of programs to control the discharges of certain toxic pollutants to surface waters where water quality is now impaired. In carrying out the requirements of the toxics control provisions in the CWA, the Department will be developing and implementing a progressive program to inventory waterbodies that may require controls for toxic pollutants, to determine the specific point sources suspected of impairing water quality by discharging toxics, to determine the amount of each toxic pollutant discharged by each of these point sources, and to develop control strategies for toxic pollutant load reduction that focuses on high priority areas where improvements will result in the greatest environmental benefit. In addition, the Department needs to assess where additional water quality information is necessary to determine the contribution of toxics from nonpoint sources as well as point sources. During 1987-1988, the Department will complete a Toxic Control Implementation Plan.

E. RULE REVISIONS BY SECTION

The following discussions compare the proposed rule language that went to hearing, with the final recommended rule language. The final recommended rule language is based on staff evaluation of testimony and requirements for consistency with federal and state laws and Department policies. The [bracketed] phrases are those that will be eliminated from the proposed rule language, and the underlined phrases are those added, based on testimony. Explanations for the changes follow each section.

Section (a)

Proposed Rule Language:

340-41-__(2)(p)

(a) Toxic substances shall not be present in the waters of the state at levels which are or may become injurious to public health, safety, or welfare; aquatic life; or other designated beneficial uses.

Final Rule:

(A) Toxic substances shall not be [present] introduced above natural background levels in the waters of the state [at levels] in

amounts, concentrations or combinations, which [are or may become injurious to] may be harmful, may chemically change to harmful forms in the environment, or may bioaccumulate to levels that adversely affect public health, safety, or welfare; aquatic life; or other designated beneficial uses.

Discussion:

These changes were made to recognize that certain toxic substances may be present under natural conditions, and the intent is to prevent introduction above background concentrations. The phrase "or may become" was unclear in terms of whether it meant a chemical may be toxic in the future, or whether a chemical may degrade to a more toxic form. This language was clarified by explaining that toxic substances that may chemically change to more harmful forms, or may bioaccumulate would be prohibited. The section (a) was changed to (A) to be consistent with rule nomenclature.

Section (b)

Proposed Rule Language:

(b) Levels of toxic substances shall not exceed the most recent criteria values for organic and inorganic pollutants established by EPA and published in Quality Criteria for Water (1976), 40 CFR Parts 141-143 (1985) for drinking water; and the Federal Registers November 28, 1980, 45 FR 79318 for sixty-four pollutants, February 15, 1984, 49 FR 5831 for dioxin, and July 29, 1985, 50 FR 30784 for nine pollutants.

Final Rule:

(B) Levels of toxic substances shall not exceed the most recent criteria values for organic and inorganic pollutants established by EPA and published in Quality Criteria for Water (19[7]86).[40 CFR Parts 141-143 (1985) for drinking water; and the Federal Registers November 28, 1980, 45 FR 79318 for sixty-four pollutants, February 15, 1984, 49 FR 5831 for dioxin, and July 29, 1985, 50 FR 30784 for nine pollutants.] A list of the criteria values is presented in Table 20.

Discussion:

The Quality Criteria for Water (1986) document includes summaries of all the contaminants for which EPA has developed human health and aquatic life criteria recommendations, so all the references for the Federal Registers and CFR are no longer necessary. The list of contaminants included in the Quality Criteria for Water (1986) will be

added to the rule. Section (b) was changed to (B) for correct rule nomenclature.

Section (c)

Proposed Rule Language:

(c) These criteria shall apply unless data from scientifically valid studies show conclusively that beneficial uses will not be adversely affected by exceeding a criterion by a specific amount or that a more restrictive criterion is warrented to protect beneficial uses.

Final Rule:

(C) These criteria shall apply unless data from scientifically valid studies [show conclusively] demonstrate that the most sensitive designated beneficial uses will not be adversely affected by exceeding a criterion, or that a more restrictive criterion is warranted to protect beneficial uses, as accepted by the Department on a site specific basis [by a specific amount]. Where no published EPA criteria exist for a toxic substance, public health advisories and other published scientific literature may be considered and used, if appropriate, to set guidance values.

Discussion:

As was mentioned previously, scientifically valid studies can be defined as those studies where data was statistically significant, reproducible, and defensible. The Department retained the language from the proposed rule to the final rule to assure that information considered in any regulatory decision is of the highest quality and credible. The Department chose to change "show conclusively" to"demonstrate" since this indicates a more realistic and appropriate term.

Respondents also suggested that health advisories and published reports be included as part of the rule to address substances where no published EPA criteria exists. Since the Department considers health advisories as "scientifically valid" information, these documents will be consulted prior to any decisions regulating toxic substances in the absence of criteria. Section (c) was changed to (C) to be consistent with rule nomenclature.

Section (d)

Proposed Rule Language:

(d) Bio-assessment studies shall be conducted, as the Department deems necessary, to monitor the toxicity of complex effluents or other suspected discharges to aquatic life. If toxicity occurs, the Department shall consider measures necessary to reduce toxicity through permit modification.

Final Rule:

(D) Bio-assessment studies such as laboratory bioassays or instream measurements of indigenous biological communities, shall be conducted, as the Department deems necessary, to monitor the toxicity of complex effluents [or], other suspected discharges, or chemical substances without numeric criteria, to aquatic life. These studies, properly conducted in accordance with standard testing procedures, will be considered as scientifically valid for the purposes of (C). If toxicity occurs, the Department shall [consider] evaluate and implement measures necessary to reduce toxicity [through permit modification] on a case-by-case basis.

Discussion:

The Department agrees that toxicity studies could be used as scientific evidence in evaluating whether a permit limit or best management practices should be modified to protect beneficial uses. By adding "evaluate and implement", the Department demonstrates a commitment to action to reduce toxicity in the most feasible and practical manner, on a case-by-case basis. Deleting "permit modification"is necessary to indicate that the policy will apply to both point and nonpoint sources of toxic substances.

Section (d) was changed to (D) for correct rule nomenclature.

KUW:h
WH2115

ATTACHMENT G

June 13, 1987

EQC STAFF REPORT

ATTACHMENT G

Department of Environmental Quality

522 S.W. FIFTH AVENUE, BOX 1760, PORTLAND, OREGON 97207 [illegible]

MEMORANDUM

TO: Environmental Quality Commission

FROM: Director

SUBJECT: Agenda Item No. H, June 13, 1986 EQC Meeting,

Request for authorization to conduct public hearings on proposed amendments to the Water Quality Standards Regulation, OAR 340, Chapter 41: Antidegradation Policy, Mixing Zone Policy, and Toxic Substance Standards

Background

OR 468.735 provides that the Environmental Quality Commission, by rule, may establish standards of quality and purity for waters of the state. Present water quality standards contained in Oregon Administrative Rules (OAR Chapter 340 Division 41) were adopted in December 1976. The Commission adopted revisions to these standards in September 1979, July 1985, and added nuisance aquatic growth standards in March 1986.

The Clean Water Act (Public Law 92-500, as amended) requires the state to hold public hearings, at least once each three years, to review applicable water quality standards. To comply with provisions of the Act, the Department conducted statewide hearings in Spring 1984 to solicit comments on a concept to modify the fecal coliform standard from year-round application to a seasonal application. In addition, the Department solicited suggestions for proposing amendments or modifications to the present standards.

At the July 19, 1985 Environmental Quality Commission meeting Agenda Item I, Proposed Adoption of Amendments to Water Quality Standards Regulation, was considered by the Commission. The report presented the public testimony from the 1984 public hearings. The Department received specific proposals from the public on changes to the water quality standards including mixing zones, antidegradation, dissolved chemical substances, pesticides and organic toxics, and nutrients.

While the public hearings were in progress to discuss whether the fecal coliform standard should apply year-round or just during the water contact recreation season, the Department received a microbiological criteria document from EPA discussing two bacterial indicator species that better relate human fecal contamination to bathing water quality. Based on that information, the Department chose to postpone consideration of specific changes to the fecal coliform standard. Instead, the Department will measure E.Coli or enterococci on a trial basis in addition to fecal coliform to determine their potential as indicator organisms. After sufficient data have been collected, the Department will re-evaluate the fecal coliform standard.

To address the specific proposals on the other water quality standards received from the public, the Department recommended that issue papers be prepared and circulated for public review. Based on this recommendation, the EQC directed the Department staff to prepare issue papers dealing with potential rule amendments for the following.

a) Antidegradation Policy: Include reference to scenic waterways and more specific protection of existing uses.

b) Mixing Zone Policy: Expand criteria for defining mixing zones for point source discharges.

c) Dissolved Chemical Substances: Update the standards to include consideration of a hardness factor and incorporate the most recent EPA criteria.

d) Pesticides and Other Organic Toxic Substances: Update the standards to reflect the latest scientific and technical information.

e) Nutrient Standards: Add standards for surface waters to limit nuisance aquatic weed and algae growths.

Development of nuisance aquatic growth standards was the first issue paper to be completed and taken out for public hearing. After extensive review of the public testimony, the Department proposed adoption of a nuisance aquatic growth rule at the March 14, 1986, Environmental Quality Commission meeting. The Commission adopted the proposed rule as OAR 340-41-150.

The remaining issue papers are presented in this staff report. They include: a) Antidegradation Policy; b) Mixing Zone Policy; and c) Toxic Substance Standards. The Toxic Substances paper combines discussion of the standards for Dissolved Chemical Substances, and Pesticides and Other Organic Toxic Substances. Each of these issue papers are presented in Attachment A with descriptions of the current standard, analyses of the current standards, summaries of public and agencies' comments related to the individual standards, alternatives for revising the standards to address concerns and clarify the intent of the standards, and finally evaluation of the alternatives. A summary of each of the issue papers follows:

A. Antidegradation Policy

The purpose of an antidegradation policy is to limit activities or discharges to those that will not permanently affect water quality and threaten or impair the designated beneficial uses of all waters of the state. The policy allows some water quality degradation to accommodate necessary development, but uses must be protected. Special protection is provided for high quality and outstanding national resource waters to maintain and protect the water quality at the highest level possible and to preserve the value of the resources.

The Department is proposing to amend the current antidegradation policy OAR 340-41-026(1)(a). The proposed changes are summarized as follows:

1. Include language to protect the water quality necessary to support all designated beneficial uses in waters of the state. The current policy includes protection for only high quality and outstanding quality waters of the state.

2. Modify the language to include lowering water quality only where it is necessary to accommodate important and justifiable social or economic development. The current policy allows EQC to lower water quality standards for necessary and justifiable economic or social development. The proposed language change to include "important" would be more rigorous and emphasize "important and significant development" instead of only "justifiable development".

3. Add State Scenic Waterways, and areas of special ecological significance to the outstanding waterways list to provide the highest level of protection of water quality and beneficial uses for these waters.

4. Include a provision that is intended to prevent cumulative impacts from a series of permitted short-term water quality disturbances in high quality waters.

B. Mixing Zones

A mixing zone is a portion of a stream that serves as a zone of initial dilution where waste waters and receiving waters mix, and numeric water quality criteria can be legally exceeded. Chronic and acutely toxic conditions must be prevented in this zone and water quality standards must be met at the mixing zone boundary even under lowest flow conditions. The intent of the current policy is to state when a mixing zone is defined and how it is established, without delineating precise methodology. This approach has allowed the Department to set mixing zones on a site-specific basis but it has not provided clear enough guidance in defining mixing zones.

After evaluating the current policy and its implementation, the Department is proposing revisions and additions to clarify both the intent of the policy and the procedures used for establishing mixing zones. The policy is the same for each basin and the rule reference is included in Attachment F. The proposed changes are summarized as follows:

1. Re-organize the mixing zone policy to include these components:

   Statement of Policy
   Methodology for Assessing Appropriate Mixing Zones
   Establishing Mixing Zone
   Applicant Responsibilities
   Monitoring Mixing Zones
   Modification of Mixing Zones

2. Include specific biological, chemical and physical factors to be considered in assessing receiving waters and effluent characteristics. Incorporating these factors in the standard would assist in determining where mixing zones should be located in fresh and marine waters. Alternative language is also proposed that would reference mixing zone guidance instead of incorporating the factors directly into the rule.

3. Include a statement that addresses how mixing zones are defined and what conditions must be met in the mixing zone. These conditions must be such that aesthetics, aquatic life, public health, and other beneficial uses are protected.

4. Add a provision that authorizes the Department to direct the permit applicant to submit the information on receiving water and effluent characteristics necessary to define mixing zones.

5. Add a provision for biological monitoring in the mixing zone to insure protection of all beneficial uses and water quality.

6. Add a provision that authorizes the Department to re-evaluate the mixing zone designation or outfall location if unforeseen adverse effects to beneficial uses occur before a permit expires.

C. Toxic Substances

The Department is proposing to combine the standards for "Pesticides and Other Organic Toxic Substances" with "Dissolved Chemical Substances" since the topics are closely related and criteria levels are based on many of the same EPA references. Until 1980, the standard reference for inorganic and organic toxic substances was the 1976 Quality Criteria for Water, published by EPA. Since then, a considerable amount of applied research in toxics has been completed and new information on toxicity has been published. The current standards on toxic substances should be amended to incorporate new and updated toxics criteria published by EPA.

The proposed language modifications for the new Toxic Substances standard is summarized as follows:

1. Include a general statement of policy that prohibits injurious levels of toxics in the water to protect beneficial uses, and a reference to the most recent EPA criteria values.

2. Include authorization for the Department to allow either more or less restrictive values for site-specific situations. Due to the unique nature of many waters within the state, established criteria values (or guide concentrations) may not always be set at the appropriate level to protect the designated beneficial uses of certain waterways. The Department should have the ability to make site-specific judgements based on the data from scientifically valid studies.

3. Include a provision for bioassessments to monitor situations where the toxic components or toxicity of an effluent is unknown. Due to the intricate chemical reactions within complex effluents, chemical analyses for known or suspected toxic substances may not sufficiently address the lethal potential of a wastewater. Through toxicity bioassays or in-stream monitoring, the effects of the effluent on aquatic communities can be assessed. If toxicity occurs, the Department may then initiate corrective actions.

The proposed language changes for each of the standards discussed are included within the issue papers of Attachment A, and the new proposed rule amendments are included in Attachment F. The Department will continue to evaluate proposals submitted and will propose future rulemaking actions as appropriate. Hearing testimony will undoubtedly raise additional issues which will be discussed as part of the hearing record evaluation and response.

Alternatives and Evaluation

The alternatives are as follows:

1. Authorize the Department to conduct public hearings on the proposed amendments.

2. Do not authorize public hearings.

The Department believes that public hearings are needed to solicit comments and to raise important issues involving water quality standards development. Public testimony assists the Department staff in preparing the proposed rule amendments to be presented for Commission consideration and possible adoption.

Summation

1. Water Quality standards are reviewed by Department staff and taken out to public hearing periodically to incorporate updated information.

2. During the 1984 public hearing process, several proposals for standards revision were received from the public.

3. The Commission has requested the Department to prepare issue papers for public review on the antidegradation policy, the mixing zone policy, and the toxic substances standards.

4. Issue papers are presented with proposed rule amendments to clarify the intent and application of the standards.

Director's Recommendation

Based on the summation, the Department requests authorization from the Commission to proceed to public hearing to take testimony on the proposed amendments for the Antidegradation Policy, the Mixing Zone Policy, and the Toxic Substances standards, as presented in Attachment F.

Fred Hansen

Attachments:

A. Issue Papers
B. Hearing Notice
C. Statement of Need for Rulemaking
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Krystyna U. Wolniakowski:c
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ATTACHMENT A

ISSUE PAPERS

ANTIDEGRADATION POLICY

INTRODUCTION

This review evaluates the Oregon Antidegradation Policy and proposes revisions and addition to the language to clarify the intent of the policy.

