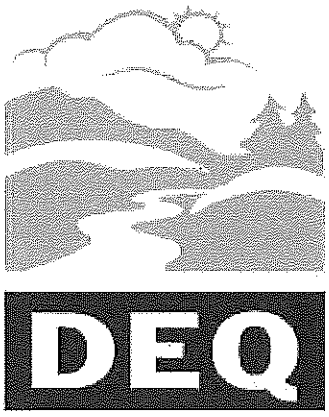
OREGON
ENVIRONMENTAL QUALITY
COMMISSION MEETING
MATERIALS 02/28/1997



State of Oregon
Department of Environmental Quality

REVISED A G E N D A

ENVIRONMENTAL QUALITY COMMISSION MEETING

February 28, 1997
DEQ Conference Room 3A
811 S. W. Sixth Avenue
Portland, Oregon

Beginning at 9:00 a.m

Notes: Because of the uncertain length of time needed for each agenda item, the Commission may deal with any item at any time in the meeting. If a specific time is indicated for an agenda item, an effort will be made to consider that item as close to that time as possible. However, scheduled times may be modified if agreeable with participants. Anyone wishing to listen to the discussion on any item should arrive at the beginning of the meeting to avoid missing the item of interest.

Public Forum: The Commission will break the meeting at approximately **11:30 a.m.** for the Public Forum if there are people signed up to speak. The Public Forum is an opportunity for citizens to speak to the Commission on environmental issues and concerns not a part of the agenda for this meeting. The public comment period has already closed for the Rule Adoption items and, in accordance with ORS 183.335(13), no comments can be presented to the Commission on those agenda items. Individual presentations will be limited to 5 minutes. The Commission may discontinue this forum after a reasonable time if an exceptionally large number of speakers wish to appear.

A. **Approval of Minutes**

B. **Approval of Tax Credits**

C. **Action Item**: Revocation and Request to Decommission Permit No. 95-014 - John M Compton

THIS ITEM HAS BEEN DELETED

D. **Action Item**: Variance Application of Mr. and Mrs. Stephen Wilkins

THIS ITEM HAS BEEN DELETED

E. **†Rule Adoption**: Permanent Rule Making for the On-Site Sewage Disposal Systems in the Clear Lake Watershed in Lane County

F. **Temporary Rule Adoption**: 401 Grazing Certification Rules

Only Written Testimony will be taken on this Item

G. **†Rule Adoption**: Draft Amendments to Waste Tire Carrier Permit Rules

H. †**Rule Adoption**: Rules Regarding Clarification of Tank Vessel Per Trip Fees and Oil Spill Contingency Planning Requirements

I. **Action Item**: Total Dissolved Gas Waiver

J. **Action Item**: Implementation of Environmental Equity Advisory Committee Recommendations

K. **Informational Item**: Portland Area Ozone Contingency Plan Exceedance Analysis

L. **Action Item**: Transfer of Field Burning Program to the Department of Agriculture

M. **Commissioners' Report**

N. **Director's Report**

Hearings have already been held on the Rule Adoption items and the public comment period has closed. In accordance with ORS 183.335(13), no comments can be presented by any party to either the Commission or the Department on these items at any time during this meeting.

The Commission has set aside April 17-18, 1997, for their next meeting in Portland, Oregon.

Copies of staff reports for individual 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 229-5395, or toll-free 1-800-452-4011. Please specify the agenda item letter when requesting.

If special physical, language or other accommodations are needed for this meeting, please advise the Director's Office, (503)229-5395 (voice)/(503)229-6993 (TTY) as soon as possible but at least 48 hours in advance of the meeting.

February 25, 1997

Approved _____
Approved with Corrections _____

Environmental Quality Commission
Work Session
January 9, 1997

The Environmental Quality Commission work session was convened at 1:15 p.m. at the Department of Environmental Quality, 811 S.W. 6th Avenue, Portland, Oregon. The following members were present:

Henry Lorenzen, Chair
Melinda Eden, Member
Linda McMahan, Member
Tony Van Vliet, Member
(Vice Chair Carol Whipple was not present)

Also present were Larry Knudsen, Assistant Attorney General, Oregon Department of Justice, Langdon Marsh, Director, DEQ, and other DEQ staff.

Review of Revised Environmental Clean-up Rules

Mary Wahl, Waste Management and Cleanup Administrator, introduced this item to the Commission. She said the rulemaking process, tasked with revising clean-up rules addressing risk assessment, hot spots and remedy selection, was on schedule per the 1995 legislative mandate.

Dick Pedersen, Waste Management and Cleanup Policy and Program Development Manager, discussed the rulemaking process, and provided information about the central advisory committee, the technical work groups and the public information sessions. Citizen discussion groups were offered statewide and there were public hearings in seven locations.

Brooks Koenig, with the Waste Management and Cleanup Policy and Program Section, reviewed specific aspects of the proposed rules, indicating they were more risk-based, addressed hot spots and placed more emphasis on land use.

Staff then answered Commissioners' questions, and discussed the Department's plans for training following the rulemaking process.

Total Dissolved Gas Update

The Commission requested an update on the status of research regarding total dissolved gas and fish survival rates. Presenting to the Commission were

Mark Schneider with the National Marine Fisheries Services (NMFS), Margaret Filardo with the Fish Passage Center, Tom Backman with the Columbia River Intertribal Fish Commission and Kirk Beiningen with the Oregon Department of Fish and Wildlife (ODFW).

Mark Schneider reviewed the 1996 waiver process. He then presented and discussed the Independent Scientific Advisory Board's (ISAB) review of NMFS' "1996 Annual Report to the Oregon Department of Environmental Quality" draft version dated December 1, 1996. The ISAB review provided comments on the seven topics included in the NMFS draft report:

1. Statistical evaluation of the available PIT-tag data to determine week-by-week survival changes.

2. Week-by-week estimates of the quantities of voluntary vs. involuntary spill.

3. Empirical estimate of survival associated with spill.

4. Incidence of Gas Bubble Disease signs in adult salmonids and estimates of upstream spawning delays of returning salmonids from increased spill.

5. Survival estimates of transported vs. untransported fish at collector projects.

6. Survival and incidence of Gas Bubble Disease data from net pens below Bonneville Dam.

7. Incidence of Gas Bubble Disease signs in resident fish species collected from below the Bonneville Dam.

The Commission then asked questions of the invited panel members. Chair Lorenzen expressed his continuing concern with the lack of correlation between spill and increased salmonid survival rates.

Mr. Schneider responded that with only three years' experience with the spill program, the science is not yet sufficient to support speculation about improved survival rates.

Approved _____
Approved with Corrections _____

Minutes are not final until approved by the EQC

ENVIRONMENTAL QUALITY COMMISSION
MINUTES OF THE TWO HUNDRED AND FIFTY-SEVENTH MEETING

January 10, 1997
Regular Meeting

The Environmental Quality Commission meeting was convened at 8:30 a.m. on Friday, January 10, 1997, at the Department of Environmental Quality, 811 S.W. Sixth Avenue, Portland, Oregon. The following members were present:

Henry Lorenzen, Chair
Carol Whipple, Vice Chair
Melinda Eden, Member
Linda McMahan, Member
Tony Van Vliet, Member

Also present were Larry Knudsen, Assistant Attorney General, Oregon Department of Justice, Langdon Marsh, Director, DEQ, and other DEQ staff.

Note: Staff reports presented at this meeting, which contain the Department's recommendations, are on file in the Office of the Director, 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. These written materials are incorporated in the minutes of the meeting by reference.

Chair Lorenzen called the meeting to order at 8:30 a.m.

A. Approval of Minutes

Commissioner Eden noted a correction in the minutes of the November 15, 1996 work session. The corrected sentence should read "Commissioner Eden asked about the source and outcome of water used in the neutralization *(not incineration)* process." Commissioner Whipple moved to approve the minutes with the correction. Commissioner Eden seconded the motion and the minutes were approved as corrected.

B. Approval of Tax Credits

No tax credits were presented.

C. Rule Adoption: Revised Environmental Clean-up Rules

Mary Wahl, Waste Management and Cleanup Administrator and Jeff Christensen, Senior Policy Analyst in Cleanup Policy and Program Development presented the Revised Environmental Cleanup Rules to the Commission. Ms. Wahl noted two items for correction in the staff report: (1) in the cover memo, the lowest cost option is preferred unless there are proportionately greater benefits in the other balancing factors, not if there is risk reduction below the acceptable risk level; and (2) the original "Attachment A" had some word processing errors that were corrected and the new "Attachment A" dated January 10, 1997, would be the document subject to the vote.

Ms. Wahl expressed her appreciation to staff and the many citizen volunteers who made the rule revision process possible. She said that while the Department and the advisory committee believe the proposed rules are both protective and workable, they are both willing to come together again and revise the rules if needed.

Jeff Christensen discussed the rules, the rulemaking process, and the comments received. He noted that the comments led to some refinements in the rules, but the overall structure of the rules was similar to the Public Comment version of the rules that was open for comments for forty-five days and was subject to nine hearings in seven cities across Oregon.

Commissioner Eden moved to adopt the rules as recommended by the Department. Commissioner Whipple seconded the motion and it was unanimously approved.

After the vote on the rule adoption, Don Haagensen, a Portland attorney and Chair of the Central Advisory Committee, spoke briefly on the rulemaking process. He commended both the Department and his fellow committee members for doing high quality work in short turnaround times.

John Ledger, Legislative Counsel of Associated Oregon Industries (AOI), also spoke after the vote. Mr. Ledger commended the Department for working together with industry to forge a set of rules that would be flexible and cost reasonable.

D. Rule Adoption: Air Quality Industrial Rules (Small Source Title V Deferral Extension)

Greg Green, Air Quality Administrator, introduced this item to the Commission. Air pollution sources that exceed certain emission thresholds must have Title V permits or synthetic minor permits. In January, 1995, EPA announced a "transition policy" allowing sources with the Potential To Emit (PTE) at threshold levels, but with low *actual* emissions (less than 50 percent of threshold levels) to defer Title V permitting requirements until January, 1997. DEQ adopted a rule (OAR 340-028-2110(4) (b)) to take advantage of the policy. EPA recently extended the deferral by eighteen months, while it engages in rulemaking to redefine PTE (required by recent court cases). This proposed revision would take advantage of the Small Source Title V Deferral Extension.

Commissioner Whipple asked what proportion of sources were limited by the current threshold. Benjamin Allen of the Air Quality staff said that PTE and Plant Site Emission Limits (PSELs) are not directly comparable. PTE determines whether a source must have a Title V permit, but is not a regulatory limit on emissions like PSELs.

The Department recommended that the Commission adopt the proposed rule amendment. Commissioner Van Vliet moved approval of the Department's recommendation; Commissioner Eden seconded the motion. The motion was unanimously approved.

E. Action Item: Extension of the Tualatin Sub-basin Nonpoint Source Management Implementation/Compliance Schedule and Order (EQC Order)

Bob Baumgartner, Manager of Northwest Region's Water Quality Technical Services program, presented this item to the Commission. Mike Wiltsey with the Northwest Region and Amin Wahab, Fanno Creek Watershed Manager with the City of Portland, were also available to answer questions.

The original EQC Order was adopted in 1993 to insure continued implementation of ongoing nonpoint source pollution control efforts to achieve compliance with the Tualatin Basin phosphorus Total Daily Maximum Loads (TMDLs). The original expiration date of the EQC Order was December 31, 1995. On November 17, 1995, the Commission extended the compliance schedule in the Order for fifteen months to allow for a broad review of the Tualatin TMDLs.

Due to budget shortfalls, the review project has not been completed. The proposed extension of the EQC Order would provide enough time for the Department to complete a thorough review of the scientific information. Further

implementation strategies and compliance schedules would be based on review of the science. In addition, an extension would prevent the Designated Management Agencies (DMAs) and the Department from being out of compliance with the Order.

Mr. Wahab with the City of Portland said he supported the Department's recommendation. Commissioner Eden asked whether any DMAs disagreed with the proposed Order extension and Mr. Baumgartner responded no. Chair Lorenzen asked whether the project can be completed according to cleanup levels in the original order. Mr. Baumgartner responded that although water quality in the Tualatin has improved over the last ten years, original cleanup level estimates may need to be revised based on scientific review.

Commissioner Whipple moved approval to extend the Tualatin Sub-basin Nonpoint Source Management Implementation/Compliance Schedule and Order. Commissioner McMahan seconded the motion and it was unanimously approved.

F. Action Item: DEQ v. Russell Henry, Jr. dba Henry Dozing and Excavating and Lane Ward -- Appeal of Hearing Order re: Violation and Assessment of Civil Penalty

This case came before the Environmental Quality Commission on Russell R. Henry Jr.'s appeal of the hearings officer's Hearing Order Regarding Violation and Assessment of Civil Penalty, dated April 19, 1996. Larry Knudsen, Assistant Attorney General, provided a summary of the appeal to the Commission. Leslie Carlough with the Northwest Region's Enforcement Section and Dottie West, open-burning specialist with the Western Region's Salem office were available to answer questions from the Commission. The Appellant was represented by Attorney Stephen F. Mannenbach who participated via conference call.

Following discussion of Mr. Henry's request that the Commission dismiss the Department's Notice of Appeal and Answering Brief in its entirety, Commissioner McMahan moved to deny Mr. Henry's Motion to Strike "Motion to Deny," dated August 12, 1996. Commissioner Eden seconded the motion and it was passed with four yes votes and one no vote (Commissioner Eden).

Commissioner Van Vliet moved to deny Mr. Henry's Motion to Dismiss Answering Brief, dated July 18, 1996. Commissioner Eden seconded the motion and it was unanimously approved.

After considering the record in the case and arguments from each party, Commissioner Eden moved the Commission affirm the decision of the hearings

officer and incorporate by reference and adopt as its own the hearings officer's Hearing Order Regarding Violation and Assessment of Civil Penalty, dated April 19, 1996. Commissioner McMahan seconded the motion and it was unanimously approved.

G. Action Item: Petition to Repeal a Portion of OAR 340-024-0301 Regarding Vehicle Inspection Program for W. and E. Scappoose

This matter came before the Environmental Quality Commission as a Petition to Repeal a Portion of the Rule Adopting the Portland Area Inspection Program Boundary and Petition to Stay Implementation as to W. Scappoose and E. Scappoose pursuant to ORS 183.390 and OAR 137-01-070. The petition was filed on November 25, 1996 by the City of Scappoose. The City requested that the portion of the petition requesting repeal of the rule not be considered by the Commission until after the filing of a "Technical Report" as referenced in the petition. The petitioner subsequently withdrew the portion of the petition requesting a stay of implementation of the rule.

Representing the City of Scappoose were Jeff Bennett, Legal Counsel, Ken Bailey, City Council Member, Lisa Smith with the Planning Office and City Manager Don Otterman. There were also several City Council members present in the audience. The City identified an industrial facility in Columbia County (Multnomah Plywood Corp.) that closed in 1994, and subsequently requested that their Air Contaminate Discharge Permit be cancelled. According to City officials, the permitted emissions from this facility would offset emissions generated by motor vehicles commuting into the Portland airshed from Scappoose. The City maintained that substituting the permitted industrial emissions for those of motor vehicles should mitigate the need for vehicle testing in Scappoose. Mr. Otterman discussed improvements in bus service designed to reduce vehicle miles travelled. Ms. Smith reviewed traffic studies and presented a vanpooling recommendation.

Greg Green, Air Quality Division Manager, and Dave Collier, Air Quality Division, presented the Department's position that while the emission contribution from any one geographic area may seem relatively small when compared to the entire Air Quality Maintenance Area Ozone Maintenance Plan emissions, each emission strategy is very important to the collective success of the Ozone Maintenance Plan. They also stated that substituting emissions reductions from Multnomah Plywood for Scappoose area motor vehicles would unfairly shift the strategy emphasis to the industrial souce sector.

Following questioning from the Commission, Commissioner Eden moved to approve the Department's recommendation to deny the petition submitted by the City of Scappoose and retain the Scappoose census areas in the Motor Vehicle Inspection and Maintenance area. She included in the motion a direction to Department staff to explore creative ways to reward communities for efforts such as those carried out by the City of Scappoose. Commissioner McMahan seconded the motion. Commissioner Van Vliet proposed a second motion to allow a temporary stay of removal from the Vehicle Inspection Boundary, but withdrew the motion following clarification from Larry Knudsen, Assistant Attorney General. Director Marsh took a roll call vote on the motion to deny, and it passed with four yes votes and one no vote (Commissioner Van Vliet). Chair Lorenzen thanked the City of Scappoose representatives for their efforts to improve the region's air quality.

H. Action Item: Department of Environmental Quality's Recommendations Regarding the Deadline for Accepting Comments on Proposed Rulemaking

Susan Greco, Department Rules Coordinator, presented this item to the Commission. The Commission had previously requested that the Department make recommendations regarding the procedures for considering comments on proposed rulemaking. In the past, the Commission has asked either selected members of an advisory committee, a panel of technical experts or representatives of affected interest groups to attend a Commission meeting when proposed rules were to be adopted by the Commission, and answer any questions the Commission might have regarding the proposed rules. These Commission meetings have occurred after the public comment period has closed. Based on advise from the Attorney General's office, the Commission can no longer follow this practice without violating ORS 183.335(13)(g). Rules adopted using this practice would be at risk of being invalidated by a court since they would not have been adopted in compliance with rulemaking procedures.

The Department recommended that it continue to employ the procedures used in the past. For those rules which appear to the Department to be controversial or in which the Commission has expressed interest, the Department will schedule the comment period to extend through a Commission meeting. At that meeting, the Commission can hear from staff, technical experts, the advisory committee, affected parties and the general public. The Department will continue to schedule a public hearing and accept both written and oral comments at the hearing. The adoption of the rules will be scheduled for a subsequent Commission meeting.

Following discussion and questions from the Commission, Director Marsh proposed that these recommendations be implemented on a trial basis and reviewed periodically to ensure they will allow the Commission to hear from interested and affected parties without violating the prohibition on late comments. The Commission agreed, and there was no motion or vote required.

Mary Wahl, Waste Management and Cleanup Division Administrator, introduced Items I, J, K, L and M to the Commission. She provided a summary of the reports that are provided to the 1997 Legislature, either as required by law or in response to specific direction provided to the Department by the 1995 Legislature.

I. Informational Item: 8th Annual Environmental Clean-up Report

The Waste Management and Cleanup Division is required under ORS 465.235 to provide this annual report to the Commission, the Governor and the Legislature. The report presents cleanup program activities for the past fiscal year and summarizes cleanup actions in progress as well as those projected for completion through June, 1997. It also includes a summary of the four-year plan through 1999.

J. Informational Item: Report to the 1997 Legislature on Status and Alternative Funding Mechanisms for the Toxics Use Reduction Program

The Hazardous Waste Policy and Program Development Section of the Waste Management and Cleanup Division was directed by the Legislature, in a 1995 budget note, to review the current funding source for the Toxics Use Reduction Program and to evaluate alternative funding mechanisms for the program. The report summarizes the results of this evaluation and provides the Legislature with four new few options as alternate funding sources.

K. Informational Item: Report to the 1997 Legislature on Orphan Site Funding Review

The Cleanup Policy and Program Development Section of the Waste Management and Cleanup Division was directed by the Legislature in a 1995 budget note to convene a task force to review alternate funding sources for the fees supporting orphan site cleanups. This report summarizes the results of the review effort and presents the Legislature with several funding alternatives.

L. Informational Item: Report to the 1997 Legislature on Solid Waste "Budget Note" Review

The 1995 Legislature asked the Department to "review existing legislation and report to the 1997 Legislature on any recommended changes in waste reduction and recycling measurement requirements, and enforcement ...." The Department's report contains the Department's analysis and recommendations.

M. Informational Item: Solid Waste Management Program Biennial Report to the 1997 Legislature

The first three parts of this report provide data on information on the status of solid waste generation, waste prevention, recycling and disposal in Oregon. The fourth part is a status report from Portland Metropolitan Service District on waste reduction program planning and implementation.

N. Commissioners' Reports

Commissioner Whipple reported on the development of the Healthy Streams Partnership and her role as the Commission's representative on the Governor's Watershed Enhancement Board. She encouraged Commission members to follow the progress of the Partnership and discussed its potential impact on the Department.

Commissioner Van Vliet noted a recent, anonymous article in the "Oregon Insider" regarding the Department's enforcement program. Northwest Region Administrator Tom Bispham said the Department was preparing a response.

Chair Lorenzen said he would like to arrange a joint meeting of the Commission and the Board of Agriculture within the next several months to discuss topics of mutual interest.

O. Director's Reports

Director Marsh briefed the Commission on the recent federal district court ruling which states that the U.S. Forest Service must get Oregon 401 Water Quality Certification before issuing or renewing grazing permits for 1997. DEQ and the Oregon Department of Agriculture (ODA) are working jointly to develop a "universal" 401 Certification to provide to people requesting grazing permits. The current proposed approach would be through an emergency rule process to be brought to the Commission at the February, 1997, meeting.

Director Marsh discussed the list of agency legislation to be introduced this session. He noted that Non Point Source Tax Credit proposal did not make the cut during the Department of Administrative Service's review process.

Director Marsh reported on his recent trip to the Netherlands with Oregon government and industry representatives to explore incentive-based options for future environmental regulation, such as the so-called "Green Permits" and the Environmental Stewardship Project. He said there may be industry-introduced legislation this session that will bring these approaches to a more visible level.

State of Oregon

Department of Environmental Quality Memorandum

Date: February 19,1997

To: Environmental Quality Commission

From: Maggie Vandehey, Tax Credit Coordinator

Subject: Corrections to 2/28/97 Agenda Item B

Please discard the previous Agenda Item B for the February 28, 1997 Environmental Quality Commission meeting that was sent to you and replace it with this enclosure. I corrected several errors in my report generator. I hope this didn't cause any inconvenience.

Environmental Quality Commission

☐ Rule Adoption Item
X Action Item
☐ Information Item

Agenda Item B
February 28, 1997 Meeting

Title:

Approval of Tax Credit Applications

Summary:

Staff does not recommend granting three requests for extension of time to file applications. Staff does recommend the approval of three (3) tax credit applications with a total facility cost of $245,136 and two (2) certificate revocations as follows:

3	**Pollution Prevention**	$123,843
1	**Pollution Control**	
1	Field Burning Facility	$121,293
4	**Total Tax Credits**	**$ 245,136**

0 Applications with costs exceeding $250,000
0 Applications for Pre-certification
0 Request for certificate transfer
2 Certificate revocations
3 Requests for extension of time to file

Approve issuance of tax credit certificates for applications as presented in Attachment A of the staff report.
Revoke tax credit certificates presented in Attachment B of the staff report.
Do not grant an extension of time to file three applications as requested in Attachment C of the staff report.

Margaret C. Vandehey for

Report Author | Division Administrator | Director

February 10, 1997
Taxshare\eqc_fin\9702_eqc.doc

†Accommodations for disabilities are available upon request by contacting the Public Affairs Office at (503)229-5317(voice)/(503)229-6993(TDD).

State of Oregon
Department of Environmental Quality Memorandum†

Date: February 10, 1997

To: Environmental Quality Commission

From: Langdon Marsh, Director

Subject: Agenda Item B, February 28, 1997 EQC Meeting
Approval of Tax Credit Applications

Statement of the Need for Action

This staff report presents the staff analysis of pollution prevention and control facilities tax credit applications and the Department's recommendation for Commission action on these applications. The following is a summary of the applications presented in this report:

Applications for Pollution Prevention Pilot Program: Air Quality

All equipment is used in the normal course of doing business. However, the owners would not have replaced their existing systems at this time or with this particular equipment had it not been required by the National Emission Standards for Hazardous Pollutants (NESHAP) and to avoid monitoring and record-keeping requirements.

TC No.	Applicant	Description	Cost	Percent Allocable
4712	Lyle & Rosalie Nelson, LLC	New multiprocess wet cleaning system installed as a replacement for one of two percloroethylene dry cleaning machines which vented emissions to the atmosphere during the drying cycle.	$39,200	
4717	Newport Dry Cleaners	New non venting dry-to-dry percloroethylene dry-cleaning machine installed as a replacement for a perc dry-to-dry machine which vented emissions to the atmosphere.	$55,143	
4718	West 11th Laundry and Cleaners, Inc.	New non venting dry-to-dry percloroethylene dry-cleaning machine installed as a replacement for a perc dry-to-dry machine which vented emissions to the atmosphere	$29,500	
		Total Prevention	**$ 123,843**	

†A large print copy of this report is available upon request.

Applications for Pollution Control Tax Credit

Other Division 16

4672	David R. Briggs[1]	AQ: Field Burning. Like-for Like Replacement of John Deere 2810 7-Bottom plow. New John Deere 8400 225 hp tractor. Used to plow, harrow and flail as an alternative to open field burning.	$121,293	52%
		Total Pollution Control	**$121,293**	

1 See Certificate Revocation

Certificate Revocation

David R. Briggs' tax credit application number 4672 contains a like-for-like replacement of a 7-Bottom plow which was certified under Pollution Control Facility Tax Credit Certificate Number 2856 as shown in Attachment B. Certificate Number 2856 would be revoked to coincide with the approval of tax credit application number 4672.

ELF Atochem North America, Inc. received Pollution Control Facility Certificate Number 2740 on December 13, 1991 for a two-stage emergency scrubber. However, during 1994 they experienced two events where chlorine escaped into the air which necessitated replacement of the 1991 equipment. Elf Atochem will be applying for a tax credit on the new replacement scrubber which became operational in March of 1996.

Extension of Time to File

On December 31, 1996, Willamette Industries, Inc. requested an extension of time to file three applications as provided for in OAR 340-16-020 (1):

> *(c)The Commission may grant an extension of time to submit an application if circumstances beyond the control of the applicant would make a timely filing unreasonable;*
> *(d) An extension shall only be considered if applied for within two years of substantial completion of construction of the facility. An extension may be granted for no more than one year. Only one extension may be granted.*

The three projects were completed and placed in service on December 31, 1994. They are:

Willamette's South Valley Project #185 - Equipment Washing Station
Willamette's Duraflake Project # 239 - Air Density Separator
Willamette's Albany Paper Mill project #94-20 - Mill Sewer System

The requests, as shown in Attachment C, are made for the following circumstances beyond the control of the applicant:

1. Applicant found it difficult to document the components eligible for pollution control in a manner that would satisfy the CPA reviewing the application.
2. Applicant's Environmental Engineering Staff had time pressures placed on them due to work involving Title V Federal Air Permits.
3. Applicant's acquisition of another business placed a burden on the applicant's accounting department.

Background and Discussion of Issues

There are no issues presented for discussion in this report.

Summary of Any Prior Public Input Opportunity

The Department does not solicit public comment on individual tax credit applications during the staff application review process. Opportunity for public comment exists during the Commission meeting when the applications are considered for action.