The purpose of an antidegradation policy is to limit activities or discharges to those that will not permanently affect water quality and threaten or impair the designated beneficial uses of all waters of the state. The policy allows some water quality degradation to accommodate necessary development, but beneficial uses must be protected. Special protection is provided for high quality and outstanding national resource waters to maintain and protect the water quality at the highest level possible and to preserve the value of those resources.

ANTIDEGRADATION POLICY

Section 340-41-026(1)(a) under "Policies and Guidelines Generally Applicable to All Basins" states the policy as follows:

"Existing high quality waters which exceed those levels necessary to support the propagation of fish, shellfish and wildlife and recreation in and on the water shall be maintained and protected unless the environmental Quality Commission chooses, after full satisfaction of the intergovernmental coordination and public participation provisions of the continued planning process to lower water quality for necessary and justifiable economic or social development. The Director or his designee may allow lower water quality on a short-term basis in order to respond to emergencies or to otherwise protect public health and welfare. In no event, however, may degradation of water quality interfere with or become injurious to the beneficial uses of water within surface waters of the following areas:

(A) National Parks;

(B) National Wild and Scenic Rivers;

(C) National Wildlife Refuges;

(D) State Parks."

ANALYSIS OF THE ANTIDEGRADATION POLICY

The three parts in the current antidegradation policy are 1) the provision for maintaining and protecting high quality waters, 2) the provision for lowering water quality for emergency situations, and 3) special protection for exceptional waters within the state.

1) "Existing high quality waters which exceed those levels necessary to support propagation of fish, shellfish and wildlife and recreation in and on the water shall be maintained and protected unless the Environmental Quality Commission chooses after full satisfaction of intergovernmental coordination and public provisions of the continuing planning process to lower water quality for necessary and justifiable economic or social development."

Existing high quality waters are defined as those waters that are above the set standards designed to protect designated beneficial uses. For example, if a stream is 100% saturated with dissolved oxygen, and is designated as a cold water fish stream, the stream would qualify as high quality water because the standard only requires a dissolved oxygen saturation of 90% to meet the cold water fish use. According to this provision, the water quality must be maintained and protected at the existing 100% level and cannot be degraded to the 90% level by any activities. However, this provision also allows some flexibility to accommodate development. If the public shows that the development is necessary and important through the public hearing process, and the EQC judges that the development will preserve the water quality to protect the beneficial uses, limited degradation may occur.

The definition of "necessary and justifiable economic and social development" is not clearly stated in the rules, and has been questioned as to what factors are considered in judging a development to be necessary, justifiable, economical or socially important enough to degrade water quality. No one definition or set of factors apply, but the language provides the Commission the opportunity to make individual site-specific decisions based on evidence presented by the persons seeking the change and the public. The benefits of the projects are always weighed against the costs to a community and the environment. This is not intended to be a license to degrade water quality.

The key is that a strong tie should be established between lower water quality and "significant" economic or social development.

The following criteria may be used as guidance in the decision making process. Demonstration of important economic and social development entails two separate tasks. First, the person seeking change should describe and analyze the current state of economic and social development in the area that would be affected. The purpose of this step is to determine the "baseline" economic status of the affected community, i.e., the measure against which the effect of the water quality downgrade is judged. The following factors should be included in the baseline analysis:

- population
- area employment (numbers employed, earnings, major employers);

- area income (earnings from employment and transfer payments, if known);
- manufacturing profile: types, value, employment, trends;
- government fiscal base: revenues by source (employment and sales taxes, etc.).

Second, the person seeking the change in water quality should then demonstrate the extent to which the sought-for level of water quality would create an incremental increase in the rate of economic and social development and why the change in water quality is necessary to achieve such development. The person should provide analysis, along with all supporting data used in its preparation, showing the extent to which the factors listed above will benefit from the change in water quality requested. The analysis should specially demonstrate why such economic and social development is contingent upon the water quality change. The following factors may be included in the analysis of incremental effects expected to result from the degradation in water quality.

- expected plant expansion;
- employment growth;
- direct and indirect income effects;
- increases in the community tax base.

The requirements for a given analysis will be site-specific, depending upon factors such as data availability, conditions specific to the relevant water body, and the area of impact (whether city, county, or State-wide.)

For example, if a community using septic systems was growing rapidly, a waste water treatment facility would soon be required to accommodate the growth, prevent possible groundwater contamination, and provide better services to the community. The treatment facility would need to discharge the effluent into a river, but in doing so may add BOD loading, lower the dissolved oxygen, or alter water chemistry in some way. The Commission would need to judge whether the project is truly needed, what the community costs and benefits are, and if groundwater quality or surface water quality would be threatened or beneficial uses impaired, based on testimony presented by the person seeking the change and the public.

2) <u>The Director or his designee may allow lower water quality on a short-term basis in order to respond to emergencies or to otherwise protect public health and welfare.</u>

Occasionally, a situation arises where temporary degradation of water quality must occur to accommodate a necessary project or to respond to emergencies. If a water supply line crossing a stream is broken and needs to be repaired or replaced, this provision allows the Director to set less stringent standards on a temporary basis, or permit activities that in the long-term would be a benefit to the community.

3) In no event, however, may degradation of water quality interfere with, or become injurious to the beneficial uses of water within surface waters of the following areas: (A) National Parks, (B) National Wild and Scenic Rivers, (C) National Wildlife Refuges, and (D) State Parks.

This provision in intended to give special protection for classified exceptional waters of the state. The Commission does not have the authority to allow any permanent degradation of these waters for any reason. The water quality and beneficial uses must be protected to preserve the unique resource values of these areas. Even though this is a very strict provision, it is not intended to be "non-degradation" clause. If, for example, development might be proposed upstream of an area classified as a State Park, the developer would need to show conclusively that the development would not in any way diminish the value of the State Park located downstream, although some temporary disturbance may occur during the construction activity. The Commission would then judge, based on technical evidence and public testimony, that the development would not only protect and maintain existing water quality, but all beneficial uses and unique resource values would be protected. If the provision was strictly a non-degradation statement, then even temporary disturbance would not be allowed under any circumstances. Thus, the intent of this provision is to protect existing water quality in special areas. The actual wording, however, does not clearly state this objective. Merely stating that water quality degradation may not interfere with beneficial uses only re-states the basic policy of maintaining and protecting beneficial uses, without emphasizing maintaining and protecting the existing water quality. In some cases, the existing water quality may be of much higher quality than is necessary to support the uses. In addition, defining "interfere" and "injurious" is difficult and subject to misinterpretation. Alternative wording would serve to clarify the intent and level of protection for special national resource waters.

Although temporary degradation of water quality can be permitted to accommodate a short-term activity, the Department needs to consider the cumulative effects from numerous short-term disturbances in close proximity on a particular water way. It is possible that consecutive disturbance or degradation in water quality may impact aquatic life communities, or other beneficial uses to a point that recovery may not occur as predicted.

SUMMARY AND DISCUSSION OF 1984 PUBLIC TESTIMONY ON ANTIDEGRADATION

Three respondents described their concerns as follows:

1) Oregon State Parks requested that the Antidegradation Policy be amended to include designated "State Scenic Waterways" (ORS 390.825) to ensure that scenic waterways remain unpolluted and the outstanding water quality and beneficial uses be maintained.

   The Department also recommends including State Scenic Waterways in the policy since special protection of these waters is consistent with the scenic waterways statutes (ORS 390.835).

2) Oregon Shores Conservation Coalition expressed that the current Anti-degradation policy is not consistent with Oregon Public Law ORS 468.710(2) which declares that the public policy of the state is to"protect, maintain, and improve the quality of the waters of the state... beneficial uses." they contend that the provision for lowering water quality for "necessary and justifiable economic or social development", is inconsistent with the intent of the Oregon Public Law since the statute does not specifically include that provision.

The Attorney General for Oregon reviews and evaluates the Oregon Water Quality Standards to assure consistency between the statues and the corresponding rules. The current water quality standards were certified by the Attorney General as consistent with the intent of public law when they were filed with EPA. In addition, that provision is consistent with a similar provision in the Federal EPA Anti-degradation Policy.

3) EPA recommended that the current policy should be amended to reflect the 1983 revisions of the federal water quality regulations. The following changes were requested to provide more consistency between the federal and state antidegradation policies:

   a) Add a new paragraph which requires the protection of existing uses and the water quality necessary to ensure the preservation of those uses for ALL waterways:

      "Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected."

   b) Modify the first sentence of the policy "...for necessary and justifiable economic or social development." to read "where it is necessary to accommodate important economic or social development in the areas in which the waters are located." EPA stated that this phrase is intended to convey a general concept regarding what level of social or economic development could be used to justify a change in high quality waters. More exact meanings will only be possible on a case-by-case basis. EPA further stated that"necessary and justifiable.." was not as rigorous as "necessary to accommodate important...".

   c) Delete reference to specific outstanding waters and amend the last sentence to include all surface waters of the state.

The Department concurs with the first recommendation. Since existing water quality in all waterways should be maintained and protected, it should be explicitly stated in the policy. In response to the second recommendation, the Department agrees that including the word "important" would strengthen the language in the provision. For a development to be important, it would have to be significant, noteworthy, and carry a great deal of weight. Justifiable implies a well-founded or valid development. Instead of replacing justifiable with important, the Department proposes to include both in the language to insure that a development is necessary, significant and well-founded. The Department does not agree that adding "... in which the waters are located" is necessary. This phrase is vague and does not define just what the boundaries are or where the waters are located (i.e., communities near the waterway, in the same city, county, region or state). In response to the third recommendation, the Department prefers to specify the waters that should receive special protection for the information of the public, the regulated communities, and the resource developers.

In addition, the Department proposes to change the Director and "his designee" to "a designee" to make the provision gender neutral.

ADDITIONAL PROVISIONS

In analyzing the intent of the antidegradation policy, and the language to support it, and evaluating public testimony, the Department recommends that four additional provisions be included in the policy:

1) Protection of existing water quality for all waters of the state, not just the high quality waters. If water quality of a particular waterway is just above the standard, that water quality should be maintained and not allowed to be degraded down to the standard level without a review process. In addition, if water quality of a stream is below the standard, the goal should be to improve the water quality or at least maintain it at a minimum. This provision would align the antidegradation policy closer to the state statutes ORS 468.710 that define the policy of the state which is to conserve the waters of the state, and to protect, maintain, and improve the quality of the waters for designated beneficial uses.

2) Addition of a statement that would limit the amount of allowable water quality degradation when the Commission chooses to lower water quality to accommodate development. This provision would assure that water quality may never be degraded to less than is necessary to fully protect all designated beneficial uses.

3) Addition of other exceptional waters to receive special protection. State Scenic Waterways, and important ecological areas as designated by appropriate state agencies (i.e., South Slough Sanctuary, Salmon River Estuary, or Research Natural Areas) should also be included to encourage preservation.

4) Limit temporary disturbances in high quality waterways to prevent cumulative effects on the beneficial uses. This provision would allow the Department to consider cumulative effects from numerous short-term disturbances in water quality in the same stream segment.

PROPOSED RULE MODIFICATIONS

If the public and EPA suggestions were incorporated into the Anti-degradation Policy, the following modifications would be necessary. The underlined phrases are new proposed language additions, or in some cases replacement of bracketed phrases.

340-41-026(1)(a) " Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected. "

Existing high quality waters which exceed those levels necessary to support propagation of fish, shellfish and wildlife, and recreation in and on the water shall be maintained and protected unless the Environmental Quality Commission chooses, after full satisfaction of the intergovernmental coordination and public participation provisions of the continuing planning process, to lower water quality for necessary, important and justifiable economic or social development. Water quality, however, may not be degraded to less than is necessary to fully protect all designated beneficial uses.

The Director or [his] a designee may allow lower water quality on a short-term basis in order to respond to emergencies or to otherwise protect public health and welfare.

[In no event, however, may degradation of water quality interfere or become injurious to the beneficial uses of water] Existing water quality shall be maintained and protected within surface waters of the following areas: (A) National Parks; (B) National Wild and Scenic Rivers; (C) National Wildlife Refuges; (D) State Parks; (E) State Scenic Waterways; and (F) other state designated exceptional waters of ecological or recreational significance.

The Department shall not approve any activities where it is determined that a series of temporary disturbances to water quality in the same stream system may cumulatively affect the beneficial uses in high quality and outstanding quality waters of the state.

OPTIONS

1) RETAIN THE CURRENT ANTIDEGRADATION POLICY AS WRITTEN

The intent of the policy is adequately set forth in the current language, and appears to be consistent with state law. However, EPA states that the current policy is not fully consistent with federal policy. The new regulations (40 CFR Section 131.12(a)(1) requires protection of existing uses and water quality necessary to ensure preservation of designated uses on all waterways. The Oregon policy only specifies high quality waters, and waters officially designated as exceptional. In addition, EPA strongly suggests strengthening the language on the provision for lowering water quality to assure that the development is important .

2) ADOPT THE REVISED ANTIDEGRADATION POLICY

The revised antidegradation policy as proposed would be consistent with state law and the federal EPA antidegradation policy, and would incorporate the suggested changes requested by the public. The intent for protecting and maintaining water quality and beneficial uses in all waterways, and provisions for lowering water quality in high quality waters is clearly stated. In addition, special waters are protected from any permanent degradation to water quality under all circumstances.

3) ADOPT THE REVISED POLICY AND INCLUDE A NON-DEGRADATION CLAUSE

The Commission and the public may wish to consider a non-degradation clause for the specially designated waters of the state to prevent any temporary disturbances or degradation of the water quality within those waters. This could be accomplished by modifying the last sentence to read "In no event, however may degradation of water quality occur [interfere with or become injurious to the beneficial uses of water]within surface waters...". Although the federal policy does not include a non-degradation clause, EPA allows the state to set more restrictive standards if the state decides to do so.

A non-degradation provision would assure non-degradation under any circumstances. For certain waters of the state, however, if may be so restrictive as to eliminate any necessary or desirable maintenance or development, and precludes any corrective action to protect public health and welfare.

MIXING ZONES

INTRODUCTION

This review evaluates the Oregon Mixing Zone Policy and proposes revisions and additions in language to clarify both the intent of the policy and the procedures used for establishing mixing zones.

A mixing zone, by definition, is a portion of a stream that serves as a zone of initial dilution where waste waters and receiving waters mix and where numeric water quality criteria can be legally exceeded. However, chronic or acutely toxic conditions must be prevented in this zone and water quality standards must be met at the mixing zone boundary even under lowest flow conditions to assure protection of the ambient receiving water quality and designated beneficial uses. The intent of the current policy is to state when a mixing zone is defined and how it is established, without precise methodology. This has allowed the Department to set mixing zones on a site-specific basis, but it has not provided clear enough guidance in defining mixing zones.

During the public review of the Oregon water quality standards in 1984, EPA commented on the Oregon Mixing Zone Policy and suggested that more detail on mixing zone methodology should be added to the standards. They recommended following the guidance available in the EPA Water Quality Standards Handbook (1983) on mixing zones. However, EPA also recognizes that specific mixing zone regulations should be a matter of state discretion to suit the water quality needs of each state. No other public comments were received on this topic.

CURRENT MIXING ZONE POLICY

Although the Oregon Mixing Zone policy is the same for each basin, it is referenced separately as part of the specific basin standards. The rule references for each basin are included in the footnote (*) on A-14. OAR 340-41- __ (4) states the policy as follows:

Mixing Zones:

(a) The Department may suspend the applicability of all or part of the water quality standards set forth in this rule, except those standards relating to aesthetic conditions, within a defined immediate mixing zone of specified and appropriately limited size adjacent to or surrounding the point of waste water discharge.

(b) The sole method of establishing such mixing zones shall be by the Department defining same in a waste discharge permit.

(c) In establishing mixing zones in a waste discharge permit, the Department:

(A) May define the limits of the mixing zone in terms of distance from the point of the waste water discharge or the area or volume of the receiving water or any combination thereof;

(B) May set other less restrictive water quality standards to be applicable in the mixing zone in lieu of the suspended standards;

(C) Shall limit the mixing zone to that which in all probability will:

(i) Not interfere with any biological community or population of any important species to a degree which is damaging to the ecosystem; and

(ii) Not adversely affect other beneficial uses disproportionately.

ANALYSIS OF CURRENT MIXING ZONE POLICY

Analysis of the mixing zone policy follows:

1. Subsection (4)(a) states that the Department may suspend the applicability of all or part of the water quality standards set forth in this rule, except those standards relating to aesthetic conditions, within a defined immediate mixing zone of specific and appropriately limited size adjacent to or surrounding the point of waste water discharge.

   In subsection 4(c)(B), the policy further states that the Department may set less restrictive water quality standards to be applicable in the mixing zone in lieu of suspended standards.

   It appears unnecessary to have these two statements as two sections in the policy, since they both refer to applying less stringent criteria in the mixing zones. In addition, the term "applicability" is redundant since standards are applicable by definition. These two statements can be combined into one provision that would allow for either suspension of standards or setting less restrictive standards, as the Department determines is necessary on a case-by-case basis.

2. Section (4)(b) states that the sole method of establishing such mixing zones shall be by the Department defining same in a waste discharge permit.

   Use of the term "sole method" seems inappropriate, since defining a mixing zone in a permit is an administrative action by the Department rather than a method. This statement also establishes the Department as the only authority to decide when and how a mixing zone is defined. By defining that the mixing zone is only established in a permit, the policy does not consider cases where evidence is presented that would warrant a re-consideration of the mixing zone location or size. If

beneficial uses were adversely affected in a mixing zone, the Department should have the flexibility to address the problem and make the necessary changes immediately without waiting until the waste discharge permit expires. The language can be clarified to state that the Department shall assign a mixing zone during the waste discharge permit review process, unless technical evidence supports modification before permit expiration. The actual method of defining the mixing zone should be included in another section.

3. Section (4)(c) states in establishing mixing zones in a waste discharge permit, the Department:

   (A) May define the limits of the mixing zone in terms of distance from the point of the waste water discharge or the area or the volume of the receiving water or any combination thereof:

Although (4)(c)(A) allows for defining the mixing zone limits using either distance from the point of discharge, area or volume or receiving water, or a combination thereof, it does not clearly delineate what factors are or should be taken into consideration in defining the mixing zone size. Establishing the mixing zone location is stated back in (4)(a) as being adjacent to or surrounding the point of waste water discharge. For consistency, location of the mixing zone should be included in the same section as the definition of size and the factors used for establishing mixing zones (for example stream flows, discharge rates and volumes, aquatic life communities present). In addition, a provision for passage of fish and other aquatic organisms should be added to assure that mixing zone location and size does not interfere with migration. A section can be developed that would address the factors to consider in assessing an appropriate mixing zone location, in addition to a section that describes how a mixing zone is defined in a waste discharge permit.

4. Section (4)(c)(C) states that (the Department) shall limit the mixing zone to that which in all probability will:

   (i) Not interfere with any biological community or population of any important species to a degree which is damaging to the ecosystem; and
   (ii) Not adversely affect other beneficial uses disproportionately.

(4)(c)(C) establishes the provision for (i) protection of aquatic life and (ii) other beneficial uses, but the language used does not adequately identify to what level aquatic life and other uses are actually protected.

The first statement (i) reads that the mixing zone shall in all probability "not interfere with any biological community or population of any important species (emphasis added) to a degree which may be damaging to the ecosystem." Several questions can be raised in analyzing this statement.

1. How is "probability" defined? The term "probability" implies judgement of effects on the beneficial uses. Prediction of levels of effect usually holds some uncertainty and does require judgement by the Department. This statement could be strengthened, however, by adding a provision that states judgement of the effects will be based on consideration of certain factors (such as the biological and chemical characteristics of the stream).

2. What level of impact to a biological community constitutes "interference"? The term "interference" requires some definition if it is used in reference to a biological community. Usually, the term is defined as meddling or hindering an action. We recommend using the term "measurably affect" to describe an allowable level of effect, based on quantifiable information. Although "measurably" can also be questioned in terms of how statistically significant the results need to be to measure an impact, we are using the term to indicate general trends that can be detected with a reasonable sampling effort (obvious shifts in dominant species, or elimination of species entirely).

3. If a mixing zone is not to interfere with any biological community, why is protection for only important species specified in the next part of the sentence? Protection of biological communities includes protection of important species within that community. Some species may in fact be more important for economic or ecological reasons, and should receive special protection, but without losing sight of the importance of considering the biological community as a whole. We recommend replacing "or ..." with "especially when important species are present."

4(c)(C)(ii) states that mixing zones shall "not adversely affect other beneficial uses disproportionately". Again, a problem occurs with defining disproportionate adverse effects. Since a mixing zone is technically considered a small area of allowed degradation where water quality may be lower than required by the standards, the beneficial uses may not be protected at the fullest level in that area. The question remains on what are proportional effects and how much impact to the beneficial uses is actually allowed. Since every mixing zone site will have specific water quality, stream habitat, land use and discharged effluent characteristics, and costs associated with the level of treatment required to protect beneficial uses, it is unrealistic to attempt to define a uniform level of allowable degradation and impact. A list of factors to be used in assessing streams and establishing mixing zones, would assist in evaluating the impact to the streams on a site-specific basis, and the costs involved in protecting the uses to the highest level possible.

To address the points discussed above, the language could be clarified and provisions included specifying that water quality within the mixing zone must

* not be chronically OR acutely toxic to aquatic life;
* not measurably affect the biological communities, especially when important species are present;
* not threaten public health; or
* not cause adverse effects to other beneficial uses, as determined by the Department, based on the best available information.

DEVELOPING DEQ MIXING ZONE GUIDELINES

EPA has recommended that the Department specify the methodology involved in establishing mixing zones, and incorporate that into the standards. Since the receiving waters in Oregon range from creeks to major rivers, estuaries, and oceans, with varying biological, chemical, and hydrological conditions, a uniform methodology or universal mixing zone dimensions firmly established in the standards is not practical nor desirable. However, it would be useful to develop guidelines that would specify the factors to consider for assessing and establishing the dimensions of the mixing zones for permit issuance. These would be used as necessary for the major source dischargers or for minor discharges into streams with low flows and with critical habitats or sensitive biological communities present. The mixing zone criteria would be useful to the Department as a tool for evaluation, as well as to the public as an information source for defining and regulating mixing zones.

CRITERIA NEEDED TO DEFINE MIXING ZONES

The following elements are recommended to assist with establishing appropriate mixing zones:

1) Location: Biologically important areas need to be identified and protected. Where necessary a zone of passage for migrating fish or other organisms in a water course needs to be established.

2) Size: Various methods and techniques are available for defining the surface area and volume of mixing zones. The area or volume of an individual zone or group of zones should be limited to an area or volume as small as possible and that will not adversely affect designated beneficial uses or the established aquatic life communities. Factors such as depth profiles, stream velocity, seasonal flows, instream water quality, and resident fish and aquatic life communities need to be considered in determining the size of the zone.

3) Outfall design: Prior to designating the mixing zone, the best technically feasible engineering design for the outfall structure needs to be evaluated. The outfall should be placed in a location with sufficient stream current and minimum effect on the aquatic resources and water quality.

4) In-Zone Water Quality: Although water quality standards may be suspended in the mixing zone, in-zone water quality must comply with aesthetics standards, and not be acutely or chronically toxic to aquatic life.

METHODOLOGY FOR ASSESSING AN APPROPRIATE MIXING ZONE AREA

In determining the location, surface area and volume of a mixing zone, the Department may use and evaluate the following factors, based on recommendation in the EPA Mixing Zone Guidelines:

A) RECEIVING WATER CHARACTERISTICS

* Hydrologic Factors:	Seasonal low flow rates Current direction and velocity Depths Width Channel morphology Groundwater aquifers Tidal fluctuations Shoreline configuration
* Water Quality Factors:	pH, Conductivity, Alkalinity, Temperature, Dissolved Oxygen, Salinity, Nutrients, Toxics, and other chemical constituents that may be present in effluents.
* Biological Factors:	Resident and migratory fish populations Migratory passage requirements Aquatic community composition Sensitive or critical habitat (nursery or spawning, wetland or shellfish harvest areas.)

B) EFFLUENT CHARACTERISTICS

* Effluent Discharge:	Discharge rates and volume Dilution water volume available Frequency of discharge
* Effluent Composition:	Individual contaminant concentrations Total contaminant concentrations and mass loading to receiving stream
* Effluent Effects:	Potential synergistic effects with other pollutants in receiving stream.

C) OUTFALL DESIGN AND PLACEMENT

The Department may evaluate the most technically feasible engineering design for an outfall to be located in an area of sufficient current and minimum effect on water quality, public health, and aquatic resources. No exposed outfalls will be permitted at any time.

D) IMPACT ANALYSIS AND ASSIGNING MIXING ZONES

The Department shall consider the potential impact of the discharge on water quality, public health, and the effects on present and anticipated beneficial uses, based on the evaluation of the above guidelines before assigning mixing zones.

COMPONENTS OF A MIXING ZONES POLICY

The following components are suggestions for improving the organization and language of the current mixing zone policy. Each component is divided into a description and the proposed language changes shown in quotes.

1. Statement of Policy

This statement should include the following parts to establish the policy for mixing zones:

a) Allowing mixing zones

"The Department may allow a defined portion of a stream to serve as a zone of initial dilution for wastewaters and receiving waters to thoroughly mix."

b) Suspension of standards

"The Department may suspend all or part of the water quality standards, or set other less restrictive standards in the defined mixing zone. However, the water quality in this zone must preserve aesthetic conditions at all times and must not adversely impair any designated beneficial uses. Water quality standards must be met at the mixing zone boundary even under lowest flow conditions.

2. Methodology For Assessing An Appropriate Mixing Zone

This statement should include or provide a reference to mixing zone guidelines. Including this methodology in the standards or referring to the methodology would assist in assessing where a mixing zone should be located for streams, rivers, estuaries or nearshore coastal areas.

If the methodology was included in the mixing zone policy, the following language could be used:

The Department may evaluate the following factors in assigning the location, surface area and volume of a mixing zone:

1) Receiving Water Characteristics

Hydrologic Factors: Seasonal low flow rates, current direction and velocity, depths, width, channel morphology, groundwater aquifers, tidal fluctuations, and shoreline configuration.

Chemical and Physical Factors: Conductivity, pH, alkalinity, temperature, dissolved oxygen, salinity, nutrients, toxics, and other chemical constituents that may be present in effluents.

Biological Factors: Resident and migratory fish populations, Migratory passage requirements aquatic community composition, and sensitive or critical habitat (nursery or spawning, wetland or shellfish harvest areas.)

2) Effluent Characteristics

Effluent Discharge: Discharge rates and volume, dilution water volume available, and frequency of discharge.

Effluent Composition: Individual contaminant concentrations, total contaminant concentrations and mass loading to receiving streams.

Effluent Effects: Potential synergistic effects with other pollutants in the receiving stream.

3) Outfall Design and Placement

The Department may evaluate the most technically feasible engineering design for an outfall to be located in an area of sufficient current and minimum effect on water quality, public health, and aquatic resources. No exposed outfalls will be permitted at any time.

If a reference was made to the mixing zone guidelines, then the following language could be used:

"In determining the location, surface area, and volume of a mixing zone area the Department may refer to appropriate mixing zone guidelines, to assess the biological, physical and chemical character of receiving waters and effluent, and the placement of the outfall, whenever necessary to protect instream water quality, public health, and other beneficial uses.

3. Establishing Mixing Zones

A statement that addresses how mixing zones are defined and what conditions must be met in the mixing zone.

"Based on receiving water and effluent characteristics, the Department shall assign a mixing zone in the immediate area of a waste water discharge on a case-by-case basis in the waste water discharge permit. The mixing zone shall:

a) be as small as feasible;
b) be less than the total stream width as necessary to allow passage fish and other aquatic organisms;
c) not measurably affect the indigenous biological community especially when important species are present;
d) not threaten public health;
e) not adversely affect other designated beneficial uses; and
f) be free of:

*Materials in concentrations sufficient to injure, produce adverse physiological responses or cause chronic or acute toxicity to aquatic life (50% mortality after a 96 hour exposure).
*Materials that will settle to form objectionable deposits.
*Floating debris, oil, scum, or other materials that cause nuisance conditions.
*Substances in concentrations that produce objectionable color, odor, taste or turbidity.
*Substances in concentrations that produce nuisance aquatic growth.

4. Applicant Responsibilities

A provision should be added that gives the Department authority to direct the permit applicant to submit the information necessary to define a mixing zone.

"The Department may request the applicant for a permitted discharge for which a mixing zone is required, to submit all information necessary to define a mixing zone, such as:

1) Type of operation to be conducted
2) Characteristics of the effluent flow rates and composition
3) Characteristics and low flows of receiving waters
4) Description of potential environmental effects
5) Proposed design for outfall structures."

5. Monitoring Mixing Zones

A provision should be stated for monitoring the mixing zone to insure protection of beneficial uses and water quality.

"The Department may, as necessary, require mixing zone monitoring studies and/or bioassays to be conducted at any time to evaluate water quality or biological status within and outside the mixing zone boundary."

6. Modification of Mixing Zones

A provision should be added that would give the Department authority to re-evaluate the mixing zone designation or outfall location if unforeseen environmental impacts occur.

"The Department may change a mixing zone designation or outfall location if it determines that the water quality within the mixing zone unreasonably and measurably affects any existing or potential beneficial uses in the receiving waters."

SUMMATION

In summary, two versions of a revised mixing zone policy have been proposed. Version A includes factors to consider in defining appropriate mixing zones, while Version B only refers to the factors that may be used in defining appropriate mixing zones. The two versions in their entirety follow:

VERSION A

340-41-__ (4) MIXING ZONES

(a) "The Department may allow a defined portion of a stream to serve as a zone of initial dilution for wastewaters and receiving waters to mix."

(b) "The Department may suspend all or part of the water quality standards, or set less restrictive standards in the mixing zone. However, the water quality in this zone must preserve aesthetic conditions at all times and not adversely affect designated beneficial uses. Water quality standards must be met at the mixing zone boundary even at lowest stream flow conditions."

(c) "Based on the evaluation of the following factors, the Department shall assign a mixing zone in the immediate area of a waste water discharge on a case-by-case basis in the waste water discharge permit. Mixing zone location, surface area, and volume may be defined by the Department after consideration of the following:

1) Receiving Water Characteristics

Hydrologic Factors: Seasonal low flow rates, current direction and velocity, depths, width, channel morphology, groundwater aquifers, tidal fluctuations, and shoreline configuration.

Chemical and Physical Factors: Conductivity, pH, alkalinity, temperature, dissolved oxygen, salinity, nutrients, toxics, and other chemical constituents that may be present in effluents.

Biological Factors: Resident and migratory fish populations, migratory passage requirements, aquatic community composition, and sensitive or critical habitat (nursery or spawning, wetlands, or shellfish harvest areas.)

2) Effluent Characteristics

Effluent Discharge: Discharge rates and volume, dilution water volume available, and frequency of discharge.

Effluent Composition: Individual contaminant concentrations, total contaminant concentrations and mass loading to receiving streams.

Effluent Effects: Potential synergistic effects with other pollutants in receiving stream.

3) Outfall Design and Placement

The Department may evaluate the most technically feasible engineering design for an outfall to be located in an area of sufficient current and minimum effect on water quality, public health, and aquatic resources. No exposed outfalls will be permitted at any time.