Conclusions

The recommendations for action on the attached applications are consistent with statutory provisions and administrative rules related to the pollution control, pollution prevention and reclaimed plastic product tax credit programs.

Recommendation for Commission Action

The Department recommends the Commission:

A) Approve certification for the tax credit applications as presented in Attachment A of the Department Staff Report.
B) Revoke David L. Briggs' Pollution Control Tax Credit Certificate Number 2856 to coincide with the approval of tax credit application number 4672 as presented in the Department Staff Report and it's Attachment B.
C) Revoke ELF Atochem North America, Inc.'s Pollution Control Facility Certificate number 2740 as presented in the Department Staff Report and it's Attachment B.

D) Do not grant an extension of time to file the three applications as presented in the Department Staff Report and it's Attachment C. The Department does not agree the reason's cited in the letter are beyond the control of the Applicant.

Intended Follow-up Actions

Notify applicants of Environmental Quality Commission actions.

Tax Credit Program Overview

	1/1/96 - 12/31/96			2/28/97 Recommendation		
Certificates	**Certified Costs[4]**	**Certified Allocable Costs[5]**	**App. Count**	**Certified Costs[1]**	**Certified Allocable Costs[2]**	**App. Count**
Pollution Prevention	**438,561**	**438,561**	**11**	**123,843**	**123,843**	**3**
Pollution Control						
Air Quality	5,478,642	5,478,642	8			
CFC	11,336	11,336	6			
Field Burning	795,679	681,616	12	121,293	$55,777	1
Noise	200,347	200,347	3			
Hazardous Waste	136,845	136,845	4			
SW - Recycling	908,387	879,746	20			
SW - Landfill						
Water Quality	2,108,757	2,108,757	10			
UST	4,473,560	4,234,849	40			
Total	**14,113,553**	**13,732,138**	**103**	**121,293**	**$55,777**	**1**
Reclaimed Plastics	**598,250**	**598,250**	**18**			
TOTALS	**15,150,364**	**14,768,949**	**132**	**245,136**	**179,620**	**4**

[4] Certified Costs represent the total facility costs the Department determined to be eligible under the tax credit program.

[5] Certified Allocable Costs represent the Certified Costs multiplied by percentage allocable to pollution control. The actual dollars that can be applied as credit are 50 percent of the Certified Allocable Costs.

Available as Tax Relief by Year

	App. No.	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Prior to 1997*		**$18,189**	**$15,848**	**$15,347**	**$14,898**	**$12,739**	**$11,133**	**$7,750**	**$5,750**	**$738**	
2/28/97 EQC	4712	$3,920	$3,920	$3,920	$3,920	$3,920					
	4717	$5,514	$5,514	$5,514	$5,514	$5,514					
	4718	$2,950	$2,950	$2,950	$2,950	$2,950					
	4672	$4,505	$4,505	$4,505	$4,505	$4,505	$4,505	$4,505			
Total 1/28/97*		$17	$17	$17	$17	$17	$5	$5			
Cumulative Total*		**$18,2062**	**$15,865**	**$15,364**	**$14,915**	**$12,756**	**$11,138**	**$7,755**	**$5,750**	**$738**	

* in thousands

Attachments

A. Pollution Control Tax Credit Application Review Reports.
B. Certificates to be Revoked.
C. Requests for Extension of Time to File.

Reference Documents (available upon request)

1. ORS 468.150 through 468.190.
2. OAR 340-16-100 through 340-16-125.
3. OAR 340-16-005 through 340-16-050.
4. ORS 468.925 through 468.965.
5. OAR 340-17-010 through 340-17-055.

Approved:

Section: _____

Division: _____

Report Prepared By: Margaret Vandehey
Phone: (503) 229-6878
Date Prepared: February 10, 1997

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State of Oregon
Department of Agriculture

TAX RELIEF APPLICATION REVIEW REPORT

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1. Applicant

David R. Briggs
92001 N. Coburg Rd
Eugene OR 97408-9236

The applicant owns and operates a grass seed farm operation in Lane County, Oregon.

Application was made for tax credit for air pollution control equipment.

2. Description of Claimed Facility

The equipment described in this application is located at 92001 N Coburg Rd, Eugene, Oregon. The equipment is owned by the applicant.

John Deere	8400	225 hp tractor	$116,922.58
John Deere	2810	7-Bottom plow	4,300.00*

Claimed equipment cost: $121,292.58
(Accountant's Certification was provided and the applicant provided copies of purchase orders.)

*This facility is a like-for-like replacement of the original facility certified as certificate 2856. The facility is eligible for tax credit certification (340-16-025)(3)(g)(A) up to an amount equal to the difference between the cost of the new facility ($18,500) and the like-for-like replacement cost of the original facility ($14,200). The value of the improvement, therefore, is $4,300.

3. Description of Farm Operation Plan to Reduce Open Field Burning.

The applicant has 900 acres of annual grass seed under cultivation. Mr. Briggs has now made the complete transition from open field burning to flail chopping, plowing, disking, harrowing and rolling to prepare his acreage for replanting.

The applicant states that to accomplish the plowing, harrowing and rolling functions in a timely manner the higher horsepower tractor and wider 7-bottom plow are required.

4. Procedural Requirements

The equipment is governed by ORS 468.150 through 468.190, and by OAR Chapter 340, Division 16. The equipment has met all statutory deadlines in that:

Purchase of the equipment was substantially completed on July 15, 1996. The application was submitted on October 3, 1996; and the application for final certification was found to be complete on January 23, 1997. The application was filed within two years of substantial completion of the equipment.

5. Evaluation of Application

a. The equipment is eligible under ORS 468.150 because the equipment is an approved alternative method for field sanitation and straw utilization and disposal that reduces a substantial quantity of air pollution. This reduction is accomplished by reduction of air contaminants, defined in ORS 468A.005; by reducing the maximum acreage to be open burned in the Willamette Valley as required in OAR 340-26-013; and, the facility's qualification as a "pollution control facility", defined in OAR 340-16-025(2)(f) A): "Equipment, facilities, and land for gathering, densifying, processing, handling, storing, transporting and incorporating grass straw or straw based products which will result in reduction of open field burning."

b. Eligible Cost Findings

In determining the percent of the pollution control equipment cost allocable to pollution control, the following factors from ORS 468.190 have been considered and analyzed as indicated:

1. The extent to which the equipment is used to recover and convert waste products into a salable or usable commodity.

   The equipment does not recover or convert waste products into a salable or usable commodity.

2. The estimated annual percent return on the investment in the equipment.

   There is no annual percent return on the investment as applicant claims no gross annual income.

3. The alternative methods, equipment and costs for achieving the same pollution control objective.

   The method chosen is an accepted method for reduction of air pollution. The method is one of the least costly, most effective methods of reducing air pollution.

4. Any related savings or increase in costs which occur or may occur as a result of the purchase of the equipment.

   There is an increase in operating costs of $2,762 to annually maintain and operate the equipment. These costs were considered in the return on investment calculation.

5. Any other factors which are relevant in establishing the portion of the actual cost of the equipment properly allocable to the prevention, control or reduction of air pollution.

A facility that replaces a previously certified facility before the end of its useful life is eligible for the remainder of the tax credit certified to the original facility (340-16-025) (3) (g) (B). The applicant's previous application was certified for $7,100 ($14,200 x .50) in tax relief. The certification was issued in 1992. The remainder of the tax credit eligible to the new facility is $3,550 ($7,100 x .50).

The established average annual operating hours for tractors is set at 450 hours. To obtain a percent allocable, the annual operating hours per implement used in reducing acreage open field burned is as follows:

Implement	Acres Worked	Acres/Hour	Annual Operating hours
Plow	350	7	50
Harrow/Roller	1050 (350 x 3)	7	150
Total annual operating hours			200

The total annual operating hours of 200 divided by the average annual operating hours of 450 produces 44 percent allocable.

Equipment	Claimed Cost	Percent Allocable	Cost Allocable
Tractor	$116,992.58	44	$51,477
Plow	4,300.00	100	4,300
Total	$121,292.58	46	$55,777

Therefore, the claimed facility cost of $121,292.58 multiplied by 46 percent allocable to pollution control, multiplied by 50 percent of the certified cost of the facility, plus the $3,550 remainder of the previously certified tax credit provides a 52 percent portion of the facility that is allocable to pollution control.

$121,292.58 x .46 x. 50 + $3,550 = $31,447/.50 = $62,894/121,292.58 = 52%

The actual cost of the equipment properly allocable to pollution control as determined by using these factors is 52%.

6. Summation

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

b. The equipment is eligible under ORS 468.150 as an approved alternative method for field sanitation and straw utilization and disposal that reduces a substantial quantity of air pollution as defined in ORS 468A.005

c. The equipment complies with DEQ statutes and rules.

d. The portion of the equipment that is properly allocable to pollution control is 52%.

7. The Department of Agriculture's Recommendation

Based upon these findings, it is recommended that a Pollution Control Facility Certificate bearing the cost of $121,292, with 52% allocated to pollution control, be issued for the equipment claimed in Tax Credit Application Number TC-4672.

Jim Britton, Manager
Smoke Management Program
Natural Resources Division
Oregon Department of Agriculture
PH: (503) 986-4701
FX: (503) 986-4730

JB:rc
January 23, 1997

Application No. T-4712

State of Oregon
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT
POLLUTION PREVENTION PILOT PROGRAM

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1. Applicant

Lyle & Rosalie Nelson, LLC
415 SE 3rd
Bend, Oregon 97702

The applicant owns and operates a clothes cleaning shop located 415 SE 3rd Bend, Oregon.

Application was made for tax credit for an air pollution prevention facility.

2. Description of Facility

The claimed facility is a new multiprocess wet cleaning system which was installed as a replacement for one of two perc dry-cleaning machines which vented emissions to the atmosphere during the drying cycle. The wet cleaning system eliminates the emissions of perc by replacing the process with one using water and detergents.

Claimed Facility Cost: $ 39,200

3. Procedural Requirements

The facility is governed by ORS 468A.095 through 468A.098, and by OAR Chapter 340, Division 16.

The pollution prevention facility met all regulatory deadlines in that:

Installation of the facility was substantially completed on June 18, 1996. The application for final certification was received by the Department on December 17, 1996. The application was found to be complete on January 6, 1997, within one year of installation of the facility.

4. Evaluation of Application

Rationale For Eligibility

(1) The pollution prevention facility is eligible because a multiprocess wet cleaning system is a recognized alternative to perc dry-cleaning and it was installed as a replacement for an existing perc machine. Also the new process is not subject to the National Emission Standard for Hazardous Air Pollutants (NESHAP), specifically 40 CFR 63.320 to 63.325 national perchloroethylene air emissions standard for dry cleaning facilities.

The pollution prevention facility was installed between January 1, 1996 and December 31, 1999.

The facility does not qualify for a pollution control tax credit under ORS 468.165 and 468.170.

(2) The facility installed a multiprocess wet cleaning system as a replacement for a perc dry-cleaning machine.

(3) The facility is registered with the EPA under the Clean Air Act Title III National Emissions Standards for Hazardous Air Pollutants.

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 it meets the definition of a pollution prevention facility for this pilot program.

c. The applicant indicated that the tax credit program was a determining factor in installing this equipment.

6. Director's Recommendation

Based upon these findings, it is recommended that a Pollution Prevention Facility Certificate bearing the cost of $ 39,200 be issued for the facility claimed in Tax Credit Application No. T-4712.

DPK

Application No. T-4717

State of Oregon
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT
POLLUTION PREVENTION PILOT PROGRAM

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1. Applicant

Newport Dry Cleaners
324 N. Coast Hwy.
Newport, Oregon 97365

The applicant owns and operates a percloroethylene dry cleaning shop located at 324 N. Coast Hwy. Newport, Oregon.

Application was made for tax credit for an air pollution prevention facility.

2. Description of Facility

The claimed facility is a new non venting dry-to-dry perc dry-cleaning machine which was installed as a replacement for an old perc dry-to-dry machine which vented emissions to the atmosphere. The new perc machine reduces the creation of emissions by maintaining them within the machine.

Claimed Facility Cost: $ 55,143

3. Procedural Requirements

The facility is governed by ORS 468A.095 through 468A.098, and by OAR Chapter 340, Division 16.

The facility met all regulatory deadlines in that:

Installation of the facility was substantially completed on December 8, 1996. The application for final certification was received by the Department on December 30, 1996. The application was found to be complete on January 6, 1997, within one year of installation of the facility.

4. Evaluation of Application

Rationale For Eligibility

(1) The pollution prevention facility is eligible because it meets the requirement of avoiding the substantive requirements of the National Emission Standard for Hazardous Air Pollutants (NESHAP), specifically 40 CFR 63.320 to 63.325 national perchloroethylene air emissions standard for dry cleaning facilities.

The facility was installed between January 1, 1996 and December 31, 1999.

The facility does not qualify for a pollution control tax credit under ORS 468.165 and 468.170.

(2) The owner installed equipment which resulted in perchloroethylene use of less than 140 gallons per year and the dry cleaning facility qualifies as a small area source under the NESHAP.

(3) The dry cleaning facility is registered under the Clean Air Act Title III National Emissions Standards for Hazardous Air Pollutants.

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 it meets the definition of a pollution prevention facility for this pilot program.

c. The applicant indicated that the tax credit program was not a determining factor in installing this equipment.

6. Director's Recommendation

Based upon these findings, it is recommended that a Pollution Prevention Facility Certificate bearing the cost of $ 55,143 be issued for the facility claimed in Tax Credit Application No. T-4717.

DPK

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Application No. T-4718

State of Oregon
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT
POLLUTION PREVENTION PILOT PROGRAM

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1. Applicant

West 11th Coin Laundry and Cleaners, Inc.
2410 West 11th
Eugene, Oregon 97402

The applicant owns and operates a laundry and percloroethylene dry-cleaning shop located 2410 West 11th Eugene, Oregon.

Application was made for tax credit for an air pollution prevention facility.

2. Description of Facility

The claimed facility is a new non venting dry-to-dry perc dry-cleaning machine which was installed as a replacement for an old perc dry-cleaning machine which vented emissions to the atmosphere. The new perc machine reduces the creation of emissions by maintaining them within the machine.

Claimed Facility Cost: $ 29,500

3. Procedural Requirements

The facility is governed by ORS 468A.095 through 468A.098, and by OAR Chapter 340, Division 16.

The facility met all regulatory deadlines in that:

Installation of the pollution prevention facility was substantially completed on July 12, 1996. The application for final certification was received by the Department on January 3, 1997. The application was found to be complete on January 9, 1997, within one year of installation of the facility.

4. Evaluation of Application

Rationale For Eligibility

(1) The pollution prevention facility is eligible because it meets the requirement of avoiding the substantive requirements of the National Emission Standard for Hazardous Air Pollutants (NESHAP), specifically 40 CFR 63.320 to 63.325 national perchloroethylene air emissions standard for dry cleaning facilities.

The new dry-cleaning facility is leased from Pierre Equipment Leasing, Inc. and was installed between January 1, 1996 and December 31, 1999. Lessor agrees to relinquish rights to applicable tax credits.

The facility does not qualify for a pollution control tax credit under ORS 468.165 and 468.170.

(2) The owner installed equipment which resulted in perchloroethylene use of less than 140 gallons per year and the dry cleaning facility qualifies as a small area source under the NESHAP.

(3) The dry cleaning facility is registered under the Clean Air Act Title III National Emissions Standards for Hazardous Air Pollutants.

5. Summation

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

b. The facility is eligible for final tax credit certification in that it meets the definition of a pollution prevention facility for this pilot program.

c. The applicant indicated that the tax credit program was a determining factor in installing this equipment.

6. Director's Recommendation

Based upon these findings, it is recommended that a Pollution Prevention Facility Certificate bearing the cost of $ 29,500 be issued for the facility claimed in Tax Credit Application No. T-4718.

DPK
01/27/97 2:46 PM

elf atochem
ATO

ELF ATOCHEM NORTH AMERICA, INC.
6400 N.W. Front Avenue
Portland, Oregon 97210

(503) 228-7655

Attachment B

December 16, 1996

Department of Environmental Quality
Management Services Division, 6th Floor
811 S.W. Sixth Avenue
Portland, OR 97204

This letter is intended to notify the Department of a change in equipment which was previously certified for tax credit.

On December 13, 1991 the Department issued Pollution Control Facility Certificate No. 2740 for a two-stage emergency chlorine scrubber. A copy of the certificate is attached. Although the scrubber was very affective in controlling chlorine emissions to air during emergencies, during 1994 we experienced two events where chlorine escaped to air before the scrubber was fully operational.

During 1995 we constructed a new continuously operating scrubber which became operational in March of 1996. Most of the components of the old scrubber were utilized in the new scrubber, but some were removed from service. Attached is a copy of Exhibit "C" from the original tax credit application. The equipment listed on the first entry of Exhibit "C" for $118,793.71 has been removed from service and has been discarded. This equipment was removed from service in March of 1996. It appears that the Department should modify Certificate No. 2740 to reflect these changes.

Elf Atochem North America is planning to file a pollution control tax credit application for the new scrubber. None of the components from the old scrubber which are being used in the new scrubber have been included in the facility cost for the new scrubber.

If you have any questions, please feel free to contact me at (503) 225-7210.

Sincerely
Elf Atochem North America

Larry D. Patterson
Environmental Manager

STATE OF OREGON
DEPARTMENT OF ENVIRONMENTAL QUALITY

Certificate No. 2740
Date of Issue 12-13-91
Application No. T-2656

POLLUTION CONTROL FACILITY CERTIFICATE

Issued To:	Location of Pollution Control Facility:
ATOCHEM NORTH AMERICA BASIC CHEMICALS DIVISION P.O. Box 4102 Portland, OR 97208	6400 N.W. Front Portland, Oregon
As: ( )Lessee (x)Owner	
Description of Pollution Control Facility: Two-stage emergency chlorine seal scrubber.	
Type of Pollution Control Facility: (x)Air ( )Noise ( )Water ( )Solid Waste ( )Hazardous Waste ( )Used Oil	
Date Facility was Completed: 4/12/90 Placed into Operation: 4/12/90	
Actual Cost of Pollution Control Facility: $345,213.00	
Percent of Actual Cost Properly Allocable to Pollution Control: 100%	

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 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: W W Wessinger

Title: William W. Wessinger, Chairman

Approved by the Environmental Quality Commission on the 13th day of December, 1991.

MY102408 (12/91)

OLD SCRUBBER CERTIFICATION

STATE OF OREGON
DEPARTMENT OF ENVIRONMENTAL QUALITY

Certificate No. 2856
Date of Issue 4-23-92
Application No. T-3742

POLLUTION CONTROL FACILITY CERTIFICATE

ISSUED TO:	LOCATION OF POLLUTION CONTROL FACILITY:
David R. Briggs 92001 North Coburg Road Eugene, Oregon 97401	92001 North Coburg Road Eugene, Oregon 97401
ATTENTION: David R. Briggs	

AS: ( )LESSEE (x)OWNER ( )INDIV ( )PARTNER ( )CORP ( )NON-PROFIT ( )CO-OP

DESCRIPTION OF POLLUTION CONTROL FACILITY:

John Deere, model 2810 plow.

TYPE OF POLLUTION CONTROL FACILITY:
(x)AIR ( )NOISE ( )WATER ( )SOLID WASTE ( )HAZARDOUS WASTE ( )USED OIL

DATE FACILITY WAS COMPLETED: 1-2-92 PLACED INTO OPERATION: 8-01-92

ACTUAL COST OF POLLUTION CONTROL FACILITY: $14,200.00

PERCENT OF ACTUAL COST PROPERLY ALLOCABLE TO POLLUTION CONTROL: 100%

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 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: William W. Wessinger

Title: William W. Wessinger, Chairman

Approved by the Environmental Quality Commission on the 23rd day of April, 1992.

JB:FB
MY102920 (4/92)

Attachment C

Willamette Industries, Inc.
Executive Offices

3800 First Interstate Tower
Portland, OR 97201
(503) 227-5581

December 31, 1996

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

Re: Willamette Industries, Inc.
Extension Request for Filing Application for Final Certification
South Valley Equipment Washing Station

Gentlemen:

Willamette Industries, Inc. hereby requests an extension of 180 days until June 29, 1997, pursuant to OAR 340-16-020(1)(e), to complete the above-referenced Application for Final Certification of Pollution Control Facility for Tax Relief Purposes.

Per our books and records, Willamette's South Valley Project #185 - Equipment Washing Station was totally completed and placed in service on December 31, 1994. Since shortly after completion of this project, Willamette has been trying to gather and document data which breaks down the project between components eligible for the pollution control credit and those not eligible. We have experienced difficulty in documenting the eligible portion of this project in a manner which will satisfy the Certified Public Accountants who certify to the eligible costs of the project. Our environmental engineering staff, who normally complete these applications, have also had tremendous time pressures placed upon them recently with work involving Title V Federal Air Permits and measuring and maintaining compliance with the various DEQ requirements. We also have just recently completed an acquisition of an Irish entity which has burdened our accounting department. Because of these difficulties and time constraints, we are unable to meet the deadline for filing the DEQ's Application for Final Certification of December 31, 1996.

We therefore request an additional extension of 180 days until June 29, 1997, pursuant to OAR 340-16-020(1)(e), to complete and receive approval for the above-reference Application for Final Certification of Pollution Control Facility for Tax Relief Purposes. Please note that we intend to file the application within the next month, but we are requesting an additional 180 day extension in case the DEQ requests additional information.

Cordially,

WILLAMETTE INDUSTRIES, INC.

Jim Aden
Assistant Tax Manager

Willamette Industries, Inc.
Executive Offices

3800 First Interstate Tower
Portland, OR 97201
(503) 227-5581

December 31, 1996

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

Re: Willamette Industries, Inc.
Extension Request for Filing Application for Final Certification
Duraflake Air Density Separator

Gentlemen:

Willamette Industries, Inc. hereby requests an extension of 180 days until June 29, 1997, pursuant to OAR 340-16-020(1)(e), to complete the above-referenced Application for Final Certification of Pollution Control Facility for Tax Relief Purposes.

Per our books and records, Willamette's Duraflake Project #239 - Air Density Separator was totally completed and placed in service on December 31, 1994. Since shortly after completion of this project, Willamette has been trying to gather and document data which breaks down the project between components eligible for the pollution control credit and those not eligible. We have experienced difficulty in documenting the eligible portion of this project in a manner which will satisfy the Certified Publ: Accountants who certify to the eligible costs of the project. Our environmental engineering staff, who normally complete these applications, have also had tremendous time pressures placed upon them recently with work involving Title V Federal Air Permits and measuring and maintaining compliance with the various DEQ requirements. We also have just recently completed an acquisition of an Irish entity which has burdened our accounting department. Because of these difficulties and time constraints, we are unable to meet the deadline for filing the DEQ's Application for Final Certification of December 31, 1996.

We therefore request an additional extension of 180 days until June 29, 1997, pursuant to OAR 340-16-020(1)(e), to complete and receive approval for the above-reference Application for Final Certification of Pollution Control Facility for Tax Relief Purposes. Please note that we intend to file the application within the next month, but we are requesting an additional 180 day extension in case the DEQ requests additional information.

Cordially,

WILLAMETTE INDUSTRIES, INC.

Jim Aden
Assistant Tax Manager

Willamette Industries, Inc.
Executive Offices

3800 First Interstate Tower
Portland, OR 97201
(503) 227-5581

December 31, 1996

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

Re: Willamette Industries, Inc.
Extension Request for Filing Application for Final Certification
Albany Paper Mill Sewer System

Gentlemen:

Willamette Industries, Inc. hereby requests an extension of 180 days until June 29, 1997, pursuant to OAR 340-16-020(1)(e), to complete the above-referenced Application for Final Certification of Pollution Control Facility for Tax Relief Purposes.

Per our books and records, Willamette's Albany Paper Mill's Project #94-20 - Mill Sewer System was totally completed and placed in service on December 31, 1994. Since shortly after completion of this project, Willamette has been trying to gather and document data which breaks down the project between components eligible for the pollution control credit and those not eligible. We have experienced difficulty in documenting the eligible portion of this project in a manner which will satisfy the Certified Public Accountants who certify to the eligible costs of the project. Our environmental engineering staff, who normally complete these applications, have also had tremendous time pressures placed upon them recently with work involving Title V Federal Air Permits and measuring and maintaining compliance with the various DEQ requirements. We also have just recently completed an acquisition of an Irish entity which has burdened our accounting department. Because of these difficulties and time constraints, we are unable to meet the deadline for filing the DEQ's Application for Final Certification of December 31, 1996.

We therefore request an additional extension of 180 days until June 29, 1997, pursuant to OAR 340-16-020(1)(e), to complete and receive approval for the above-reference Application for Final Certification of Pollution Control Facility for Tax Relief Purposes. Please note that we intend to file the application within the next month, but we are requesting an additional 180 day extension in case the DEQ requests additional information.

Cordially,

WILLAMETTE INDUSTRIES, INC.

Jim Aden
Assistant Tax Manager

This Item has been deleted from the agenda

This Item has been deleted from the agenda

Item E
EQC Mtg
2/28/97

CORRECTED COPY OF RECOMMENDED RULES FOR CLEAR LAKE WATERSHED

2/28/97

ATTACHMENT B

PROPOSED MODIFIED RULES

OAR 340-41-270, OAR 340-71-400, AND OAR 340-71-460

[Note - there are two sets of these rules. The first set shows the existing rules with the changes marked. The second set is a "clean" copy of the rules with the proposed modifications included]

Special Policies and Guidelines

340-41-270 In order to preserve the existing high quality water in Clear Lake north of Florence for use as a public water supply source requiring only minimal filtration, it is the policy of the Environmental Quality Commission to protect the Clear Lake watershed including both surface and groundwaters, from existing and potential contamination sources with the following requirements:

(1) The total phosphorus maximum annual loading discharged into Clear Lake shall not exceed 241 pounds per year from all sources.

(2) The total phosphorus maximum annual loading for the Clear Lake watershed shall be deemed exceeded if the median concentration of total phosphorus from samples collected in the epilimnion between May 1 and September 30 exceed nine micrograms per liter during two consecutive years.

(3) Of the total phosphorus loading of 241 pounds per year specified in section (1) of this rule, 192 pounds per year shall be considered current background and Department reserve and shall not be available to other sources.

(4) The total phosphorus maximum annual loading discharged into Collard Lake shall not exceed 123 pounds per year.