(d) The mixing zone shall:

1) be as small as feasible;
2) be less than the total stream width as necessary to allow passage fish and other aquatic organisms;
3) not measurably affect the indigenous biological community especially when important species are present;
4) not threaten public health;
5) not adversely affect other designated beneficial uses; and
6) be free of:

*Materials in concentrations sufficient to injure, produce adverse physiological responses or cause chronic or acute toxicity to aquatic life (50% mortality after a 96 hour exposure).
*Materials that will settle to form objectionable deposits.
*Floating debris, oil, scum, or other materials that cause nuisance conditions.
*Substances in concentrations that produce objectionable color, odor, taste or turbidity.
*Substances in concentrations that produce nuisance aquatic growth.

(e) The Department may also request the applicant for a permitted discharge for which a mixing zone is required to submit all information necessary to define a mixing zone, such as:

1) Type of operation to be conducted
2) Characteristics of the effluent flow rates and composition
3) Characteristics and low flows of receiving waters
4) Description of potential environmental effects
5) Proposed design for outfall structures."

(f) The Department may, as necessary, require mixing zone monitoring studies and/or bioassays to be conducted at any time to evaluate water quality or biological status within and outside the mixing zone boundary.

(g) The Department may change a mixing zone designation or outfall location if it determines that the water quality within the mixing zone unreasonably affects any existing or potential beneficial uses in the receiving waters."

VERSION B

(4) MIXING ZONES

(a) "The Department may allow a defined portion of a stream to serve as a zone of initial dilution for wastewaters and receiving waters to mix."

(b) "The Department may suspend all or part of the water quality standards, or set less restrictive standards in the mixing zone. However, the water quality in this zone must preserve aesthetic conditions at all times and not adversely affect designated beneficial uses. Water quality standards must be met at the mixing zone boundary even at lowest stream flow conditions."

(c) "In determining the location, surface area and volume of a mixing zone area, the Department may refer to appropriate mixing zone guidelines to assess the biological, physical, and chemical character of receiving waters and effluent, and the placement of the outfall, whenever necessary to protect instream water quality, public health, and other beneficial uses. Based on receiving water and effluent characteristics, the Department shall assign a mixing zone in the immediate area of a wastewater discharge on a case-by-case basis in the wastewater discharge permit."

(d) The mixing zone shall:

1) be as small as feasible;
2) be less than the total stream width as necessary to allow passage fish and other aquatic organisms;
3) not measurably affect the indigenous biological community especially when important species are present;
4) not threaten public health;
5) not adversely affect other designated beneficial uses; and
6) be free of:

*Materials in concentrations sufficient to injure, produce adverse physiological responses or cause chronic or acute toxicity to aquatic life (50% mortality after a 96 hour exposure).
*Materials that will settle to form objectionable deposits.
*Floating debris, oil, scum, or other materials that cause nuisance conditions.
*Substances in concentrations that produce objectionable color, odor, taste or turbidity.
*Substances in concentrations that produce nuisance aquatic growth.

(e) The Department may also request the applicant for a permitted discharge for which a mixing zone is required to submit all information necessary to define a mixing zone, such as:

1) Type of operation to be conducted
2) Characteristics of the effluent flow rates and composition
3) Characteristics and low flows of receiving waters
4) Description of potential environmental effects
5) Proposed design for outfall structures."

(f) The Department may, as necessary, require mixing zone monitoring studies and/or bioassays to be conducted at any time to evaluate water quality or biological status within and outside the mixing zone boundary.

(g) The Department may change a mixing zone designation or outfall location if it determines that the water quality within the mixing zone unreasonably affects any existing or potential beneficial uses in the receiving waters."

OPTIONS

1. RETAIN THE CURRENT MIXING ZONE POLICY.

The current mixing zone policy is adequate, and mixing zones have been defined using the policy as it is written in the rules. After analyzing the current policy, several modifications could be made to clarify the language and provide a more organized policy with more provisions for the responsibilities of the Department and the regulated community.

2. ADOPT VERSION A

Version A provides a mixing zone policy that incorporates the guidelines used to establish a mixing zone into the administrative rules. Any future changes, modifications, or variance in the adopted guidelines, would require Commission approval. This option would allow the regulated community to be aware of the procedures and requirements for mixing zone determinations, and provide input as necessary for any changes through the public hearing process.

3. ADOPT VERSION B

Version B provides a mixing zone policy that refers to using the DEQ mixing zone criteria as needed, without specifically stating them in the standards. This option would enable the Department to make necessary updates, revisions or modifications in the guidelines or factors to consider as needed without Commission approval for each technical change. However, this option would eliminate the public notice procedure for each proposed change, so the public and the regulated community would be responsible for consulting with the Department about most recent guidelines.

* RULE REFERENCES BY BASIN

Basin	Mixing Zone Rules
North Coast	340-41-205(4)
Mid Coast	340-41-245(4)
Umpqua	340-41-285(4)
South Coast	340-41-325(4)
Rogue	340-41-365(4)
Willamette	340-41-445(4)
Sandy	340-41-485(4)
Hood	340-41-525(4)
Deschutes	340-41-565(4)
John Day	340-41-605(4)
Umatilla	340-41-645(4)
Walla Walla	340-41-685(4)
Grande Ronde	340-41-725(4)
Powder	340-41-765(4)
Malheur River	340-41-805(4)
Owyhee	340-41-845(4)
Malheur Lake	340-41-885(4)
Goose and Summer Lakes	340-41-925(4)
Klamath	340-41-965(4)

TOXIC SUBSTANCES

INTRODUCTION

Since the 1980 revisions to Oregon's water quality standards, a considerable amount of applied research has been done nationally in the development of water quality criteria for toxic substances. Oregon's present standards for "Pesticides and Other Toxic Substances" and "Dissolved Chemical Substances" need to be amended to incorporate new and updated toxics criteria recently published by EPA. Until 1980, the standard reference for organic toxics, pesticides and dissolved chemical substances criteria had been the 1976 EPA publication "Quality Criteria for Water". On November 28, 1980, EPA published a series of ambient water quality criteria documents. These provided information for 64 toxic priority pollutants. Criteria values for dioxin were published on February 15, 1984 and new criteria for nine pollutants were published on July 19, 1985.

This paper will discuss both standards since the topics are closely related and based on the same EPA references. Pesticides and other organic toxic substances will be discussed first, and will then be followed by the inorganic dissolved chemical substances.

CURRENT PESTICIDE AND OTHER ORGANIC TOXIC SUBSTANCES STANDARD

The current standard is the same for each of the nineteen basins. Rule references for each basin are referenced as a footnote (*).
OAR 340-41-__ (2)(p) was adopted in 1980 and reads as follows:

"Pesticides and other organic toxic substances shall not exceed those criteria contained in the 1976 edition of the EPA publication "Quality Criteria for Water". These criteria shall apply unless supporting data shows conclusively that beneficial uses will not be adversely affected by exceeding a criterion by a specific amount or that a more stringent criterion is warranted to protect beneficial uses."

ANALYSIS OF THE CURRENT STANDARD

1. " Pesticides and other organic toxic substances shall not exceed those criteria contained in the 1976 edition of the EPA publication "Quality Criteria for Water. " The current rule is considered a narrative water quality standard as opposed to a numerical standard which would have absolute values specific for a list of toxic organic substances. The "Red Book", as the document above is commonly called, was used as a reference because it contained the most updated information available on toxics during the last standards revision. By referencing the book, it was not necessary to list all the chemicals and their criteria values.

Although numerical criteria may be preferred because they are more easily interpreted in defining specific control requirements, rapid advances in the field of toxicology precludes the Department from stating each value in the standards. If numerical criteria were included in the standards, every update and change in the criteria from EPA would require new rule amendments. Using the narrative approach where the most updated EPA information was referenced would allow the Department to enforce the most scientifically updated information without requiring a hearing and Commission action for every change. By including the reference to Quality Criteria for Water (1976), and including language to support use of the most recent criteria for EPA's list of priority pollutants, many chemicals of concern would be addressed.

2. <u>These criteria shall apply unless supporting data show conclusively that beneficial uses will not be adversely affected by exceeding criterion by a specific amount or that a more stringent criterion is warranted to protect beneficial uses.</u> This provision was included to allow either more or less restrictive values then the "Red Book" recommended, to make site-specific judgements based on receiving water and effluent characteristics, and the beneficial uses of a particular stream segment. Since the field of toxicology is expanding and becoming more complex, and each state's waters have unique biological, hydrological, and chemical characteristics, in addition to varied designated beneficial uses, it may not be appropriate to apply EPA criteria values in all cases.

   The criteria values were primarily derived under laboratory conditions and are <u>guidance values,</u> not standards that can be applied to every water body in every state.

   To clarify and strengthen the intent of this provision, and assure that more or less restrictive values are not just arbitrarily applied, a wording change would be helpful. Be deleting "supporting data" and inserting "data from scientifically valid studies", the provision becomes more specific and enforceable.

3. Many industries discharge complex effluents, which are process wastewaters that may contain more than one toxic substance, and where many of the individual components cannot be specifically identified. Applying specific criteria to the toxic components of the effluent during the permit process may not be a "scientifically valid" approach due to the complex interactions among chemicals when they are mixed. Some chemical mixtures exhibit a synergistic effect, becoming more toxic together than the individual components. Other chemicals may exhibit an antagonistic (cancelling) effect where individually they are toxic, but together become less-or non-toxic. It would be helpful to include a narrative provision for biomonitoring and chronic and acute bioassays (bioassessments) for aquatic life, to apply to situations where no numerical criteria exist for a substance, or when multiple toxicants are present in a waterbody and synergistic or antagonistic effects may be expected.

CURRENT DISSOLVED CHEMICAL SUBSTANCES STANDARD

Although the standard is generally the same for each of the nineteen river basins, total dissolved solids do change by basin. Rules for each basin are referenced in a footnote (*).
OAR 340-41- _ (2)(o) reads as follows:

"Dissolved Chemical Substances: Guide concentrations listed below shall not be exceeded unless otherwise specifically authorized by DEQ upon such conditions as it may deem necessary to carry out the general intent of this plan to protect the beneficial uses set forth in rule 340-41- __ : (mg/l)

(A)	Arsenic(As)	0.01
(B)	Barium(Ba)	1.0
(C)	Boron(Bo)	0.5
(D)	Cadmium(Cd)	0.003
(E)	Chromium(Cr)	0.02
(F)	Copper(Cu)	0.005
(G)	Cyanide(Cr)	0.005
(H)	Fluoride(F)	1.0
(I)	Iron(Fe)	0.1
(J)	Lead(Pb)	0.05
(K)	Manganese(Mn)	0.05
(L)	Phenols(total)	0.001
(M)	Total Dissolved Solids-Columbia River	500
(N)	Total Dissolved Solids - other	100
(O)	Zinc(Zn)	0.01"

ANALYSIS OF THE CURRENT STANDARD

The guide concentrations listed in the standards are values derived from the drinking water standards for those substances of concern in drinking water supplies, or the EPA priority pollutant criteria. Many of the values listed do not reflect the most recent EPA criteria values published in 1980 and 1985. In addition, the toxicity of a number of the inorganic substances listed is dependent on the hardness (expressed as mg/l CaCO3) of the receiving water. EPA has published formulas for deriving the proper criteria values based on a hardness factor for Cadmium, Chromium III, Copper, Lead Nickel, Silver, and Zinc for aquatic life. For example, the current criteria value for Cadmium is listed as 0.003 mg/l. Using the new formula, hardness values of 50 mg/l (typical of Willamette River and other western Oregon streams), would limit Cadmium to 0.00066 mg/l, or a hardness value of 200 mg/l (Eastern Oregon streams) would limit Cadmium to 0.002 mg/l. To address human health protection, the most current drinking water standards for pollutants of concern in drinking water should be referenced and included in this section.

Since many of the same EPA documents apply to both organic and inorganic toxics, the two sections could be combined and the table of values deleted to eliminate the outdated information. However, the total dissolved solids concentrations are specific for each basin. These values will remain the same for each basin and will remain in the present subsection.

COMPONENTS OF A REVISED TOXIC SUBSTANCES STANDARD

The following components are suggestions for improving the organization and language of the current standards for pesticides and other organic toxic substances, and for dissolved chemical substances. Each component is divided into a description and proposed language changes in quotes.

1. General Statement and Criteria Reference

   This statement should include language provisions prohibiting injurious levels of toxic substances in the waters of the state to protect public health, aquatic life, and other beneficial uses, and a reference to the most recent EPA criteria values. These references include hardness factors for the inorganic pollutant concentrations.

   "Toxic substances shall not be present in the water of the state at levels which are or may become injurious to public health, safety, or welfare; aquatic life; or other designated beneficial uses. Levels of toxic substances shall not exceed the most recent criteria values for organic and inorganic pollutants established by EPA and published in Quality Criteria for Water (1976), 40 CFR Parts 141-143 (1985) and the Federal Register (November 28, 1980, February 15, 1984 and July 29, 1985)."

2. Provision for Site Specific Determination

   This statement should be included to allow either more or less restrictive values for unique situations:

   "These criteria shall apply unless data from scientifically valid studies show conclusively that beneficial uses will not be adversely affected by exceeding criterion by a specific amount or that a more restrictive criterion is warranted to protect beneficial uses."

3. Provision for Bioassessments

   Due to the intricate chemical interactions that may occur within complex industrial and other effluents, chemical analysis for known or suspected toxic components may not sufficiently address the lethal or chronic potential of the wastewater. Bioassessments (instream and laboratory bioassays) are needed to adequately monitor these situations. The following statement could be added:

   "Bioassessment studies which include instream monitoring and laboratory bioassays, shall be conducted, as the Department deems necessary, to monitor the toxic effects of complex effluents or other suspected toxic discharges. If toxicity occurs, the Department shall consider measures necessary to reduce toxicity through permit modification."

PROPOSED REVISION OF LANGUAGE FOR TOXIC SUBSTANCES

The following language is proposed to replace "Pesticides and Other Organic Toxic Substances" and "Dissolved Chemical Substances" with a standard on "Toxic Substances":

Toxic Substances

(a) Toxic substances shall not be present in the water of the state at levels which are or may become injurious to public health, safety, or welfare; aquatic life; or other designated beneficial uses.

(b) Levels of toxic substances shall not exceed the most recent criteria values for organic and inorganic pollutants established by EPA and published in Quality Criteria for Water (1976); 40 CFR Part 141-143 (1985) for drinking water; and the Federal Registers November 28, 1980, 45 FR 79318 for sixty-four pollutants, February 15, 1984, 49 FR 5831 for dioxin, and July 29, 1985, 50 FR 30784 for nine pollutants.

(c) These criteria shall apply unless data from scientifically valid studies show conclusively that beneficial uses will not be adversely affected by exceeding a criterion by a specific amount or that a more restrictive criterion is warranted to protect beneficial uses.

(d) Bioassessment studies which include instream montoring and laboratory bioassays shall be conducted, as the Department deems necessary, to monitor the toxic effects of complex effluents or other suspected toxic discharges. If toxicity occurs, the Department shall consider measures necessary to reduce toxicity through permit modification.

OPTIONS

1. RETAIN CURRENT STANDARDS

This option would not be feasible because the narrative references are outdated for both the pesticides and organic toxic substances, and dissolved chemical substances. To provide the best protection to beneficial uses and public health, the most recent scientific information needs to be used.

2. ADOPT PROPOSED REVISION

This option would combine the inorganic and organic pollutants into one standard and use the same approach in enforcing allowable levels. Although numerical information is not presented in table form, it would be readily accessible to those interested from Department staff.