~~(5) Lane County or any other jurisdiction shall not issue permits allowing connection of development in the Clear Lake watershed to a sewerage facility and the Department or its contract agent shall not issue on-site sewage system construction-installation permits or favorable site evaluation reports for on-site sewage systems within the Clear Lake watershed until a plan is submitted to and approved by the Department showing how total phosphorus loadings limitations required by this rule will be achieved and maintained. The plan shall include, but not be limited to, the following:~~

~~(a)Projected phosphorus loadings for existing development and future planned development within the Clear Lake watershed. Technical bases for the projections shall be cited. The plan shall include phosphorus loadings from storm runoff during and after construction, on-site sewage disposal systems and other management activities in the watershed including, but not limited to, forest harvesting;~~

~~(b) Adopted ordinances as necessary to carry out the provisions of the plan;~~

~~(c) Agreements, contracts and other information as needed to show how and what entity will effectively implement each provision of the plan.~~

~~(6) The plan required by section (5)of this rule shall address necessary controls to reduce phosphorus loadings into Collard Lake to levels less than 60 pounds per year. The Department may approve a plan with annual loadings greater than 60 pounds per year, but only if the plan demonstrates that controls necessary to achieve less than 60 pounds per year are unreasonable and overly burdensome.~~

~~(7)If the plan required by section (5) of this rule proposes that Clear Lake and/or Collard Lake loading limits be increased from levels established in section (1)and/or section (4)of this rule, the plan shall include the social and economic justification for such increases as required by Oregon Administrative Rule (OAR) 340-41-026. The justification shall show the costs of achieving the loading limits established in this rule as well as the economic and social benefits of increasing the loads. The Commission shall not approve any plan that will not achieve a lake loading limit for Collard Lake of 140 pounds or less of phosphorus per~~

~~year. The Commission shall not approve any plan that will not achieve a lake loading limit for Clear Lake of 251 pounds or less of phosphorus per year.~~

~~(8) No construction of a sewerage facility to serve the Clear Lake watershed or a portion thereof shall begin until or unless:~~

~~(a) The facilities plan report and engineering plans and specifications have been approved in writing by the Department;~~

~~(b) It is constructed and operated by a municipality with authority for the operation and maintenance of sewerage facilities;~~

~~(c)Before construction starts, the responsible municipality shall demonstrate that it has a reliable source of funding to assure proper construction, operation, maintenance, and replacement of the required sewerage facilities.~~

~~(9) No on-site sewage system construction installation permits, favorable site evaluation reports, or sanitary sewer connection permits shall be issued until a plan for monitoring the water quality of Clear Lake is submitted to and approved by the Department. The plan shall include contracts or memorandums of agreement that assure that the monitoring will be conducted.~~

~~(10) Unless it is demonstrated that stormwater runoff treatment and control systems are not necessary to meet the total maximum annual loading for total phosphorus, any off-site or on-site control facilities for stormwater quality control necessary to comply with this rule shall be under the control of a municipality.~~

—Stat. Auth.: ORS 183.335, 454.625, 468.020, ~~468.705 & 468.710~~, 468B.010 and 468B.020.
Stat. Implemented: ORS 454.685
Hist.: DEQ 3-1983, f. & ef. 4-18-83; DEQ 44-1990, f. & cert. ef. 12-19-90

340-71-400

Geographic Area Special Considerations.

(1) River Road — Santa Clara Area, Lane County:

(a) Within the areas set forth in subsection (b) of this section the Agent may issue either construction permits for new subsurface sewage disposal systems or favorable reports of evaluation of site suitability to construct systems under the following circumstances:

(A) The system complies with all rules in effect at the time the permit is issued; and

(B) The system will not in itself contribute, or in combination with other new sources after April 18, 1980, contribute more than sixteen and seven-tenths (16.7) pounds nitrate-nitrogen per acre per year to the local groundwater. The applicant shall assure compliance with this condition by showing his ownership or control of adequate land through easements or equivalent.

(b) Subsection (a) of this section shall apply to all of the following area generally known as River Road — Santa Clara, and defined by the boundary submitted by the Board of County Commissioners for Lane County, which is bounded on the south by the City of Eugene, on the west by the Southern Pacific Railroad, on the north by Beacon Drive, and on the east by the Willamette River, and containing all or portions of T16S, R4W, Sections 33, 34, 35, 36; T17S, R4W, Sections 1, 2, 3, 4, 10, 11, 12, 13, 14, 15, 22, 23, 24, 25; and T17S, R1E, Sections 6, 7, 18, Willamette Meridian;

(c) This rule is subject to modification or repeal by the Commission on an area-by-area basis upon petition by the appropriate local agency or agencies. Such petition either shall provide reasonable evidence that development using subsurface sewage disposal systems will not cause unacceptable degradation of groundwater quality or surface water quality or shall provide equally adequate evidence that degradation of groundwater or surface water quality will not occur as a result of such modification or repeal;

(d) Subsections (a) and (b) of this section shall not apply to any construction permit application based on a favorable report of evaluation of site suitability issued by the Agent pursuant to ORS 454.755(1)(b), where such report was issued prior to the effective date of this rule.

(2) General North Florence Aquifer, North Florence Dunal Aquifer Area, Lane County:

(a) Within the area set forth in subsection (2)(b) of this rule, the agent may issue construction permits for new on-site sewage disposal systems or favorable reports of evaluation of site suitability to construct individual or community on-site sewage disposal systems under the following circumstances:

(A) The lot and proposed system shall comply with all rules in effect at the time the permit or favorable report of site suitability is issued; or

(B) The lot and proposed system complies with paragraph 2(a)(A) of this rule, except for the projected daily sewage loading rates, and the system in combination with all other previously approved systems owned or legally controlled by the applicant shall be projected by the Department to contribute to the local groundwater not more than fifty-eight (58) pounds nitrate-nitrogen NO_3-N per year per acre owned or controlled by the applicant.

INSERT ***which is the area beginning at a point known as Tank One, located in Section One,***

(b) Subsection (2)(a) of this rule shall apply to all of the following area hereby known as the General North Florence Aquifer of the North Florence Dunal Area and is defined by the hydrologic boundaries identified in the June 1982, 208 North Florence Dunal Aquifer Study, which is the area bounded on the west by the Pacific Ocean; on the southwest and south by the Siuslaw River; on the east by the North Fork of the Siuslaw River and the ridge line at the approximate elevation of four hundred (400) feet above mean sea level directly east of Munsel Lake, Clear Lake and Collard Lake; and on the north by Mercer Lake, Mercer Creek, Sutton Lake and Sutton Creek; and containing all or portions of T17S, R12W, Sections 27, 28, 33, 34, 35, 36, and T18S, T12W, sections 1, 2, 3, 4, 9, 10, 11, 12, 13, 14, 15, 16, 22, 23, 24, 25, 26, 27; W.M., Lane County, except that portion defined as the Clear Lake Watershed ~~more particularly described by OAR 340-71-460(6)(f).~~ Township 18 South, Range 12 West, of the Willamette Meridian, Lane County, Oregon:

Run thence S. 67° 50' 51.5" E. 97.80 ft. to the True Point of Beginning; Run thence S. 05° 40' 43.0" W. 1960.62 ft. to a point; Run thence S. 04° 58' 45.4" E. 1301.91 ft. to a point; Run thence S. 52° 44' 01.0" W. 231.21 ft. to a point; Run thence S. 15° 20' 45.4" E. 774.62 ft. to a point; Run thence S. 31°44' 14.0" W. 520.89.ft. to a point; Run thence S. 00° 24' 43.9" W. 834.02 ft. to a point; Run thence S. 07° 49' 01.8" W. 1191.07 ft. to a point; Run thence S. 50° 26' 06.3" W. 731.61 ft. to a point; Run thence S. 02° 51' 10.5" W. 301.37 ft. to a point; Run thence 36° 37' 58.2" W. 918.41 ft. to a point; Run thence S. 47° 12' 26.3" W. 1321.86 ft. to a point; Run thence S. 72° 58' 54.2" W. 498.84 ft. to a point; Run thence S. 85° 44' 21.3" W. 955.64 ft. to a point; Which is N. 11° 39' 16.9" W. 5434.90 ft. from a point known as Green Two (located in Section 13 in said Township and Range); Run thence N. 58° 09' 44.1" W. 1630.28 ft. to a point; Run thence N. 25° 23' 10.1" W. 1978.00 ft. to a point; Run thence N. 16° 34' 21.0" W. 1731.95 ft. to a point; Run thence N. 06° 13' 18.0" W. 747.40 ft. to a point; Run thence N. 03° 50' 32.8" E. 671.51 ft. to a point; Run thence N. 59° 33' 18.9" E. 1117.02 ft. to a point; Run thence N. 59° 50' 06.0" E. 1894.56 ft. to a point; Run thence N. 48° 28' 40.0" E. 897.56 ft. to a point; Run thence N. 31° 29' 50.7" E. 920.64 ft. to a point; Run thence N. 19° 46' 39.6" E. 1524.95 to a point; Run thence S. 76° 05' 37.1" E. 748.95 ft. to a point; Run thence S. 57° 33' 30.2" E. 445.53 ft. to a point; Run thence S. 78° 27' 44.9" E. 394.98 ft. to a point; Run thence S. 61° 55' 39.0" E. 323.00 ft. to a point; Run thence N. 89° 04' 46.8" E. 249.03 ft. to a point; Run thence S. 67° 43' 17.4" E. 245.31 ft. to a point; Run thence S. 79° 55' 09.8" E. 45.71 ft. to a point; Run thence S. 83° 59' 27.6" E. 95.52 ft. to a point; Run thence N. 42° 02' 57.2" E. 68.68 ft. to a point; Run thence S. 80° 41' 24.2" E. 61.81 ft. to a point; Run thence S. 10° 47' 03.5" E. 128.27 ft. to the True Point of Beginning; and containing all or portions of T17S, R12W, Sections 35 and 36; and T18S, R12W, Sections 1, 2, 11 and 12; W.M., Lane County.

(3) Lands Overlaying the Alsea Dunal Aquifer:

(a) Within the area set forth in subsection (3)(c) of this rule, the Agent may issue a construction permit for a new on-site sewage disposal system or a favorable report of evaluation of site suitability to construct a single on-site system on lots that were lots of record prior to January 1, 1981; or on lots in partitions or subdivisions that have received preliminary planning, zoning, and on-site sewage disposal approval prior to January 1,

1981, providing one of the following can be met:

(A) At the time the permit or favorable report of site suitability is issued the lot complies with OAR 340-71-100 through 340-71-360 and OAR 340-71-410 through 340-71-520; or

(B) The lot is found through site evaluation not to comply with OAR 340-71-100 through 340-71-360 and OAR 340-71-410 through 340-71-520, but does meet all of the following conditions when a pressurized seepage bed is utilized:

(i) Groundwater levels shall not be closer than four (4) feet from the ground surface or closer than three (3) feet from the bottom of the seepage bed;

(ii) The seepage bed shall be constructed in accordance with OAR 340-71-275(4) and (5);

(iii) The seepage bed shall be sized on the basis of two hundred (200) square feet of bottom area per one hundred fifty (150) gallons projected daily sewage flow;

(iv) Projected daily sewage flows shall be limited to not more than three hundred seventy-five (375) gallons per lot, except those lots which have a certificate of favorable site evaluation which provides for a larger flow;

(v) All setbacks identified in **Table 1** can be met, except that lots of record prior to May 1, 1973, shall maintain a minimum fifty (50) feet separation to surface public waters;

(vi) Sufficient area exists on the lot to install a seepage bed and a replacement seepage bed. The area reserved for replacement may be waived pursuant to the exception in OAR 340-71-150(4)(a)(B).

(C) The lot is found through site evaluation not to comply with OAR 340-71-100 through 340-71-360 and OAR 340-71-410 through 340-71-520, but does meet all of the following conditions when a conventional sand filter without a bottom is utilized:

(i) Groundwater levels shall not be closer than one (1) foot from the ground surface and not closer than one (1) foot from the bottom of the sand filter;

(ii) Sewage flows shall be limited to not more than three hundred seventy-five (375) gallons per day per lot, except those lots which have a certificate of favorable site evaluation which provides for a larger flow;

(iii) The sand filter shall be sized at one (1) square foot of bottom area for each gallon of projected daily sewage flow;

(iv) The conventional sand filter without a bottom shall be constructed in accordance with OAR 340-71-295(3);

(v) All setbacks identified in **Table 1** can be met, except that lots of record prior to May 1, 1973, shall maintain a minimum fifty (50) feet separation to surface public waters;

(vi) Sufficient area exists on the lot to install a bottomless conventional sand filter and a replacement bottomless conventional sand filter. The area for replacement may be waived pursuant to the exception contained in OAR 340-71-150(4)(a)(B).

(b) Within the area set forth in subsection (3)(c) of this rule, for lots created on or after January 1, 1981, and/or when the on-site system will serve a commercial facility, the Agent may issue a construction permit for a new on-site sewage disposal system or a favorable report of evaluation of site suitability if it is determined that all rules of the Commission can be met;

(c) The Alsea Dunal Aquifer is defined as all the land bounded on the East by Highway 101, the Pacific Ocean on the West, and from Driftwood Beach Wayside South

to the southern tip of the Alsea Bay Spit;

(d) If the results of groundwater monitoring in the Alsea Dunal Aquifer indicate unacceptable levels of degradation or if it appears necessary or desirable to pursue development of the aquifer as a source of drinking water, sewage collection and off-site treatment and disposal facilities shall be installed unless further study demonstrates that such facilities are not necessary or effective to protect the beneficial use.

(4) Christmas Valley Townsite, Lake County:

(a) Within the area set forth in subsection (4)(b) of this rule, the agent may consider the shallow groundwater table, if present, in the same manner as a temporary water table when preparing and/or issuing site evaluation reports and construction-installation permits;

(b) The Christmas Valley Townsite is defined as all land within the Christmas Valley Townsite plat located within Sections 9, 10, 11, 14, 15 and 16 of Township 27 South, Range 17 East, Willamette Meridian, in Lake County.