* RULE REFERENCES BY BASIN

Basin	Dissolved Chemical Substances	Pesticides
North Coast	340-41-205(2)(o)	340-41-205(2)(p)
Mid Coast	340-41-245(2)(o)	340-41-245(2)(p)
Umpqua	340-41-285(2)(o)	340-41-285(2)(p)
South Coast	340-41-325(2)(o)	340-41-325(2)(p)
Rogue	340-41-365(2)(o)	340-41-365(2)(p)
Willamette	340-41-445(2)(o)	340-41-445(2)(p)
Sandy	340-41-485(2)(o)	340-41-485(2)(p)
Hood	340-41-525(2)(o)	340-41-525(2)(p)
Deschutes	340-41-565(2)(o)	340-41-565(2)(p)
John Day	340-41-605(2)(o)	340-41-605(2)(p)
Umatilla	340-41-645(2)(o)	340-41-645(2)(p)
Walla Walla	340-41-685(2)(o)	340-41-685(2)(p)
Grande Ronde	340-41-725(2)(o)	340-41-725(2)(p)
Powder	340-41-765(2)(o)	340-41-765(2)(p)
Malheur River	340-41-805(2)(o)	340-41-805(2)(p)
Owyhee	340-41-845(2)(o)	340-41-845(2)(p)
Malheur Lake	340-41-885(2)(o)	340-41-885(2)(p)
Goose and Summer Lakes	340-41-925(2)(o)	340-41-925(2)(p)
Klamath	340-41-965(2)(o)	340-41-965(2)(p)

Oregon Department of Environmental Quality

A CHANCE TO COMMENT ON...

WATER QUALITY STANDARDS

Date Prepared: 5/28/86
Hearing Dates: Noted below
Comments Due: 8/8/86

WHO IS AFFECTED: All businesses, residents, industries and local government in the state of Oregon.

WHAT IS PROPOSED: The Department proposes to amend the Antidegradation Policy, the Mixing Zone Policy, and the standards for Toxic Substances as contained in the Oregon Water Quality Standards Chapter 340, Division 41.

WHAT ARE THE HIGHLIGHTS: The Department of Environmental Quality recently conducted its triennial review of the Water Quality Standards. During this review, the public suggested modifications and additions to the current water quality standards. At the July 17, 1985, Environmental Quality Commission meeting, the Commission directed the Department staff to prepare issue papers dealing with potential rule amendments for the following:

a) Antidegradation Policy: Include reference to State Scenic Waterways, and more specific protection of existing uses.

b) Mixing Zone Policy: Expand criteria for defining mixing zones for point source discharge.

c) Dissolved Chemical Substances: Update the standards to include hardness factors and incorporate the most recent EPA criteria.

d) Pesticides and Other Organic Toxic Substances: Update the standards to reflect the latest scientific and technical information.

These issue papers were presented at the June 13, 1986 EQC meeting. The Commission directed the Department to conduct public hearings on the proposed rule amendments presented in the issue papers. The public is invited to comment on the proposed rule amendments, suggest alternatives, or provide information on potential fiscal and economic impact.

P.O. Box 1760
Portland, OR 97207

FOR FURTHER INFORMATION:
[illegible]

HOW TO COMMENT: Public Hearings Schedule

Portland — July 21, 1986 at 9:00 am
DEQ Conference Room (1400)
14th Floor, 522 SW 5th St. Portland, OR

Eugene — July 21, 1986 at 7:00 pm
Lane County Courthouse
South Harris Hall
Public Service Building
125 E. 8th Avenue
Eugene, OR

Medford -- July 22, 1986 at 1:00 pm
Jackson County Courthouse Auditorium
10 S. Oaksdale, Medford, OR

Bend — July 23, 1986 at 1:00 pm
City Council Chamber, City Hall
710 NW Wall St, Bend OR

La Grande — July 24, 1986 at 6:30 pm
Room 309, Hoke Hall,
Eastern Oregon State College
8th and "K": Avenue, La Grande, OR

A Department staff member will be appointed to preside over and conduct the hearings. Written comments should be sent to:

Department of Environmental Quality
Water Quality Division
P. O. Box 1760
Portland, OR 97207

The comment period will end on Friday August 8, 1986 at 5:00 p.m.

For more information or copies of the Department issue papers, contact Ms Krystyna Wolniakowski at 229-6018 or toll-fee 1-800-452-4011.

WHAT IS THE NEXT STEP: After the public testimony has been received and evaluated, the proposed amendments will be revised as appropriate, and will be presented to the Environmental Quality Commission in the Fall of 1986 for their consideration. The Commission may adopt rule amendments as proposed, adopt modified rule amendments, or decline to adopt rule amendments and take no further action.

Attachment C

STATEMENT OF NEED FOR RULEMAKING

Pursuant to ORS 183.335(7), this statement provides information on the Environmental Quality Commission's intended action to adopt rules.

(1) Legal Authority

ORS 468.735 provides that the Commission by rule may establish standards of quality and purity for waters of the state in accordance with the public policy set forth in ORS 468.710. ORS 183.545 requires a review every three years of state agency administrative rules to minimize the economic effect these rules may have on businesses. ORS 193.550 requires, among other factors, that public comments to be considered in the review and evaluation of these rules.

(2) Need For Rule

The Environmental Quality Commission, at its July 19, 1985 meeting, directed the Department to prepare issue papers pertaining to potential rule amendments to the antidegradation policy, mixing zone policy, and toxic substances standards, after the public requested a review of these standards specifically. At the June 13, 1986 EQC meeting, the Commission authorized the Department staff to hold hearings on the proposed rule amendments and to consider public testimony in developing final rule amendments.

Options described in the issue papers will be presented to the Commission after all public testimony has been received. Adoption of proposed rule amendments, modification of those amendments or no action may be taken by the Commission after the hearing record has been evaluated.

(3) Principal Documents Relied Upon in this Rulemaking

Clean Water Act amended in 1981.

Federal Register, Vol. 48, No. 217, November 8, 1983, Water Quality Standards Regulation.

Federal Register, Vol. 45, No. 231, November 28, 1980, Water Quality Criteria Documents; Availability (64 priority pollutants).

Federal Register, Vol. 49, No. 32, February 15, 1984, Water Quality Criteria Documents; Availability (dioxin).

Federal Register, Vol. 50, No. 145, July 29, 1985, Water Quality Criteria; Availability of Documents (nine pollutants).

Quality Criteria for Water, 1976, EPA. US GPO: 0-222-904.

Water Quality Standards Handbook, December 1983, EPA.

Technical Support document for Water Quality-based Toxics Control, September 1985, EPA.

Agenda Item No. F June 13, 1986, EQC Meeting: Request for authorization to conduct public hearings on proposed amendments to the Water Quality Standards Regulation, OAR 340, Chapter 41: Antidegradation Policy, Mixing Zone Policy, and Toxic Substances Standards.

ORS 468.735, 468.710, 183.545, and 183.550.

FISCAL AND ECONOMIC IMPACT

Adoption and implementation of the proposed revisions to water quality standards could result in increased costs to local governments, small businesses, and individuals for treatment and control of point and non-point source wastes. Specifically, increased costs for wastewater treatment could be incurred by municipalities, private utilities, and industries to reduce toxic substances loading to surface waters, or to provide specific outfall designs to minimize impacts on beneficial uses. These costs could break down into two categories: (1) capital construction costs for advanced wastewater treatment facilities to improve toxic substance removal, or build or extend outfalls into areas of minimal impact, and (2) increased operating costs.

In addition, increased costs could be incurred by a wide range of individuals and governmental entities for the improvement of management practices. These costs would relate to improving management practices to better control non-point sources to prevent degradation of water quality and maintain and protect all designated beneficial uses in agricultural, forest harvest, and urban areas.

In summary, the fiscal and economic impacts are not well defined. Public comment on any fiscal and economic impact is welcome and may be submitted in the same manner as indicated for the testimony on this notice.

LAND USE CONSISTENCY

The Department has concluded that the proposal conforms with Statewide Planning Goals and Guidelines.

Goal 6 (Air, Water, and Local Resource Quality): The proposed revisions to the water quality standards are designed to more clearly protect and maintain water quality statewide.

Goal 11 (Public Facilities and Services): To attain compliance with the revised standards, additional costs for capital improvements and operation of wastewater treatment facilities may be incurred depending on which revisions may be adopted and on the specific water body. Additional planning to insure timely, orderly and efficient arrangement or construction of facilities to provide needed level of treatment to meet the standards may be required in certain cases.

Goal 19 (Ocean Resources): The proposed revisions are designed to protect and maintain water quality in nearshore and estuarine waters.

The rules do not appear to conflict with other Goals.

Public comment on any land use issue involved is welcome and may be submitted in the same manner as indicated for testimony in this notice. It is requested that local, state, and federal agencies review the proposed action and comment on possible conflicts with their programs affecting land use and with Statewide Planning Goals within their expertise and jurisdiction. The Department of Environmental Quality intends to ask the Department of Land Conservation and Development to mediate any appropriate conflicts brought to our attention by local, state and federal authorities.

PROPOSED RULE AMENDMENTS

Antidegradation Policy

If the public and EPA suggestions were incorporated into the antidegradation policy, the following modifications would be necessary. The underlined phrases are new proposed language additions, or in some cases replacements of bracketed phrases:

340-41-026(1)(a) " Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.

Existing high quality waters which exceed those levels necessary to support propagation of fish, shellfish and wildlife, and recreation in and on the water shall be maintained and protected unless the Environmental Quality Commission chooses, after full satisfaction of the intergovernmental coordination and public participation provisions of the continuing planning process, to lower water quality for necessary, important and justifiable economic or social development. Water quality, however, may not be degraded to less than is necessary to fully protect all designated beneficial uses.

The Director or [his] a designee may allow lower water quality on a short-term basis in order to respond to emergencies or to otherwise protect public health and welfare.

[In no event, however, may degradation of water quality interfere or become injurious to the beneficial uses of water] Existing water quality shall be maintained and protected within surface waters of the following areas: (A) National Parks; (B) National Wild and Scenic Rivers; (C) National Wildlife Refuges; (D) State Parks; (E) State Scenic Waterways; and (F) other state designated exceptional waters of ecological or recreational significance.

The Department shall not approve any activities where it is determined that a series of temporary disturbances to water quality in the same stream system may cumulatively affect the beneficial uses in high quality and outstanding quality waters of the state.

Mixing Zones

Two similar versions of a revised mixing zone policy have been proposed. Version A (C) includes factors to consider in defining appropriate mixing zones, while version B (C) only refers to the factors that may be used in defining appropriate mixing zones. This proposed language is intended to replace the current mixing zone policy for each basin. (Shown in brackets). Rule references are included as a footnote (*).

[340-41- _ (4) Mixing Zones:

(a) The Department may suspend the applicability of all or part of the water quality standards set forth in this rule, except those standards relating to aesthetic conditions, within a defined immediate mixing zone of specified and appropriately limited size adjacent to or surrounding the point of waste water discharge.

(b) The sole method of establishing such mixing zones shall be by the Department defining same in a waste discharge permit.

(c) In establishing mixing zones in a waste discharge permit, the Department:

(A) May define the limits of the mixing zone in terms of distance from the point of the waste water discharge or the area or volume of the receiving water or any combination thereof;

(B) May set other less restrictive water quality standards to be applicable in the mixing zone in lieu of the suspended standards;

(C) Shall limit the mixing zone to that which in all probability will:

(i) Not interfere with any biological community or population of any important species to a degree which is damaging to the ecosystem; and

(ii) Not adversely affect other beneficial uses disproportionately.]

VERSION A

340-41- (4) MIXING ZONES

(a) "The Department may allow a defined portion of a stream to serve as a zone of initial dilution for wastewaters and receiving waters to mix."

(b) "The Department may suspend all or part of the water quality standards, or set less restrictive standards in the mixing zone. However, the water quality in this zone must preserve aesthetic conditions at all times and not adversely affect designated beneficial uses. Water quality standards must be met at the mixing zone boundary even at lowest stream flow conditions."

(c) "Based on the evaluation of the following factors, the Department shall assign a mixing zone in the immediate area of a waste water discharge on a case-by-case basis in the waste water discharge permit. Mixing zone location, surface area, and volume may be defined by the Department after consideration of the following:

1) Receiving Water Characteristics

Hydrologic Factors: Seasonal low flow rates, current direction and velocity, depths, width, channel morphology, groundwater aquifers, tidal fluctuations, and shoreline configuration.

Water Quality Factors: Conductivity, pH, alkalinity, temperature, dissolved oxygen, salinity, nutrients, toxics, and other chemical constituents that may be present in effluents.

Biological Factors: Resident and migratory fish populations, migratory passage requirements, aquatic community composition, sensitive or critical habitat (nursery or spawning, wetland or shellfish harvest areas.)

2) Effluent Characteristics

Effluent Discharge: Discharge rates and volume, dilution water volume available, and frequency of discharge.

Effluent Composition: Individual contaminant concentrations, total contaminant concentrations and mass loading to receiving streams.

Effluent Effects: Potential synergistic effects with other pollutants in receiving stream.

3) Outfall Design and Placement

Evaluate the most technically feasible engineering design for an outfall to be located in an area of sufficient current and minimum effect on water quality, public health, and aquatic resources. No exposed outfalls will be permitted.

(d) The mixing zone shall:

1) be as small as feasible;
2) be less than the total stream width as necessary to allow passage fish and other aquatic organisms;
3) not measurably affect the indigenous biological community especially when important species are present;
4) not threaten public health;
5) not adversely affect other designated beneficial uses; and
6) be free of:

*Materials in concentrations that will cause acute (96HLC50) or chronic toxicity to aquatic life
*Materials that will settle to form objectionable deposits.
*Floating debris, oil, scum, or other materials that cause nuisance conditions.
*Substances in concentrations that produce objectionable color, odor, taste or turbidity.
*Substances in concentrations that produce nuisance aquatic growth.

(e) "The Department may request the applicant for a permitted discharge for which a mixing zone is required, to submit all information necessary to define a mixing zone, such as:

1) Type of operation to be conducted
2) Characteristics of the effluent flow rates and composition
3) Characteristics and low flows of receiving waters
4) Description of potential environmental effects
5) Proposed design for outfall structures."

(f) "The Department may, as necessary, require mixing zone monitoring studies and/or bioassays to be conducted at any time to evaluate water quality or biological status within and outside the mixing zone boundary."

(g) "The Department may change a mixing zone designation or outfall location if it determine that the water quality within the mixing zone unreasonably and measurably affect any existing or potential beneficial uses in the receiving waters."

VERSION B

340-41- (4) MIXING ZONES

(a) "The Department may allow a defined portion of a stream to serve as a zone of initial dilution for wastewaters and receiving waters to thoroughly mix."

(b) "The Department may suspend all or part of the water quality standards, or set other less restrictive standards in the defined mixing zone. However, the water quality in this zone must preserve aesthetic conditions at all times and must not adversely impair any designated beneficial uses. Water quality standards must be met at the mixing zone boundary even under lowest flow conditions.

(c) "In determining the location, surface area, and volume of a mixing zone area, the Department may refer to appropriate mixing zone guidelines to assess the biological, physical, and chemical character of receiving waters and effluent and the placement of the outfall, whenever necessary to protect instream water quality, public health, and other beneficial uses. Based on receiving water and effluent characteristics, the Department shall assign a mixing zone in the immediate area of waste water discharge on a case-by-case basis in the waste water discharge permit.

(d) The mixing zone shall:

1) be as small as feasible;
2) be less than the total stream width as necessary to allow passage fish and other aquatic organisms;
3) not measurably affect the indigenous biological community especially when important species are present;
4) not threaten public health;
5) not adversely affect other designated beneficial uses; and
6) be free of:

*Materials in concentrations that will cause acute (96HLC50) or chronic toxicity to aquatic life
*Materials that will settle to form objectionable deposits.
*Floating debris, oil, scum, or other materials that cause nuisance conditions.
*Substances in concentrations that produce objectionable color, odor, taste or turbidity.
*Substances in concentrations that produce nuisance aquatic growth.

(e) "The Department may request the applicant for a permitted discharge for which a mixing zone is required, to submit all information necessary to define a mixing zone, such as:

1) Type of operation to be conducted
2) Characteristics of the effluent flow rates and composition
3) Characteristics and low flows of receiving waters
4) Description of potential environmental effects
5) Proposed design for outfall structures."