(5) Clatsop Plains Aquifer, Clatsop County: The Clatsop Plains Groundwater Protection Plan, prepared by R.W. Beck and Associates and adopted by Clatsop County, provides a basis for continued use of on-site sewage disposal systems while protecting the quality of groundwater for future water supplies. For the plan to be successful, the following components must be accomplished:

(a) By not later than January 1, 1983, Clatsop County shall identify and set aside aquifer reserve areas for future water supply development containing a minimum of two and one half (2-1/2) square miles. The reserve areas shall be controlled so that the potential for groundwater contamination from nitrogen and other possible pollutants is kept to a minimum;

(b) The Agent may issue construction installation permits for new on-site sewage disposal systems or favorable reports of site evaluation to construct on-site systems within the area generally known as the Clatsop Plains, which is bounded by the Columbia River to the North; the Pacific Ocean to the west; the Necanicum River, Neawanna Creek, and County Road 157 on the south; and the Carnahan Ditch-Skipanon River and the foothills of the Coast Range to the east, providing:

(A) The lot or parcel was created in compliance with the appropriate comprehensive plan for Gearhart (adopted by County Ordinance 80-3), Seaside (adopted by County Ordinance 80-10), Warrenton (adopted by County Ordinance 82-15), or the Clatsop County plan adopted through Ordinance No. 79-10; and either

(B) The lot or parcel does not violate any rule of this Division; or

(C) Lot or parcel does not violate the Department's Water Quality Management Plan or any rule of this Division, except the projected maximum sewage loading rate would exceed the ratio of four hundred fifty (450) gallons per one-half (1/2) acre per day. The on-site system shall be either a sand filter system or a pressurized distribution system with a design sewage flow not to exceed four hundred fifty (450) gallons per day; or

(D) The Department may approve the use of standard on-site systems to serve single family dwellings within planned developments or clustered-lot subdivisions providing:

(i) The planned development or clustered-lot subdivision is not located within Gearhart, Seaside, Warrenton, or their urban growth boundaries; and

(ii) The lots do not violate any rule of this Division, except the projected maximum sewage loading rate may exceed the ratio of four hundred fifty (450) gallons per acre per

day; and

(iii) The Department is provided satisfactory evidence through a detailed groundwater study that the use of standard systems will not constitute a greater threat to groundwater quality than would occur with the use of sand filter systems or pressurized distribution systems.

(6) Within areas east of the Cascade Range where the annual precipitation does not exceed twenty (20) inches, and after evaluating the site, the Agent may issue a construction-installation permit authorizing installation of a standard system to serve a single family dwelling, provided the requirements in subsections (6)(a) and (b) of this rule are met:

(a) Minimum Site Criteria:

(A) The property is ten (10) acres or larger in size. The minimum parcel size considered under this rule is designated by the County, but in no event shall it be less than ten (10) acres;

(B) The slope gradient does not exceed thirty (30) percent;

(C) The soils are diggable with a backhoe to a depth of at least twenty-four (24) inches;

(D) The site is found to comply with the provisions of OAR 340-71-220(1)(b,e,f,g,h, and i).

(b) Minimum Construction Requirements:

(A) The system shall contain not less than two hundred twenty-five (225) linear feet of disposal trench for projected sewage flows not exceeding four hundred fifty (450) gallons per day. Larger sewage flows shall be sized on the basis of seventy-five (75) linear feet per each one hundred fifty (150) gallons of projected flow;

(B) The system shall be constructed and backfilled in compliance with OAR 340-71-220: sections (3), (4), (5), (7), (8), (9), (10), and (11) of this rule.

(c) At the discretion and request of the owner or the owner's authorized representative, a single application may be submitted to the Agent for both a site evaluation report and a construction-installation permit. The application would include the sum of the fees for both activities, pursuant to OAR 340-71-140(1)(a)(A) and OAR 340-71-140(1)(b)(A)(i), as well as the following:

(A) Favorable land use compatibility statement from the appropriate land use authority signifying that the proposed land use is compatible with the Land Conservation and Development Commission acknowledged comprehensive plan or complies with the statewide planning goals;

(B) Property development plan acceptable to the Agent showing the location of existing and proposed improvements, including the locations of the dwelling and sewage disposal system;

(C) All other exhibits the Agent finds are necessary to complete the application.

(d) The Agent may waive the pre-cover inspection for a system installed pursuant to this section, provided the system installer submits the following information to the Agent at the time construction of the system is complete:

(A) A detailed and accurate as-built plan of the constructed system; and

(B) A list of all material used in the construction of the system; and

(C) A written certification (on a form acceptable to the Department) that the

construction was in accordance with the permit and rules of the Commission.

(7) Within areas east of the Cascade Range where the annual precipitation does not exceed twenty (20) inches, the Agent may issue a construction-installation permit authorizing installation of a standard system to serve a single family dwelling, provided the requirements in subsections (7)(a) and (b) of this rule are met. The Agent may waive the site evaluation for a single family dwelling provided:

(a) Minimum Site Criteria:

(A) The property is eighty (80) acres or larger in size. The minimum parcel size considered under this rule is designated by the County, but in no event shall it be less than eighty (80) acres;

(B) The separation distance between the proposed on-site system and the nearest dwelling, other than that being served by the proposed system, is at least one-quarter mile;

(C) The nearest property line to the proposed system is at least 100 feet, the nearest domestic water source is at least 200 feet, and the nearest surface public water is at least 200 feet; and

(D) In the opinion of the Agent, sufficient topographical and soils information, including but not limited to slope, terrain, landform, and rock outcrops, is submitted with the application to determine the property can be approved for on-site sewage disposal in conformance with the purpose of these rules as stated in OAR 340-71-110.

(b) Minimum Construction Requirements:

(A) Sizing requirements of **Tables 4 and 5** shall be followed as closely as possible. In any case, the system shall contain not less than two hundred twenty-five (225) linear feet of disposal trench for projected sewage flows not exceeding four hundred fifty (450) gallons per day. Larger sewage flows shall be sized on the basis of seventy-five (75) linear feet per each one hundred fifty (150) gallons of projected flow;

(B) The system shall be constructed and backfilled as closely as possible to the requirements contained in OAR 340-71-220.

(c) At the request of the owner or the owner's authorized representative, a single application may be submitted to the Agent for both a site evaluation report and a construction-installation permit. The application would include the fee for a site evaluation, pursuant to OAR 340-71-140, as well as the following:

(A) Favorable land use compatibility statement from the appropriate land use authority signifying that the proposed land use is compatible with the Land Conservation and Development Commission acknowledged comprehensive plan or complies with the statewide planning goals;

(B) Property development plan acceptable to the Agent showing the location of existing and proposed improvements, including the locations of the dwelling and sewage disposal system;

(C) All other exhibits the Agent finds are necessary to complete the application;

(D) If the decision is made to waive the site evaluation, the fee will be transferred to the permit.

(d) The Agent may waive the pre-cover inspection for a system installed pursuant to this section, provided the system installer submits the following information to the Agent at the time construction of the system is complete:

(A) A detailed and accurate as-built plan of the constructed system; and

(B) A list of all material used in the construction of the system; and

(C) A written certification (on a form acceptable to the Department) that the construction was in accordance with the permit and rules of the Commission.

(e) The conditions for OAR 340-71-400(7) shall be set forth in an addendum to the memorandum of agreement (contract) between the County and the Department.

Stat. Author.: ORS 183.335, 454.625, 468.020, 468B.010 and 468B.020.
Stat. Impl.: ORS 454.610, 454.615

340-71-460
Moratorium Areas

(1) Whenever the Commission finds that construction of subsurface or alternative sewage disposal systems should be limited or prohibited in an area, it shall issue an order limiting or prohibiting such construction.

(2) The order shall be issued only after public hearing for which more than thirty (30) days' notice is given.

(3) The order shall be a rule of this division which contains a general description of the moratorium area. A more detailed description of the area, if needed, shall be an appendix to these rules.

(4) No permit or site evaluation report shall be issued for construction of a new or expanded system which would violate any order of the Commission issued pursuant to ORS 454.685.

(5) Criteria For Establishing Moratoriums: In issuing an order under this section the Commission shall consider the factors contained in ORS 454.685(2).

~~(6) Specific Moratorium Areas: Pursuant to ORS 454.685, the Agent shall not issue sewage system construction installation permits or approved site evaluation reports within the boundaries of the following areas of the state:~~

~~Lane County - Clear Lake Watershed of the North Florence Dunal Aquifer Area, as follows: The area hereby known as the Clear Lake Watershed of the North Florence Dunal Aquifer Area defined by the hydrologic boundaries identified in the June 1982, 208 North Florence Dunal Aquifer Study which is the area beginning at a point known as Tank One, located in Section One, Township 18 South, Range 12 West, of the Willamette Meridian, Lane County, Oregon:~~

~~Run thence S. 67° 50' 51.5" E. 97.80 ft. to the True Point of Beginning; Run thence S. 05° 40' 43.0" W. 1960.62 ft. to a point; Run thence S. 04° 58' 45.4" W. 1301.91 ft. to a point; Run thence S. 52° 44' 01.0" W. 231.21 ft. to a point; Run thence S. 15° 20' 45.4" W. 774.62 ft. to a point; Run thence S. 31° 44' 14.0" W. 520.89 ft. to a point; Run thence S. 00° 24' 43.9" W. 834.02 ft. to a point; Run thence S. 07° 49' 01.8" W. 1191.07 ft. to a point; Run thence S. 50° 26' 06.3" W. 731.61 ft. to a point; Run thence S. 02° 51' 10.5" W. 301.37 ft. to a point; Run thence S. 36° 37' 58.2" W. 918.41 ft. to a point; Run thence S. 47° 12' 26.3" W. 1321.86 ft. to a point; Run thence S. 72° 58' 54.2" W. 498.84 ft. to a point; Run thence S. 85° 44' 21.3" W. 955.64 ft. to a point; Which is N. 11° 39' 16.9" W. 5434.90 ft. from a point known as Green Two (located in Section 13 in said Township and Range);~~

~~Run thence N. 58° 09' 44.1" W. 1630.28 ft. to a point; Run thence N. 25° 23' 10.1" W. 1978.00 ft. to a point; Run thence N. 16° 34' 21.0" W. 1731.95 ft. to a point; Run thence N. 06° 13' 18.0" W. 747.40 ft. to a point; Run thence N. 03° 50' 32.8" E. 671.51 ft. to a point; Run thence N. 59° 33' 18.9" E. 1117.02 ft. to a point; Run thence N. 59° 50' 06.0" E. 2894.56 ft. to a point; Run thence N. 48° 28' 40.0" E. 897.56 ft. to a point; Run thence N. 31° 29' 50.7" E. 920.64 ft. to a point; Run thence N. 19° 46' 39.6" E. 1524.95 ft. to a point; Run thence S. 76° 05' 37.1" E. 748.95 ft. to a point; Run thence S. 57° 33' 30.2" E. 445.53 ft. to a point; Run thence S. 78° 27' 44.9" E. 394.98 ft. to a point; Run thence S. 61° 55' 39.0" E. 323.00 ft. to a point; Run thence N. 89° 04' 46.8" E. 249.03 ft. to a point; Run thence S. 67° 43' 17.4" E. 245.31 ft. to a point; Run thence S. 79° 55' 09.8" E. 45.71 ft. to a point; Run thence S. 83° 59' 27.6" E. 95.52 ft. to a point; Run thence N. 42° 02' 57.2" E. 68.68 ft. to a point; Run thence S. 80° 41' 24.2" E. 61.81 ft. to a point; Run thence S. 10°47' 03.5" E. 128.27 ft. to the True Point of beginning; and containing all or portions of T17S, R12W, Sections 35 and 36; and T18S, R12W, Sections 1, 2, 11 and 12; W.M., Lane County.~~

Stat. Author.: ORS 183.335, 454.625, 468.020, 468B.010 and 468B.020.
Stat. Impl.: ORS 454.685

Special Policies and Guidelines

340-41-270 In order to preserve the existing high quality water in Clear Lake north of Florence for use as a public water supply source requiring only minimal filtration, it is the policy of the Environmental Quality Commission to protect the Clear Lake watershed including both surface and groundwaters, from existing and potential contamination sources with the following requirements:

(1) The total phosphorus maximum annual loading discharged into Clear Lake shall not exceed 241 pounds per year from all sources.

(2) The total phosphorus maximum annual loading for the Clear Lake watershed shall be deemed exceeded if the median concentration of total phosphorus from samples collected in the epilimnion between May 1 and September 30 exceed nine micrograms per liter during two consecutive years.

(3) Of the total phosphorus loading of 241 pounds per year specified in section (1) of this rule, 192 pounds per year shall be considered current background and Department reserve and shall not be available to other sources.

(4) The total phosphorus maximum annual loading discharged into Collard Lake shall not exceed 123 pounds per year.

Stat. Auth.: ORS 183.335, 454.625, 468.020,, 468B.010 and 468B.020.
Stat. Implemented: ORS 454.685
Hist.: DEQ 3-1983, f. & ef. 4-18-83; DEQ 44-1990, f. & cert. ef. 12-19-90

340-71-400

Geographic Area Special Considerations.

(1) River Road — Santa Clara Area, Lane County:

(a) Within the areas set forth in subsection (b) of this section the Agent may issue either construction permits for new subsurface sewage disposal systems or favorable reports of evaluation of site suitability to construct systems under the following circumstances:

(A) The system complies with all rules in effect at the time the permit is issued; and

(B) The system will not in itself contribute, or in combination with other new sources after April 18, 1980, contribute more than sixteen and seven-tenths (16.7) pounds nitrate-nitrogen per acre per year to the local groundwater. The applicant shall assure compliance with this condition by showing his ownership or control of adequate land through easements or equivalent.

(b) Subsection (a) of this section shall apply to all of the following area generally known as River Road — Santa Clara, and defined by the boundary submitted by the Board of County Commissioners for Lane County, which is bounded on the south by the City of Eugene, on the west by the Southern Pacific Railroad, on the north by Beacon Drive, and on the east by the Willamette River, and containing all or portions of T16S, R4W, Sections 33, 34, 35, 36; T17S, R4W, Sections 1, 2, 3, 4, 10, 11, 12, 13, 14, 15, 22, 23, 24, 25; and T17S, R1E, Sections 6, 7, 18, Willamette Meridian;

(c) This rule is subject to modification or repeal by the Commission on an area-by-area basis upon petition by the appropriate local agency or agencies. Such petition either shall provide reasonable evidence that development using subsurface sewage disposal systems will not cause unacceptable degradation of groundwater quality or surface water quality or shall provide equally adequate evidence that degradation of groundwater or surface water quality will not occur as a result of such modification or repeal;

(d) Subsections (a) and (b) of this section shall not apply to any construction permit application based on a favorable report of evaluation of site suitability issued by the Agent pursuant to ORS 454.755(1)(b), where such report was issued prior to the effective date of this rule.

(2) General North Florence Aquifer, North Florence Dunal Aquifer Area, Lane County:

(a) Within the area set forth in subsection (2)(b) of this rule, the agent may issue construction permits for new on-site sewage disposal systems or favorable reports of evaluation of site suitability to construct individual or community on-site sewage disposal systems under the following circumstances:

(A) The lot and proposed system shall comply with all rules in effect at the time the permit or favorable report of site suitability is issued; or

(B) The lot and proposed system complies with paragraph 2(a)(A) of this rule, except for the projected daily sewage loading rates, and the system in combination with all other previously approved systems owned or legally controlled by the applicant shall be projected by the Department to contribute to the local groundwater not more than fifty-eight (58) pounds nitrate-nitrogen NO_3-N per year per acre owned or controlled by the applicant.

ERT ***which is the area beginning at a point known as Tank One, located in Section One,***

(b) Subsection (2)(a) of this rule shall apply to all of the following area hereby known the General North Florence Aquifer of the North Florence Dunal Area and is defined by hydrologic boundaries identified in the June 1982, 208 North Florence Dunal Aquifer dy, which is the area bounded on the west by the Pacific Ocean; on the southwest and uth by the Siuslaw River; on the east by the North Fork of the Siuslaw River and the ge line at the approximate elevation of four hundred (400) feet above mean sea level ectly east of Munsel Lake, Clear Lake and Collard Lake; and on the north by Mercer ke, Mercer Creek, Sutton Lake and Sutton Creek; and containing all or portions of 7S, R12W, Sections 27, 28, 33, 34, 35, 36, and T18S, T12W, sections 1, 2, 3, 4, 9, 10, , 12, 13, 14, 15, 16, 22, 23, 24, 25, 26, 27; W.M., Lane County, except that portion fined as the Clear Lake Watershed ~~more particularly described by~~ Township 18 South, ange 12 West, of the Willamette Meridian, Lane County, Oregon:
un thence S. 67° 50' 51.5" E. 97.80 ft. to the True Point of Beginning; Run thence S. 5° 40' 43.0" W. 1960.62 ft. to a point; Run thence S. 04° 58' 45.4" E.. 1301.91 ft. to a oint; Run thence S. 52° 44' 01.0" W. 231.21 ft. to a point; Run thence S. 15° 20' 45.4" . 774.62 ft. to a point; Run thence S. 31°44' 14.0" W. 520.89.ft. to a point; Run thence . 00° 24' 43.9" W. 834.02 ft. to a point; Run thence S. 07° 49' 01.8" W. 1191.07 ft. to point; Run thence S. 50° 26' 06.3" W. 731.61 ft. to a point; Run thence S. 02° 51' 0.5" W. 301.37 ft. to a point; Run thence 36° 37' 58.2" W. 918.41 ft. to a point; Run hence S. 47° 12' 26.3" W. 1321.86 ft. to a point; Run thence S. 72° 58' 54.2" W. 98.84 ft. to a point; Run thence S. 85° 44' 21.3" W. 955.64 ft. to a point; Which is N. 11 ' 16.9" W. 5434.90 ft. from a point known as Green Two (located in Section 13 in said Township and Range); Run thence N. 58° 09' 44.1" W. 1630.28 ft. to a point; Run thence N. 25° 23' 10.1" W. 1978.00 ft. to a point; Run thence N. 16° 34' 21.0" W. 1731.95 ft. to a point; Run thence N. 06° 13' 18.0" W. 747.40 ft. to a point; Run thence N. 03° 50' 32.8" E. 671.51 ft. to a point; Run thence N. 59° 33' 18.9" E. 1117.02 ft. to a point; Run thence N. 59° 50' 06.0" E. 1894.56 ft. to a point; Run thence N. 48° 28' 40.0" E. 897.56 ft. to a point; Run thence N. 31° 29' 50.7" E. 920.64 ft. to a point; Run thence N. 19° 46' 39.6" E. 1524.95 to a point; Run thence S. 76° 05' 37.1" E. 748.95 ft. to a point; Run thence S. 57° 33' 30.2" E. 445.53 ft. to a point; Run thence S. 78° 27' 44.9" E. 394.98 ft. to a point; Run thence S. 61° 55' 39.0" E. 323.00 ft. to a point; Run thence N. 89° 04' 46.8" E, 249.03 ft. to a point; Run thence S. 67° 43' 17.4" E. 245.31 ft. to a point; Run thence S. 79° 55' 09.8" E. 45.71 ft. to a point; Run thence S. 83° 59' 27.6" E. 95.52 ft. to a point; Run thence N. 42° 02' 57.2" E. 68.68 ft. to a point; Run thence S. 80° 41' 24.2" E. 61.81 ft. to a point; Run thence S. 10° 47' 03.5" E. 128.27 ft. to the True Point of Beginning; and containing all or portions of T17S, R12W, Sections 35 and 36; and T18S, R12W, Sections 1, 2, 11 and 12; W.M., Lane County.

(3) Lands Overlaying the Alsea Dunal Aquifer:

(a) Within the area set forth in subsection (3)(c) of this rule, the Agent may issue a construction permit for a new on-site sewage disposal system or a favorable report of evaluation of site suitability to construct a single on-site system on lots that were lots of record prior to January 1, 1981; or on lots in partitions or subdivisions that have received preliminary planning, zoning, and on-site sewage disposal approval prior to January 1, 1981, providing one of the following can be met:

(A) At the time the permit or favorable report of site suitability is issued the lot complies with OAR 340-71-100 through 340-71-360 and OAR 340-71-410 through 340-71-520; or

(B) The lot is found through site evaluation not to comply with OAR 340-71-100 through 340-71-360 and OAR 340-71-410 through 340-71-520, but does meet all of the following conditions when a pressurized seepage bed is utilized:

(i) Groundwater levels shall not be closer than four (4) feet from the ground surface or closer than three (3) feet from the bottom of the seepage bed;

(ii) The seepage bed shall be constructed in accordance with OAR 340-71-275(4) and (5);

(iii) The seepage bed shall be sized on the basis of two hundred (200) square feet of bottom area per one hundred fifty (150) gallons projected daily sewage flow;

(iv) Projected daily sewage flows shall be limited to not more than three hundred seventy-five (375) gallons per lot, except those lots which have a certificate of favorable site evaluation which provides for a larger flow;

(v) All setbacks identified in **Table 1** can be met, except that lots of record prior to May 1, 1973, shall maintain a minimum fifty (50) feet separation to surface public waters;

(vi) Sufficient area exists on the lot to install a seepage bed and a replacement seepage bed. The area reserved for replacement may be waived pursuant to the exception in OAR 340-71-150(4)(a)(B).

(C) The lot is found through site evaluation not to comply with OAR 340-71-100 through 340-71-360 and OAR 340-71-410 through 340-71-520, but does meet all of the following conditions when a conventional sand filter without a bottom is utilized:

(i) Groundwater levels shall not be closer than one (1) foot from the ground surface and not closer than one (1) foot from the bottom of the sand filter;

(ii) Sewage flows shall be limited to not more than three hundred seventy-five (375) gallons per day per lot, except those lots which have a certificate of favorable site evaluation which provides for a larger flow;

(iii) The sand filter shall be sized at one (1) square foot of bottom area for each gallon of projected daily sewage flow;

(iv) The conventional sand filter without a bottom shall be constructed in accordance with OAR 340-71-295(3);

(v) All setbacks identified in **Table 1** can be met, except that lots of record prior to May 1, 1973, shall maintain a minimum fifty (50) feet separation to surface public waters;

(vi) Sufficient area exists on the lot to install a bottomless conventional sand filter and a replacement bottomless conventional sand filter. The area for replacement may be waived pursuant to the exception contained in OAR 340-71-150(4)(a)(B).

(b) Within the area set forth in subsection (3)(c) of this rule, for lots created on or after January 1, 1981, and/or when the on-site system will serve a commercial facility, the Agent may issue a construction permit for a new on-site sewage disposal system or a favorable report of evaluation of site suitability if it is determined that all rules of the Commission can be met;

(c) The Alsea Dunal Aquifer is defined as all the land bounded on the East by Highway 101, the Pacific Ocean on the West, and from Driftwood Beach Wayside South to the southern tip of the Alsea Bay Spit;

(d) If the results of groundwater monitoring in the Alsea Dunal Aquifer indicate unacceptable levels of degradation or if it appears necessary or desirable to pursue development of the aquifer as a source of drinking water, sewage collection and off-site treatment and disposal facilities shall be installed unless further study demonstrates that such facilities are not necessary or effective to protect the beneficial use.

(4) Christmas Valley Townsite, Lake County:

(a) Within the area set forth in subsection (4)(b) of this rule, the agent may consider the shallow groundwater table, if present, in the same manner as a temporary water table when preparing and/or issuing site evaluation reports and construction-installation permits;

(b) The Christmas Valley Townsite is defined as all land within the Christmas Valley Townsite plat located within Sections 9, 10, 11, 14, 15 and 16 of Township 27 South, Range 17 East, Willamette Meridian, in Lake County.

(5) Clatsop Plains Aquifer, Clatsop County: The Clatsop Plains Groundwater Protection Plan, prepared by R.W. Beck and Associates and adopted by Clatsop County, provides a basis for continued use of on-site sewage disposal systems while protecting the quality of groundwater for future water supplies. For the plan to be successful, the following components must be accomplished:

(a) By not later than January 1, 1983, Clatsop County shall identify and set aside aquifer reserve areas for future water supply development containing a minimum of two and one half (2-1/2) square miles. The reserve areas shall be controlled so that the potential for groundwater contamination from nitrogen and other possible pollutants is kept to a minimum;

(b) The Agent may issue construction installation permits for new on-site sewage disposal systems or favorable reports of site evaluation to construct on-site systems, within the area generally known as the Clatsop Plains, which is bounded by the Columbia River to the North; the Pacific Ocean to the west; the Necanicum River, Neawanna Creek, and County Road 157 on the south; and the Carnahan Ditch-Skipanon River and the foothills of the Coast Range to the east, providing:

(A) The lot or parcel was created in compliance with the appropriate comprehensive plan for Gearhart (adopted by County Ordinance 80-3), Seaside (adopted by County Ordinance 80-10), Warrenton (adopted by County Ordinance 82-15); or the Clatsop County plan adopted through Ordinance No. 79-10; and either

(B) The lot or parcel does not violate any rule of this Division; or

(C) Lot or parcel does not violate the Department's Water Quality Management Plan or any rule of this Division, except the projected maximum sewage loading rate would exceed the ratio of four hundred fifty (450) gallons per one-half (1/2) acre per day. The on-site system shall be either a sand filter system or a pressurized distribution system with a design sewage flow not to exceed four hundred fifty (450) gallons per day; or

(D) The Department may approve the use of standard on-site systems to serve single family dwellings within planned developments or clustered-lot subdivisions providing:

(i) The planned development or clustered-lot subdivision is not located within Gearhart, Seaside, Warrenton, or their urban growth boundaries; and

(ii) The lots do not violate any rule of this Division, except the projected maximum sewage loading rate may exceed the ratio of four hundred fifty (450) gallons per acre per day; and

(iii) The Department is provided satisfactory evidence through a detailed groundwater study that the use of standard systems will not constitute a greater threat to groundwater quality than would occur with the use of sand filter systems or pressurized distribution systems.

(6) Within areas east of the Cascade Range where the annual precipitation does not exceed twenty (20) inches, and after evaluating the site, the Agent may issue a construction-installation permit authorizing installation of a standard system to serve a single family dwelling, provided the requirements in subsections (6)(a) and (b) of this rule are met:

(a) Minimum Site Criteria:

(A) The property is ten (10) acres or larger in size. The minimum parcel size considered under this rule is designated by the County, but in no event shall it be less than ten (10) acres;

(B) The slope gradient does not exceed thirty (30) percent;

(C) The soils are diggable with a backhoe to a depth of at least twenty-four (24) inches;

(D) The site is found to comply with the provisions of OAR 340-71-220(1)(b,e,f,g,h, and i).