(f) "The Department may, as necessary, require mixing zone monitoring studies and/or bioassays to be conducted at any time to evaluate water quality or biological status within and outside the mixing zone boundary."

(g) "The Department may change a mixing zone designation or outfall location if it determine that the water quality within the mixing zone unreasonably and measurably affect any existing or potential beneficial uses in the receiving waters."

* RULE REFERENCES BY BASIN

Basin	Mixing Zone Rules
North Coast	340-41-205(4)
Mid Coast	340-41-245(4)
Umpqua	340-41-285(4)
South Coast	340-41-325(4)
Rogue	340-41-365(4)
Willamette	340-41-445(4)
Sandy	340-41-485(4)
Hood	340-41-525(4)
Deschutes	340-41-565(4)
John Day	340-41-605(4)
Umatilla	340-41-645(4)
Walla Walla	340-41-685(4)
Grande Ronde	340-41-725(4)
Powder	340-41-765(4)
Malheur River	340-41-805(4)
Owyhee	340-41-845(4)
Malheur Lake	340-41-885(4)
Goose and Summer Lakes	340-41-925(4)
Klamath	340-41-965(4)

PROPOSED REVISION OF LANGUAGE FOR TOXIC SUBSTANCES

The following language is proposed to replace "Pesticides and Other Organic Toxic Substances" and Dissolved Chemical Substances" with a standard on "Toxic Substances" for each basin. Rule references for each basin are included as a footnote (*). Total dissolved solids concentrations will remain the same for each basin.

["Pesticides and other organic toxic substances shall not exceed those criteria contained in the 1976 edition of the EPA publication "Quality Criteria for Water". These criteria shall apply unless supporting data shows conclusively that beneficial uses will not be adversely affected by exceeding a criterion by a specific amount or that a more stringent criterion is warranted to protect beneficial uses."]

["Dissolved Chemical Substances: Guide concentrations listed below shall not be exceeded unless otherwise specifically authorized by DEQ upon such conditions as it may deem necessary to carry out the general intent of this plan to protect the beneficial uses set forth in rule 340-41-202: (mg/l)

(A)	Arsenic(As)	0.01
(B)	Barium(Ba)	1.0
(C)	Boron(Bo)	0.5
(D)	Cadmium(Cd)	0.003
(E)	Chromium(Cr)	0.02
(F)	Copper(Cu)	0.005
(G)	Cyanide(Cr)	0.005
(H)	Fluoride(F)	1.0
(I)	Iron(Fe)	0.1
(J)	Lead(Pb)	0.05
(K)	Manganese(Mn)	0.05
(L)	Phenols(total)	0.001
(M)	Total Dissolved Solids-Columbia River	500
(N)	Total Dissolved Solids - other	100
(O)	Zinc(Zn)	0.01"]

340-41- (2)(p) Toxic Substances

(a) Toxic substances shall not be present in the waters of the state at levels which are or may become injurious to public health, safety, or welfare; aquatic life; or other designated beneficial uses.

(b) Levels of toxic substances shall not exceed the most recent criteria values for organic and inorganic pollutants established by EPA and published in Quality Criteria for Water (1976), 40 CFR Parts 141-143 (1985) for drinking water; and the Federal Registers November 28, 1980, 45 FR 79318 for sixty-four pollutants, February 15, 1984, 49 FR 5831 for dioxin, and July 29, 1985, 50 FR 30784 for nine pollutants.

(c) These criteria shall apply unless data from scientifically valid studies show conclusively that beneficial uses will not be adversely affected by exceeding a criterion by a specific amount or that a more restrictive criterion is warranted to protect beneficial uses.

(d) Bio-assessment studies shall be conducted, as the Department deems necessary, to monitor the toxicity of complex effluents or other suspected toxic discharges to aquatic life. If toxicity occurs, the Department shall consider measures necessary to reduce toxicity through permit modification.

* RULE REFERENCES BY BASIN

Basin	Dissolved Chemical Substances	Pesticides
North Coast	340-41-205(2)(o)	340-41-205(2)(p)
Mid Coast	340-41-245(2)(o)	340-41-245(2)(p)
Umpqua	340-41-285(2)(o)	340-41-285(2)(p)
South Coast	340-41-325(2)(o)	340-41-325(2)(p)
Rogue	340-41-365(2)(o)	340-41-365(2)(p)
Willamette	340-41-445(2)(o)	340-41-445(2)(p)
Sandy	340-41-485(2)(o)	340-41-485(2)(p)
Hood	340-41-525(2)(o)	340-41-525(2)(p)
Deschutes	340-41-565(2)(o)	340-41-565(2)(p)
John Day	340-41-605(2)(o)	340-41-605(2)(p)
Umatilla	340-41-645(2)(o)	340-41-645(2)(p)
Walla Walla	340-41-685(2)(o)	340-41-685(2)(p)
Grande Ronde	340-41-725(2)(o)	340-41-725(2)(p)
Powder	340-41-765(2)(o)	340-41-765(2)(p)
Malheur River	340-41-805(2)(o)	340-41-805(2)(p)
Owyhee	340-41-845(2)(o)	340-41-845(2)(p)
Malheur Lake	340-41-885(2)(o)	340-41-885(2)(p)
Goose and Summer Lakes	340-41-925(2)(o)	340-41-925(2)(p)
Klamath	340-41-965(2)(o)	340-41-965(2)(p)

300 Grandview Dr.
Ashland, Oregon 97520
August 25, 1987

Environmental Quality Commission
811 S W Sixth Avenue
Portland, Oregon 97204

Subject: Water Quality Standards Rules

Dear Commissioners:

I strongly recommend that you adopt your staff's recommendations on Final Rule Language for Mixing Zone Policy, Toxic Substances Standards and Total Dissolved Solids Standards. These standards will give much clearer guidance to dischargers and at the same time greatly improve your ability to protect water quality.

However, there is one important wording change I believe is essential to assure clarity in the Mixing Zone Policy:

Mixing Zones (d) should read: The Department may require (not "request") the applicant.....

Thank you for the chance to review these very significant and valuable changes.

Very truly yours,

Myra Erwin

Myra Erwin

NEIL GOLDSCHMIDT
GOVERNOR

Environmental Quality Commission

811 SW SIXTH AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No: G August 28, 1987, EQC Meeting

Appeal by Frank and Sandra Brown of On-Site Sewage Disposal System Variance Denial

Background and Problem Statement

The pertinent legal authorities are summarized in Attachment "A".

Frank and Sandra Brown own approximately 6 acres in Clackamas County, identified as Tax Lot 1106, Section 15B, Township 2 South, Range 3 East of the Willamette Meridian. This parcel was evaluated for on-site disposal by Dan Bush, Clackamas County Sanitarian, April 28, 1978. A favorable site evaluation report (Attachment "B") was issued by Dan Bush May 1, 1978. A permit to construct a standard on-site system was issued March 29, 1982 (Attachment "C") and expired March 29, 1983 prior to system installation. The permit was renewed April 6, 1983 (Attachment "D") and expired April 6, 1984.

Dan Bush conducted an inspection May 14, 1984 and observed a mobile home located on the property. He mailed Mr. Brown a letter dated May 15, 1984 (Attachment "E") extending the permit to June 15, 1984 and requesting completion and inspection of the on-site system by that date. Lee Grimes, Clackamas County, met with Mr. Brown on the site, July 10, 1984, and explained that inspections were required prior to covering and placing the system into use. Mr. Brown requested an inspection July 18, 1984. Richard Polson, Clackamas County, conducted an inspection July 19, 1984 and posted a correction notice indicating deficiencies and necessary corrective work. Mr. Polson followed-up his inspection with a letter to Mr. Brown dated, July 20, 1984, (Attachment "F") indicating needed corrective action and requesting work be completed within 30 days. In addition, Mr. Polson suggested that Mr. Brown hire a licensed installer to complete system installation.

Mr. Brown made no corrections and placed his system into use without a final inspection and issuance of a Certificate of Satisfactory Completion. Dan Bush, issued Mr. Brown a notice of non-compliance September 7, 1984 (Attachment "G") and established September 19, 1984 as a compliance date.

NEIL GOLDSCHMIDT
GOVERNOR

Environmental Quality Commission

811 SW SIXTH AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

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Mr. Brown made no corrections and placed his system into use without a final inspection and issuance of a Certificate of Satisfactory Completion. Dan Bush, issued Mr. Brown a notice of non-compliance September 7, 1984 (Attachment "G") and established September 19, 1984 as a compliance date.

Mr. Brown did not respond. Mr. Polson made a site visit on September 26, 1984 and informed Mr. Brown that Clackamas County had no alternative but to issue a violation because corrections were not made as requested. Subsequent letters to Mr. Brown December 4, 1984 and January 18, 1985 were returned unopened. Clackamas County Sheriff's office served Mr. Brown with a ten day violation notice February 1, 1985.

Clackamas County Counsel sent a certified letter April 5, 1985 (Attachment "H") to Mr. Brown informing him Clackamas County would file a civil lawsuit to enjoin use of his property if he did not properly complete construction of his system and obtain a Certificate of Satisfactory Completion. Clackamas County Counsel, by letter dated November 10, 1986, (Attachment "I") set February 19, 1987 as the trial date.

Frank and Sandra Brown applied for a variance from on-site sewage disposal rules January 29, 1987. The trial was held in abeyance pending outcome of the variance. Their request would require variance from the following Administrative Rules:

1. OAR 340-71-130(7) -- which requires that all materials used in on-site systems to comply with specific standards established within the Administrative Rules;

2. OAR 340-71-175(4) -- which prohibits the backfilling of a sewage disposal system until after the system has been inspected and a Certificate of Satisfactory Completion has been issued, unless the inspection has been waived by the Department or the Department's authorized agent;

3. OAR 340-71-175(5) -- which requires correction of construction deficiencies within thirty (30) days after written notification or the posting of a correction notice;

4. OAR 340-71-175(6) -- which prohibits connection to or use of an on-site system constructed after January 1, 1974, unless a Certificate of Satisfactory Completion has been issued for the installation;

5. OAR 340-71-220(10) -- which requires the use of watertight header pipe, bedded on undisturbed earth, within four (4) feet of a drop box;

6. OAR 340-71-220(11) -- which requires the distribution pipe used within the disposal trenches meet the minimum standards within OAR 340-73-060; and

7. OAR 340-71-220(12) -- which requires that effluent sewer pipe, used between the septic tank and the disposal field, meet the minimum standards identified within OAR 340-73-060.

The variance was assigned to Sherman Olson, Variance Officer for the Department of Environmental Quality. Mr. Olson examined the site and conducted an information gathering hearing March 10, 1987. He inspected the on-site system consisting of a 1,000 gallon steel septic tank, a 4 inch diameter corrugated effluent sewer pipe, 3 concrete drop boxes, and 4 disposal trenches. Corrugated polyethylene tubing that does not conform to building sewer pipe standards was used to convey effluent from the septic tank to the disposal field. Slotted corrugated polyethylene tubing bedded in gravel was used to convey effluent from drop boxes into disposal trenches, instead of solid, watertight header pipe bedded on undisturbed soil for a distance of 4 feet from the drop box. The slotted corrugated polyethylene tubing used in disposal trenches does not comply with general requirements for distribution piping or specific requirements for corrugated polyethylene distribution piping.

The Federal Housing Administration and the U.S. Department of Housing and Urban Development approve use of slotted corrugated polyethylene tubing for foundation drains but not for use in soil adsorption systems. In addition, pipe manufacturers do not advocate use of slotted corrugated polyehtylene tubing in place of heavier weight perforated corrugated polyethylene tubing manufactured specifically for use in soil adsorption systems.

The piping material standards in Oregon Administrative Rules (OAR 340-73-060) require quality sufficient to assure that piping material will not fail when used in soil adsorption systems statewide. Slotted corrugated polyethylene tubing may function satisfactorily in soil and site conditions specific to Frank and Sandra Browns' property. It may not do so in other areas of the state under different soil and site conditions.

After reviewing the variance record, Mr. Olson found that it was not unreasonable or burdensome to require the Browns to use standard materials to construct an on-site sewage disposal system (Attachment "J"). The Browns had been adequately notified of system deficiencies and had the opportunity to make corrections with relative ease as identified by Clackamas County prior to placing the system into operation. Mr. Olson did not view it appropriate to grant variances from OAR 340-71-175(4)(5) and (6) pertaining to requirements for issuance of a Certificate of Satisfatory Completion under these circumstances.

On June 3, 1987, the Director received a letter from Gary M. Carlson, Attorney, on behalf of Frank and Sandra Brown appealing Mr. Olson's decision (Attachment "K").

Frank and Sandra Brown's appeal is based on grounds that reconstruction of the system is unreasonable and unduly burdensome. They state the system is working effectively and agree to replace the system if problems occur in the future.

Alternatives and Evaluation

Pursuant to ORS 454.660, decisions of the variance officer may be appealed to the Environmental Quality Commision. Alternatives available to the Environmental Quality Commission include either upholding the decision of the variance officer or granting a variance to allow the installed system to be approved. The Commision must determine if strict compliance with the rules or standards regulating installation of an on-site sewage disposal system is inappropriate for cause, or that special physical conditions render strict compliance unreasonable, burdensome, or impractical.

The Alternatives are as follow:

1. Uphold the decision of the variance officer.

   This alternative would require Frank and Sandra Brown to abandon their system and install a new system according to construction standards in Oregon Administrative Rules. They would first have to obtain a construction-installation permit from Clackamas County.

2. Grant Frank and Sandra Brown's request to use the system as it was installed. If this alternative were adopted, the Commission would have to approve variances to materials standards OAR 340-71-130(7), OAR 340-71-220(10), OAR 340-71-220(11), and OAR 340-71-220(12), and requirements dealing with issuance of the Certificate of Satisfactory Completion OAR 340-71-175(4), OAR 340-71-175(5), and OAR 340-71-175(6).

The intent of the variance process is to provide opportunity for an applicant to propose an on-site system for a parcel that does not meet requirements of Oregon Administrative Rules because of marginal soil and site conditions.

A variance from any rule contained in OAR 340, Division 71 may be granted to applicants providing a variance officer finds (1) strict compliance with the rule or standard is inappropriate for cause; or (2) special physical conditions render strict compliance unreasonable, burdensome, or impractical. There are no special physical conditions associated with this variance proposal. Parcel size, vertical separation from groundwater, horizontal separation from surface water or other similar physical limitations are not involved. Consequently, Mr. Olson had to decide if strict compliance with rules or standards was inappropriate for cause. Mr. Brown provided no testimony, other than monetary inconvenience, to show that compliance with rules and standards was inappropriate. Frank and Sandra Brown were adequately notified of the need to correct system deficiencies and, according to the variance record, they chose not to cooperate with Clackamas County and placed their on-site sewage system into use prior to May 14, 1984 without making corrections. If they had cooperated with Clackamas County, corrections could have been made easily, the system would be in conformance with the material standards for on-site sewage disposal systems, and Clackamas County could have issued a Certificate of Satisfacotry Completion.

The variance record does indicate that the on-site sewage disposal system has functioned satisfactorily for over three years. Photographs taken by Mr. Olson, March 10, 1987, showed effluent flowing from the septic tank into the first drop box charging only the first disposal trench. No effluent was flowing over the invert in the first drop box into the lower disposal trenches of the soil absorption system. In addition, there was no evidence of overflow since the system was placed into service (none of the lower drop boxes or header pipes contained evidence of scum or sludge.)

Although Frank and Sandra Brown appear to have an on-site system that presently is functioning properly, it appears the variance process is being used inappropriately to circumvent construction and materials standards contained in Oregon Administrative Rules. Mr. Olson considered the variance record and decided that the Browns had not demonstrated strict compliance with the standards for materials in construction of an on-site sewage system is inappropriate for cause or that special conditions render strict compliance unreasonable, burdensome or impractical. They chose to ignore the requests by Clackamas County to correct system deificiencies and placed the system into operation without a Certificate of Satisfactory Completion.

Summation

1. Pertinent legal authorities are summarized in Attachment "A".

2. Dan Bush, Clackamas County, evaluated Frank and Sandra Brown's property April 28, 1978 and issued a constructon-installation permit March 29, 1982. The permit was renewed April 6, 1983 but expired April 6, 1984. The permit was extended to June 15, 1984. Mr. Brown requested an inspection July 18, 1984, but most of the system was covered and in use when Richard Polson, Clackamas county, inspected the system July 19, 1984. Mr. Polson posted a correction notice and mailed Mr. Brown a letter, dated July 20, 1984, requesting completion of work within 30 days. Further contacts by Clackamas County to have Mr. Brown voluntarily make corrections to his system failed, so Clackamas County proceeded with formal enforcement action by filing a civil lawsuit with the circuit court.

3. Frank and Sandra Brown applied to DEQ for a Variance January 29, 1987. The trial was held in abeyance pending outcome of the variance. The variance request was assigned to Mr. Olson.

4. Mr. Olson made a site visit and conducted an information gathering hearing March 10, 1987. After reviewing the record, Mr. Olson did not find it unreasonable to require use of standard materials and denied the variance.

5. Frank and Sandra Brown filed an appeal with the Commission June 3, 1987.

Director's Recommendation

Based upon the findings in the Summation, it is recommended that the Commission adopt the findings of the variance officer and uphold the decision to deny Frank and Sandra Brown's proposal to vary from materials standards OAR 340-71-130(7), OAR 340-71-220(10), OAR 340-71-220(11), OAR 340-71-220(12), and construction standards in OAR 340-71-175(4), OAR 340-71-175(5), OAR 340-71-175(6).

Fred Hansen

Attachments (10)

"A" Pertinent Legal Authorities
"B" Site Evaluation Report Letter
"C" Septic Permit
"D" Septic Tank Permit Renewal
"E" Letter to Mr. Brown from Dan Bush
"F" Letter to Mr. Brown from Richard Polson
"G" Letter of Non-Compliance to Frank Brown from Dan Bush
"H" Certified Letter to Frank J. and Sandra R. Brown from David W. Anderson
"I" Letter to David G. Phillips from David W. Anderson
"J" Mr. Olson's Variance Denial Letter
"K" Appeal Letter to Mr. Fred Hansen from Gary M. Carlson

Robert C. Paeth:c,h
WC2253
229-5289
July 24, 1987

1. Administrative rules governing subsurface sewage disposal are provided for by Statute: ORS 454.625.

2. The Environmental Quality Commission has been given statutory authority to grant variances from the particular requirements of any rule or standard pertaining to subsurface sewage disposal systems if after hearing, it finds that strict compliance with the rule or standard is inappropriate for cause or special physical conditions render strict compliance unreasonable, burdensome or impractical: ORS 454.657.

3. The Commission has been given statutory authority to delegate the power to grant variance to special variance officers appointed by the Director of the Department of Environmental Quality: ORS 454.660.

4. Mr. Olson was appointed as a variance officer pursuant to the Oregon Administrative Rules: OAR 340-71-415.

5. Decisions of the variance officers to grant variances may be appealed to the Commission: ORS 454.660.

Attachment "B"

DEPARTMENT OF PUBLIC WORKS

COUNTY OF CLACKAMAS

	Director
	DEVELOPMENT
	Building
	Soils
	Plumbing
	Admin.
	Office Files

Logged

JOHN C. McINTYRE
DIRECTOR

DON D. BROADSWORD
Operations Director

WINSTON W. KURTH
County Engineer

DAVID J. ABRAHAM
Utilities Director

RICHARD L. DOPP
Development
Services
Administrator

May 1, 1978

Donald Mullis
Rt. 1, Box 203
Estacada, Oregon 97023

RE: TAX LOT: 1106 SECTION: 15B TOWNSHIP: 2S RANGE: 3E
ACRES: 6.0

I have completed the private consultant review of the above property for a single 3 bedroom building site in the area that Mr. William H. Doak has proposed. On the basis of this study, subsurface sewage disposal appears feasible on this site. The results of the study are as follows:

The apparent textural class is silty clay loam over silty clay over stoney silty clay to clay.

The depth to distinct mottles which are indicative of the natural winter perched groundwater levels is greater than 36 inches of the ground surface.

The depth to a restrictive layer is greater than 40 inches of the ground surface.

The minimum lot size for this one building site is 2 acres.

Part of your property is excessive in slope. For these soil conditions, subsurface sewage disposal is not permitted on slopes which are in excess of twenty (20) percent.

A minimum setback of 100 feet from the well and 25 feet from the edge of the slope-break to the canyon southwest of the proposed area is required for the drainfield area.

A natural drainageway crosses through your property. No subsurface sewage disposal is permitted within 50 feet of the natural bottom. This pertains to the low wet lands east of the proposed area.

Drainfield trench depths are not to exceed thirty-six (36) inches of the ground surface.

Part of your property is unsuitable for subsurface sewage disposal. Drainfields must be installed within the area shown on the attached print as per the consultant's report of April 10, 1978. Note that this approval is site specific to the area presented in this report. The system must be located in this area.

This installation must use the serial system for the distribution of sewage effluent to the drainfield area.

With these soil conditions 150 lineal feet of drainfield line will be required per bedroom. Drainfield trenches are to be two (2) feet wide with no single line to exceed one hundred twenty-five (125) feet in length. These trenches are to be placed on the natural ground contours with no fall throughout their length. At least eight (8) feet of undisturbed earth must be maintained between disposal trenches. Drainfield installation is not permitted on ground that has been altered by cutting or filling.

Adequate area must be reserved for the initial drainfield and an area of equal size to serve as a replacement area. The replacement area is to be used to build a second drainfield, should the original fail for any non-repairable reason.

A County Septic Tank Permit is required for the installation.

This statement of feasibility shall remain in effect until issuance of a permit to construct, unless in the meantime conditions on subject or adjacent properties have been altered in any manner which would prohibit issuance of a permit in which case the evaluation report shall be considered null and void. Technical rule changes will not invalidate any evaluation report issued pursuant to O. A. R. Chapter 340, Division 7, Section 72020.

The requirements or conditions as set forth in this letter in no way waive requirements as may be set by the zoning of the area.

RICHARD L. DOPP - Development Services Administrator

By

DANIEL M. BUSH - Soil Scientist

/keg

Attachment "C"

CLACKAMAS COUNTY, OREGON

DEPARTMENT OF ENVIRONMENTAL SERVICES

902 Abernethy Road, Oregon City, Oregon 97045 – 655-8521 or 655-8690

SEPTIC PERMIT

PERMIT NO. S-90-82 EXPIRATION DATE 3-29-83

INSTALLER Frank Brown OWNER SAME

This permit authorizes the construction of a subsurface sewage disposal system on:

TAX LOT 1106 SEC. 15B T 2 S, R 3E WM

All work to conform to Oregon administrative rules governing subsurface sewage disposal.

A final inspection must be made and the construction approved prior to backfilling and/or utilization of the system.

MAKE NO CHANGES IN LOCATION OR SPECIFICATIONS WITHOUT WRITTEN APPROVAL.

PERMIT NOT TRANSFERABLE.

POST ON PREMISES UNTIL COMPLETED.

CLACKAMAS COUNTY ENVIRONMENTAL SERVICES
902 Abernethy Road, Oregon City, OR 97045

Attachment "D"

APPLICATION APPROVED

Date of Approval 4-6-83 OMBrown

Date Issued 4-6-83

SEPTIC TANK PERMIT

APPLICATION
for a Permit to *Construct* a
New or *Repair* a Subsurface or Alternative Sewage
Disposal System

Permit No. S-118-83

Fee For Permit none

Serial No. 0872978

TO BE FILLED IN BY APPLICANT (Type or Print) Renewal of S-90-82

A. REFERENCE INFORMATION:

Section 15 B T 2S R 3E Building Permit No. MH-77-82

Tax Lot 1106 Zone Approval

Lot Blk Subdivision

Location/Address 17477 SE Royer Rd

Owner's Name Frank Brown Installer's Name* (To be bid)

Address 18651 SE Foster Rd Address

City Boring State OR City State

Phone 252-7545 Zip 97009 Phone Zip

**NOTE: Only the property owner, contract purchaser, or a licensed installer may perform work on or related to installation of the sewage disposal system authorized under this permit.*

B. GENERAL DESCRIPTION:

☒ NEW CONSTRUCTION ☐ REPAIR ☐ ALTERATION

INSTALLATION WILL SERVE: ☐ HOUSE ☒ MOBILE HOME ☐ COMMERCIAL ☐ OTHER

NO. OF LIVING UNITS NO. OF BEDROOMS 3

WATER SUPPLY WILL BE: ☒ PUBLIC ☐ COMMUNITY ☐ PRIVATE ☐ OTHER

A plot plan drawn to scale on 8½" x 14" paper must be submitted with each permit and must show: Property lines and dimensions – proposed and existing structures – location of well and/or water service lines – location of septic tank and drainfield and/or sewer lines – proposed location of raindrains and method of disposal – location of driveways, patio slab, parking area and walkways – contour or ground elevation at property corners – proposed main floor and garage floor elevations – proposed setbacks from all property lines.

I certify that I am licensed under ORS 454.695 to perform work on this sewage disposal system or that I am the owner or contract purchaser of the subject property. I hereby certify that the information contained in this application is true and correct to the best of my knowledge and belief.

NOTE: A precover inspection is required and will be made within seven days of your request. This Permit expires one year from date of issuance.

X Frank J Brown
X SIGNATURE (Owner/Installer)

X DATE: 4-4-83

(FOR OFFICIAL USE ONLY)

SEWAGE DISPOSAL REQUIREMENTS:

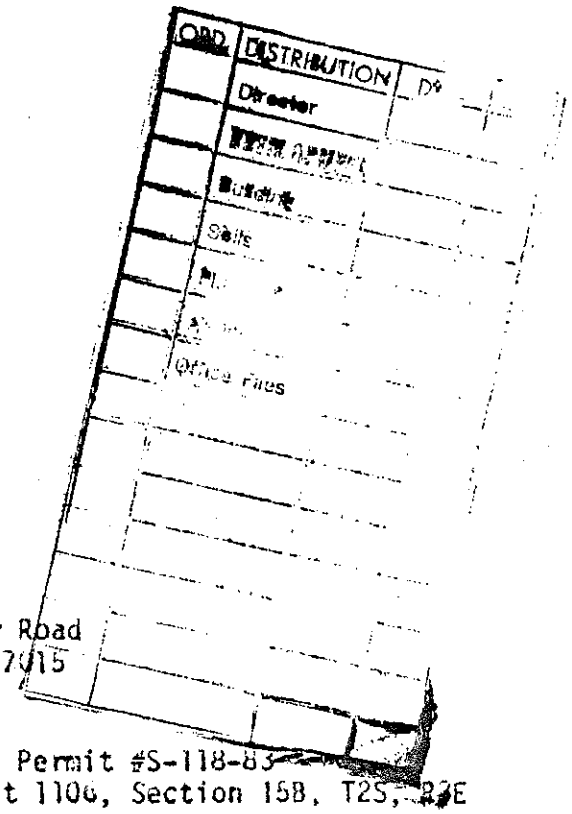
TYPE OF SYSTEM: ☒ STANDARD ☐ CAPPING FILL ☐ SAND FILTER ☐ VARIANCE ☐ OTHER

SEPTIC TANK CAPACITY 1000 GALLONS DRAINFIELD (EQUAL ___ OR SERIAL X) DISTRIBUTION

TOTAL LENGTH OF LINES 450 FEET NUMBER OF LINES 4T DISTANCE BETWEEN LINES 10 FEET

MAXIMUM TRENCH DEPTH 36 INCHES GROUNDWATER INTERCEPTOR DEPTH INCHES

Attachment "E"



May 15, 1984

Frank Brown
17477 S.E. Royer Road
Clackamas, OR 97015

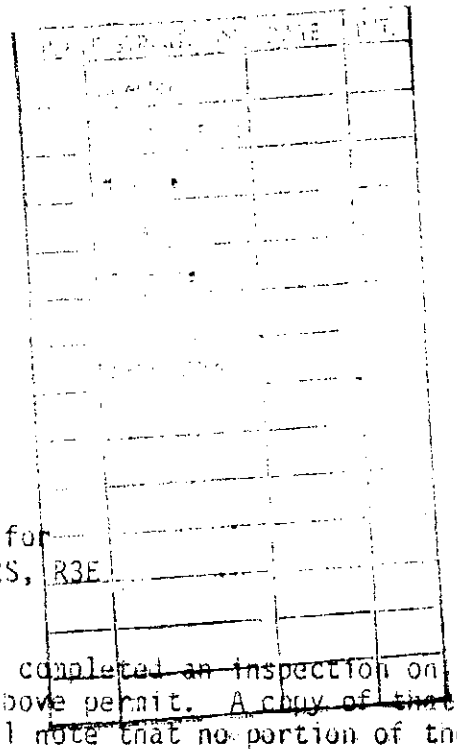
SUBJ: Septic Permit #S-118-83
Tax Lot 1106, Section 15B, T2S, R3E

As of April 6, 1984, this septic permit has expired. In light of the fact that the mobile home is situated on the property, this office has no other alternative at this time but to request that the required system, as described on the enclosed information, be completed, then inspected and approved within thirty (30) days from the date of this correspondence. Permit renewal will not suffice as satisfying this requirement. The validity of permit #S-118-83 is extended until June 15, 1984.

This office looks forward to your cooperation in this matter. We have enclosed a list of licensed installers for your convenience. If you have any questions or need further information, please feel free to contact this office.

DANIEL M. BUSH
Soil Scientist

/lab
Encl.



July 20, 1984

Frank Brown
17477 S.E. Royer Road
Clackamas, OR 97015

SUBJ. Septic Tank Permit #S-118-83 for
Tax Lot 1106, Section 15B, T2S, R3E

As per your request of July 18, 1984, I completed an inspection on the septic system installed under the above permit. A copy of that inspection report is attached. You will note that no portion of the sewage disposal system for this property is approved. The only portions of the system that were exposed for my review were the drop boxes and some of the header lines. It is evident from what I saw that improper materials have been used for the construction of the drainfield system. The corrugated pipe leading to the first open distribution box is improper material for that section of the disposal field. In opening the drop boxes, it is apparent that no header lines exist between the drop boxes and the disposal trenches. The pipe leading out of the boxes is a perforated or slitted corrugated plastic pipe that is not acceptable for drainfield use. These materials will have to be replaced with appropriate materials prior to approval of your septic system by this office. I could not inspect the septic tank or any other portions of the system to make sure that they met current code. However, given what I have seen so far, it appears that the entire system may have significant and probably irrepairable defects.

Based on the above results, I must require that appropriate corrections to this system be completed within thirty (30) days. I would also strongly recommend that you hire a licensed drainfield installer to build an appropriate system for your site. A list of licensed installers who regularly work in Clackamas County is attached.

It is noted that your septic tank permit has gone well past its expiration date of April 6, 1984. A letter to you from Dan Bush indicated that we would extend this permit until June 15th, 1984. I am now extending this time period to August 10, 1984. If this system is not installed and approved by that date, a new permit must be taken out and full fees paid. In any case, the existing system is not acceptable and must be corrected prior to occupancy of the mobile home. Use of

an unapproved septic system is a violation of State Administrative Rules and Revised Statutes.

This office hopes that you will take the appropriate measures to resolve this matter as soon as possible. If you have any questions concerning this matter, please do not hesitate to contact our office.

RICHARD L. POLSON
Chief Soils Scientist

/mb

Ser. #0372978

Attachmenrt "G"

DEPARTMENT OF ENVIRONMENTAL SERVICES
COUNTY OF CLACKAMAS
STATE OF OREGON

DEVELOPMENT SERVICES DIVISION

JOHN C. McINTYRE
Director

RICHARD L. DOPP
Development Services
Administrator

Sept 7, 1984
Date

Frank Brown
Name
17477 SE Royn Rd.
Address
Clackamas, OR 97015

SUBJ: Notice of NonCompliance: Septic Permit No. S-118-83.
Tax Lot 1106, Section 15B, Township 2S, Range 3E, W.M.

The subsurface sewage disposal system which you installed on the above property has been determined to not be in full compliance with Oregon State Standards for Subsurface and Alternative Sewage and Non-Water Carried Waste Disposal.

As per our inspection notice of July 19, 1984, this office required that certain corrections be made to the construction of this sewage disposal system. As of this date, you have not yet complied with our request. Because considerable time has elapsed since compliance was requested, we must now require that all corrections to this system be completed, an inspection requested and the system approved by September 19, 1984. A copy of the inspection report is enclosed describing the corrections and/or incomplete items involved. If the system is not corrected by the above date, the matter shall be referred to the Development Services Code Compliance Section for enforcement action.

Note, that until a Certificate of Satisfactory Completion is obtained, this system cannot be backfilled or utilized for sewage disposal.

Your prompt attention to this matter is requested. If you have any questions or special problems that make compliance with this letter impossible, please contact us immediately.

Daniel M. Bush Soil Scientist
Development Services Division

/mb

Attachment "H"

OFFICE OF COUNTY COUNSEL

CLACKAMAS COUNTY

906 MAIN STREET • OREGON CITY, OREGON 97045 • (503) 655-8362

Michael D Montgomery (1940-1982)

COUNTY COUNSEL
Scott H Parker

ASSISTANT COUNTY COUNSEL
Michael E Judd
David W Anderson
Miles A Ward

April 5, 1985

Info from Code Compl. left 5-7-85 DB

DP

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Frank J. and Sandra R. Brown
17477 S.E. Royer Road
Boring, Oregon 97009

Re: Real Property Described as Tax Lot 1106, Section 15B, T2S, R3E, of the W.M., Clackamas County, Oregon

Dear Mr. and Mrs. Brown:

The Board of County Commissioners for Clackamas County has forwarded to this office correspondence and documents from the Department of Transportation & Development, Community Environment Division, which indicate that you are allowing occupancy of a residence on your property at the above-described location without an adequate septic system. Reconstruction of the system which had been attempted apparently was not properly completed and the system is being used without a Certificate of Satisfactory Completion. This appears to be in violation of the Clackamas County Ordinance to Enforce the Oregon Standards of Subsurface Sewage Disposal.

As attorneys for Clackamas County, we have been requested to take whatever action is necessary to correct this situation. In the event the apparent violation is not resolved, this office will have no alternative but to file a civil lawsuit to enjoin the use of the property in violation of the Clackamas County ordinance.

Please advise David G. Phillips of the Community Environment Division, at 655-8521, if you are willing to take appropriate action to resolve the apparent violation. If we have not received notice from the Community Environment Division of a satisfactory solution within 15 days from the date of mailing of this letter, we will file the civil lawsuit with the court.

Thank you for your immediate attention to this matter.

Sincerely,

David W. Anderson
Assistant County Counsel

/bb
cc: David G. Phillips, Community Environment Administrator

S-118-83 Attachment "I"

OFFICE OF COUNTY COUNSEL

CLACKAMAS COUNTY

906 MAIN STREET • OREGON CITY, OREGON 97045 • (503) 655-8362

Michael D Montgomery (1940-1982)

COUNTY COUNSEL
Scott H. Parker

CHIEF ASSISTANT
Michael E. Judd

ASSISTANTS
David W. Anderson
Miles A. Ward

TO: David G. Phillips

FROM: Office of County Counsel

DATE: November 10, 1986

RE: Clackamas County v. Frank and Sandra Brown, Circuit Court Case No. 86-8-84

Trial has been set in the subject case for February 19, 1987 at 9:00 AM. Please let me know if there is a problem with that date. If not, please notify any witnesses we may have and enter the date on your calendar.

Sincerely,

David W. Anderson

David W. Anderson
Assistant County Counsel

/bk

D.B -
Please put this on your calendar. You'll probably have to testify.
D.P.

NEIL GOLDSCHMIDT
GOVERNOR

Department of Environmental Quality

811 S.W. SIXTH AVENUE, PORTLAND, OREGON 97204 PHONE: (503) 229-5696

May 14, 1987

CERTIFIED MAIL

Mr. and Mrs. Frank Brown
17477 SE Royer Road
Clackamas, OR 97015

Re: WQ-SDS-Variance Denial
T.L. 1106; Sec. 15 B;
T. 2 S.; R. 3 E., W.M.;
Clackamas County

Dear Mr. and Mrs. Brown:

In response to your variance application, I visited the above-described property and conducted an information gathering hearing on March 10, 1987. The hearing remained open through March 24 to provide you additional time to provide further testimony for entry into the record. At issue is whether you should be required to correct construction deficiencies within the sewage disposal system you installed, as requested by Clackamas County and as required by Oregon Revised Statutes and Oregon Administrative Rules. The record indicates the following history:

A. Upon receipt of your application, Clackamas County issued a permit to construct a standard sewage disposal system on your property. A condition of the permit required compliance with the Oregon Administrative Rules governing subsurface sewage disposal. It also clearly stated, "a final inspection must be made and the construction approved prior to backfilling and/or utilization of the system." The permit was renewed and extended.

B. You constructed a sewage disposed system on your property and notified Clackamas County on July 18, 1984, that the system was ready for the pre-cover inspection.

C. Staff with Clackamas County visited your property on July 19, 1984, to inspect the system and observed that most of the system had already been backfilled. The portion that could be examined was found to have been constructed in a manner that was not in compliance with the permit conditions. A correction notice outlining the system deficiencies was posted at the property, and a letter describing these deficiencies was mailed to you on July 20, 1984. Corrections to the system were required to be completed within thirty (30) days. Further contacts made by the County to obtain your cooperation in resolving this matter did not result in you complying with the correction notice.

D. A dwelling was connected to the system, thus placing it into service.

E. Because the County was unsuccessful in their attempts to have you voluntarily correct the faulty system construction, they proceeded to take formal enforcement action by filing a civil lawsuit with the circuit court in Clackamas County.

Rather than correct the system deficiencies, you have requested consideration be given to accept the system as it is now installed. Corrections would require the system be re-constructed. As I understand, it is your belief that re-construction of the system is unreasonable (because the system is not failing) and the cost to do this would be burdensome. Your request would require variance from the following Administrative Rules:

1. OAR 340-71-130(7) -- which requires that all materials used in on-site systems to comply with specific standards established within the Administrative Rules. The corrugated polyethylene tubing used in the construction of your system does not comply with the general or specific pipe standards that have been established by rule.

2. OAR 340-71-175(4) -- which prohibits the backfilling of a sewage disposal system until after the system has been inspected and a Certificate of Satisfactory Completion has been issued, unless the inspection has been waived by the Department or the Department's authorized agent. Also, if an inspection of the system is not performed within seven (7) days after notification is provided the Department or the Department's agent that the system is ready for the pre-cover inspection; the system may also be backfilled. Clackamas County arrived at the property to conduct a pre-cover inspection one (1) day after notification was received. Most of the system had already been backfilled.

3. OAR 340-71-175(5) -- which requires correction of construction deficiencies within thirty (30) days after written notification or the posting of a correction notice. Mr. Polson provided notice of the construction deficiencies by letter and by posting a correction notice at the construction site. As of March 10, 1987, none of the corrections appear to have been done.

4. OAR 340-71-175(6) -- which prohibits the connection to or use of a system that was constructed after January 1, 1974, unless a Certificate of Satisfactory Completion has been issued for the installation or deemed issued by operation of law. A dwelling has been connected to the system and the system has been placed into service without the Certificate of Satisfactory Completion having been issued or deemed issued.

5. OAR 340-71-220(10) -- which requires the use of watertight header pipe, bedded on undisturbed earth, when within four (4) feet of a drop box. Header pipe was not used to convey effluent from the drop boxes into the disposal trenches in the system you constructed. Instead, you used slotted corrugated polyethylene tubing directly from the drop box.

6. OAR 340-71-220(11) -- which requires that distribution pipe used within the disposal trenches meet the minimum standards within OAR 340-73-060. The slotted corrugated polyethylene tubing used in your drainfield does not comply with the general requirements applicable to all disposal trench piping, or the specific requirements that pertain to corrugated polyethylene pipe.

7. OAR 340-71-220(12) -- which requires that effluent sewer pipe, used between the septic tank and the disposal field, meet the minimum standards identified within OAR 340-73-060. The effluent sewer is required to be constructed with materials in conformance to building sewer pipe standards, as identified in the Oregon State Plumbing Laws and Administrative Rules. Corrugated polyethylene tubing does not conform to the building sewer pipe standards.

Variance from particular requirements of the rules pertaining to on-site sewage disposal systems may be granted if a finding can be made that strict compliance with the rules is inappropriate for cause, or that special physical conditions render strict compliance unreasonable, burdensome, or impractical. Minimum pipe standards have been established to provide assurance that the pipe will perform its design function for the useful life of the sewage disposal system. Effluent sewer piping must convey septic tank effluent to the drainfield, and possess certain characteristics to insure the pipe will retain its integrity when subjected to external forces likely to be encountered while in situ. It must also be possible to securely connect the pipe to the septic tank outlet fitting in a water-tight manner. Pipe materials that are approved by the Oregon State Plumbing Board for use in the building sewer (the pipe between the dwelling and the septic tank) possess these qualities and the sewage disposal rules specify that effluent sewer piping must conform to the building sewer requirements established by the State Plumbing Board.

Corrugated polyethylene tubing is not allowed for use as building sewer piping; it has thin-wall construction (is subject to deformation and collapse under light loads) and, because of its strength and irregular form, cannot reliably be connected to the septic tank in a sound and water-tight fashion. Similarly, the slotted corrugated polyethylene tubing has a lesser wall thickness than the allowed heavy duty corrugated polyethylene tubing, making it more susceptible to mechanical failure. In addition, the saw-cut slots are much more likely to become blocked by organic debris expected to accumulate overtime, eventually reducing the effectiveness of

the pipe at distributing effluent throughout the trench. The slotted pipe was designed for use in agricultural and construction applications to reduce groundwater drainage problems.

Due to the inherent limitations described and my evaluation of other factors related to the variance record, I am unable to reach a favorable finding to your request. In my view, it is unreasonable to allow substandard materials to be used in the construction of your sewage disposal system. The pipe error could have been corrected with relative ease if you had cooperated with Clackamas County. The construction permit directed you not to backfill the system or place it into service until a final inspection was made. Your variance request is regretfully denied.

Pursuant to OAR 340-71-440, my decision to deny your variance request may be appealed to the Environmental Quality Commission. Requests for appeal must be made by letter, stating the grounds for appeal, and addressed to the Environmental Quality Commission, in care of Mr. Fred Hansen, Director, Department of Environmental Quality, 811 SW Sixth Avenue, Portland, Oregon, 97204, within twenty (20) days of the certified mailing of this letter. Please feel free to contact me at 229-6443, if you have questions regarding this decision.

Sincerely,

Sherman O. Olson, Jr.
Senior Environmental Analyst
Sewage Disposal Section
Water Quality Division

SOO:h
WH1919
cc: Mr. Gary M. Carlson
Mr. Richard Polson, Clackamas County
Mr. David Phillips, Clackamas County
Mr. David W. Anderson, Clackamas County
Northwest Region, DEQ

Attachment "K"

LAW OFFICES OF
GARY M. CARLSON
516 S.W. COLLEGE, PORTLAND, OREGON 97201

GARY M. CARLSON*
DAVID B. WAGNER
DOUGLAS E. JENSEN

OF COUNSEL
KIRKLAND T. ROBERTS

PHONE
(503) 223-9766
*ORE. AND WASH. BARS

June 1, 1987

Mr. Fred Hanson, Director
Department of Environmental Quality
811 S.W. Sixth Avenue
Portland, OR 97204

RE: WQ-SDS-Variance Denial
T.L. 1106; Sec. 15 B;
T. 2 S.; R. 3 E. W.M.;
Clackamas County

Dear Mr. Hanson:

Mr. and Mrs. Frank Brown hereby appeal the determination of Sherman O. Olson, Jr. regarding the decision to deny a variance for Mr. and Mrs. Frank Brown's sewer installation.

The appeal is based on the grounds that reconstruction of the system is unreasonable and the cost is unduly burdensome to Mr. and Mrs. Frank Brown. Further, the system is working effectively, and they request a variance only until there is any sign of problems with the system. Mr. and Mrs. Brown had purchased what they understood was proper sewer pipe and installed it. They built the system to specifications larger than were needed but used the wrong pipe.

The findings from Mr. Olson indicate fear that the walls of the pipe are too thin and the slots, rather than holes, in the pipe are subject to clogging up over a period of time. Our request for variance is simply a request for a variance until there is any sign of problems with the system. At that time, my clients will replace it.

In view of the fact that the only way of correcting the problem is to tear up the entire sewer system and reinstall it, my client's request for a variance is reasonable.

Very truly yours,

Gary M. Carlson

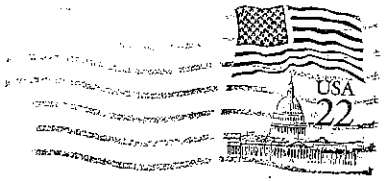
Gary M. Carlson

GMC:sms
cc: Mr. and Mrs. Frank Brown

Arno H. Denecke, P.C.
3890 Dakota Rd. S.E.
Salem, OR 97302

SALEM PM

DEQ 60 0A1831A1 08/18/87
NOTIFY SENDER OF NEW ADDRESS
:DEQ
811 SW 6TH AVE
PORTLAND OR 97204-1334



State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
RECEIVED
AUG 19 1987
OFFICE OF THE DIRECTOR

cc to Greenwood
DHS

FRED HANSEN
DEQ
811 SW 6TH AVENUE
PORTLAND, ORE. 97204

DEQ-60

photocopy for EQC sent to DHS's 8/20 MP

Midway landfill buyout end in sight

SEATTLE (AP) — A city buyout program to compensate residents who own homes near the Midway landfill will end in two years because methane gas levels have been reduced at the site, officials say.

"Property values are improving out there, and sales (of homes) are improving," said Dick Anderson, who runs the Good Neighbor Program for the Seattle Engineering Department.

Seattle began the program last year because of continuing problems with gas escaping from the landfill near Kent. Under its terms, homeowners whose houses did not sell for fair market value would get the difference from Seattle. If the houses did not sell at all, Seattle would buy them.

When the city started the buyout program, it told residents it would end the program either two years after the gas problem was solved or after 10 houses were sold at fair market value.

So far, Anderson said, only two homes have sold at market value. But, he added, "We have now gone eight months without any levels of methane of more than 100 parts per million in any home."

But an attorney for some of the residents said high levels of gas still exist around the landfill. He said a consultant to the city said the landfill will always have the potential to produce more gas.

In all, 984 houses were within the boundaries of the Good Neighbor Program. Of that number, 284 decided to participate in the buyout.

Residents around the landfill will be notified by letter that the Good Neighbor Program will end by Aug. 15, 1989, Anderson said.

Although Midway was closed as a dump in 1984, methane and other gases continued to build up in the rotting garbage, then escape through underground gravel. In several cases, homes had to be evacuated.

Meanwhile, officials estimated that the $45 million cost of closing the Midway and Kent Highlands landfills, which already has forced a $3 increase in monthly garbage rates, may go up another $20 million.

City officials said the biggest force driving up landfill costs are environmental requirements sought by the state Department of Ecology.