(b) Minimum Construction Requirements:

(A) The system shall contain not less than two hundred twenty-five (225) linear feet of disposal trench for projected sewage flows not exceeding four hundred fifty (450) gallons per day. Larger sewage flows shall be sized on the basis of seventy-five (75) linear feet per each one hundred fifty (150) gallons of projected flow;

(B) The system shall be constructed and backfilled in compliance with OAR 340-71-220: sections (3), (4), (5), (7), (8), (9), (10), and (11) of this rule.

(c) At the discretion and request of the owner or the owner's authorized representative, a single application may be submitted to the Agent for both a site evaluation report and a construction-installation permit. The application would include the sum of the fees for both activities, pursuant to OAR 340-71-140(1)(a)(A) and OAR 340-71-140(1)(b)(A)(i), as well as the following:

(A) Favorable land use compatibility statement from the appropriate land use authority signifying that the proposed land use is compatible with the Land Conservation and Development Commission acknowledged comprehensive plan or complies with the statewide planning goals;

(B) Property development plan acceptable to the Agent showing the location of existing and proposed improvements, including the locations of the dwelling and sewage disposal system;

(C) All other exhibits the Agent finds are necessary to complete the application.

(d) The Agent may waive the pre-cover inspection for a system installed pursuant to this section, provided the system installer submits the following information to the Agent at the time construction of the system is complete:

(A) A detailed and accurate as-built plan of the constructed system; and

(B) A list of all material used in the construction of the system; and

(C) A written certification (on a form acceptable to the Department) that the construction was in accordance with the permit and rules of the Commission.

(7) Within areas east of the Cascade Range where the annual precipitation does not exceed twenty (20) inches, the Agent may issue a construction-installation permit authorizing installation of a standard system to serve a single family dwelling, provided the requirements in subsections (7)(a) and (b) of this rule are met. The Agent may waive the site evaluation for a single family dwelling provided:

(a) Minimum Site Criteria:

(A) The property is eighty (80) acres or larger in size. The minimum parcel size considered under this rule is designated by the County, but in no event shall it be less than eighty (80) acres;

(B) The separation distance between the proposed on-site system and the nearest dwelling, other than that being served by the proposed system, is at least one-quarter mile;

(C) The nearest property line to the proposed system is at least 100 feet, the nearest domestic water source is at least 200 feet, and the nearest surface public water is at least 200 feet; and

(D) In the opinion of the Agent, sufficient topographical and soils information, including but not limited to slope, terrain, landform, and rock outcrops, is submitted with the application to determine the property can be approved for on-site sewage disposal in conformance with the purpose of these rules as stated in OAR 340-71-110.

(b) Minimum Construction Requirements:

(A) Sizing requirements of **Tables 4 and 5** shall be followed as closely as possible. In any case, the system shall contain not less than two hundred twenty-five (225) linear feet of disposal trench for projected sewage flows not exceeding four hundred fifty (450) gallons per day. Larger sewage flows shall be sized on the basis of seventy-five (75) linear feet per each one hundred fifty (150) gallons of projected flow;

(B) The system shall be constructed and backfilled as closely as possible to the requirements contained in OAR 340-71-220.

(c) At the request of the owner or the owner's authorized representative, a single application may be submitted to the Agent for both a site evaluation report and a construction-installation permit. The application would include the fee for a site evaluation, pursuant to OAR 340-71-140, as well as the following:

(A) Favorable land use compatibility statement from the appropriate land use authority signifying that the proposed land use is compatible with the Land Conservation and Development Commission acknowledged comprehensive plan or complies with the statewide planning goals;

(B) Property development plan acceptable to the Agent showing the location of existing and proposed improvements, including the locations of the dwelling and sewage disposal system;

(C) All other exhibits the Agent finds are necessary to complete the application;

(D) If the decision is made to waive the site evaluation, the fee will be transferred to the permit.

(d) The Agent may waive the pre-cover inspection for a system installed pursuant to this section, provided the system installer submits the following information to the Agent at the time construction of the system is complete:

(A) A detailed and accurate as-built plan of the constructed system; and

(B) A list of all material used in the construction of the system; and

(C) A written certification (on a form acceptable to the Department) that the construction was in accordance with the permit and rules of the Commission.

(e) The conditions for OAR 340-71-400(7) shall be set forth in an addendum to the memorandum of agreement (contract) between the County and the Department.

Stat. Author.: ORS 183.335, 454.625, 468.020, 468B.010 and 468B.020.
Stat. Impl.: ORS 454.610, 454.615

340-71-460
Moratorium Areas

(1) Whenever the Commission finds that construction of subsurface or alternative sewage disposal systems should be limited or prohibited in an area, it shall issue an order limiting or prohibiting such construction.

(2) The order shall be issued only after public hearing for which more than thirty (30) days' notice is given.

(3) The order shall be a rule of this division which contains a general description of the moratorium area. A more detailed description of the area, if needed, shall be an appendix to these rules.

(4) No permit or site evaluation report shall be issued for construction of a new or expanded system which would violate any order of the Commission issued pursuant to ORS 454.685.

(5) Criteria For Establishing Moratoriums: In issuing an order under this section the Commission shall consider the factors contained in ORS 454.685(2).

Stat. Author.: ORS 183.335, 454.625, 468.020, 468B.010 and 468B.020.
Stat. Impl.: ORS 454.685

Item F
2/28/91 EQC
M-4

OBSTACLES TO PROTECTING WATER QUALITY IN CLEAR AND COLLARD LAKES

OBSTACLES TO PROTECTING WATER QUALITY

NO LOCAL CONSENSUS ON

- POLLUTION PROBLEM?
- BEST SOLUTION?
- WHO PAYS?

OBSTACLES TO PROTECTING WATER QUALITY

LEGAL AUTHORITY TO REQUIRE SEWERS

- NEVER BEEN DONE WHERE NO PUBLIC HEALTH THREAT
- LAND USE ISSUES

LEGAL AUTHORITY TO REQUIRE STUDIES/ASSESS FEES

OBSTACLES TO PROTECTING WATER QUALITY

ADDITIONAL STUDIES WOULD BE USEFUL, BUT

- DEQ DOES NOT HAVE THE RESOURCES
- OTHER PARTIES NOT ABLE/WILLING
- ACCESS TO VOLUNTARY SITES MAY BE DIFFICULT

OBSTACLES TO PROTECTING WATER QUALITY

FUNDS NOT AVAILABLE TO INSTALL SEWERS

- PUBLIC AGENCIES WON'T PAY
- LOCAL RESIDENTS WON'T AGREE TO PAY

FACTORS CONSIDERED IN EVALUATING ALTERNATIVES

- DEQ TIME AND RESOURCES REQUIRED
- ENVIRONMENTAL EFFECTIVENESS
- AVAILABILITY OF PROVEN TECHNOLOGY
- COMPETING WATER QUALITY PROBLEMS
- LEGAL AUTHORITY

FACTORS CONSIDERED IN EVALUATING ALTERNATIVES

- ACCEPTABILITY TO LOCAL RESIDENTS, IMPLEMENTING PARTY
- CAPABILITY OF IMPLEMENTING PARTY
- PARTIES CONTRIBUTING TO POLLUTION PAY
- FAIRNESS AND REASONABLENESS

ALTERNATIVES EXAMINED, BOTH FOR RULE AND FOR ACTIVITIES OUTSIDE OF RULE

ACTIONS/RULES

- INSTALL SEWERS NOW
- SET UP LOCAL ADVISORY COMMITTEE NOW
- ADDITIONAL SEDIMENT OR STORMWATER CONTROL MEASURES IN RULE FORM NOW
- REQUIRE ADDITIONAL MEASURES FOR NEW SEPTIC TANKS AND DRAINFIELDS, TO REDUCE THE PHOSPHOROUS

ALTERNATIVES EXAMINED, BOTH FOR RULE AND FOR ACTIVITIES OUTSIDE OF RULE

ACTIONS/RULES

- REQUIRE GROUNDWATER MONITORING WELLS ON SITES GETTING NEW ON-SITE PERMITS
  - REQUIRE ACCESS TO SITES BY DEQ
  - REQUIRE PROPERTY OWNER INSTALL WELLS
- BUY RESIDENTIAL LOTS TO PREVENT DEVELOPMENT

ALTERNATIVES EXAMINED, BOTH FOR RULE AND FOR ACTIVITIES OUTSIDE OF RULE

WATER QUALITY STUDIES

- REQUIRE ADDITIONAL COMPREHENSIVE STUDIES NOW
  - BY DEQ
  - BY LANE COUNTY
  - BY LOCAL HOMEOWNERS
    - STUDY FEE PAID TO DEQ
    - HOMEOWNERS TO CONDUCT STUDY

ALTERNATIVES EXAMINED, BOTH FOR RULE AND FOR ACTIVITIES OUTSIDE OF RULE

WATER QUALITY STUDIES

- TRACK WATER QUALITY IN THE LAKES
- MONITOR COLLARD AND CLEAR LAKES LIKE OTHER COASTAL LAKES

Item E

RECOMMENDED RULE LANGUAGE 11:50 2/28/97

340-41-270

(5) **If water quality monitoring within the Clear Lake watershed indicates unacceptable degradation, the Commission may require additional studies and/or corrective actions by rule. Such corrective actions may include but are not limited to the construction of sewage collection and off-site treatment and disposal facilities.**

Environmental Quality Commission

☒ Rule Adoption Item
☐ Action Item
☐ Information Item

Agenda Item E
FEBRUARY 28, 1997 Meeting

Title:

Permanent Rule Adoption to Lift the Clear Lake Watershed Moratorium by Amending Oregon Administrative Rules (OAR) 340-41-270, OAR 340-71-400(2), and OAR 340-71-460

Summary:

There was an on-site sewage system moratorium in effect in the Clear Lake watershed (near Florence, Oregon) from 1983 until October, 1996. The moratorium was intended to prevent further development until such time as a watershed management plan could be implemented that would protect water quality in Clear and Collard Lakes. In response to a court order, the Commission lifted the moratorium through temporary rules in October, 1996. This action is to provide permanent rule changes that would permanently lift the moratorium.

Department Recommendation:

The Department recommends that the moratorium be lifted through adoption of the recommended rule changes. The Department intends to periodically monitor Clear and Collard Lakes. If there is significant degradation of water quality, the Department would evaluate further action. Depending on available staff and competing water quality priorities, such further actions could include working with local residents to develop a management plan, further groundwater or surface water studies, or requiring that sewers be installed.

Barbara Burton
Report Author

Steve Greenwood BAB
Division Administrator

Director

Accommodations for disabilities are available upon request by contacting the Public Affairs Office at (503)229-5317(voice)/(503)229-6993(TDD).

State of Oregon
Department of Environmental Quality Memorandum

Date: February 28, 1997

To: Environmental Quality Commission

From: Langdon Marsh, Director

Subject: Agenda Item E, Permanent Rule Adoption to Lift the Clear Lake Watershed Moratorium by Amending Oregon Administrative Rules (OAR) 340-41-270, OAR 340-71-400(2), and OAR 340-71-460, EQC Meeting on February 28, 1997

Statement of Purpose

The Department had a moratorium banning new on-site systems in the Clear Lake watershed, located near Florence. The moratorium had been in place since 1983, and was lifted through temporary rule adoption by the Commission at the October 11, 1996 meeting. The purpose of this action is to lift the moratorium through adoption of permanent rules.

Background

The Clear Lake watershed is located just north of Florence, in Lane County. Heceta Water District draws its raw water from Clear Lake, and sells drinking water to the City of Florence among other customers. Collard Lake, also in the watershed, discharges into Clear Lake. In response to studies done by Lane County showing levels of nutrients in Collard Lake that were of concern, the Commission imposed an on-site system moratorium in 1983. The purpose of the moratorium was to prevent the growth of algae in the lakes, until a watershed management plan could be developed. Initially, the Department believed the limiting nutrient for algal growth was nitrogen.

Upon further study, the Department determined that phosphorous was the limiting nutrient in the lakes, not nitrogen. Therefore, in 1990 the Commission maintained the moratorium, but added a Total Maximum Daily Load (TMDL) for phosphorous and other requirements. There were no documented water quality standards violations. Rather, this TMDL was for the purpose of preventing pollution and adverse impact on the drinking water supply for the area.

A number of affected property owners filed a lawsuit in 1989 against the Department and Heceta Water District. The lawsuit was held in abeyance during a mediation effort in 1993 and 1994. Because of the slow pace of implementation of the mediation agreement, the lawsuit was reactivated and was due to go to trial in mid-1996. Under the supervision of federal judge Thomas Coffin, the Department entered into settlement discussions with the plaintiffs (property owners) in July, 1996 and reached agreement. One of the elements in the agreement was that the Department would recommend to the Commission that the moratorium be lifted within 90 days.

This was done, and the Commission adopted temporary rules lifting the moratorium on October 11, 1996.

There have been numerous and lengthy efforts to reach an agreement that is acceptable to all or most of the interested parties, including a mediation effort in 1993-4. Agreement was reached on a conceptual plan for protecting the watershed, and was approved by Lane County and the other participants in the mediation effort. In addition, the plan was approved by the City of Florence and was supported by the Department. The plan is not legally binding, however. Support for the plan has declined since the settlement of the lawsuit in 1996.

The 1994 plan was a difficult compromise agreement. There does not appear to be a local consensus on whether there is a water quality problem, and, if there is a problem, what the solution should be. There has been substantial controversy on each of the major provisions of the mediated agreement, and it is not clear if any of them will be implemented in the short term, other than adoption of the Lane County sediment control rules.

A key provision of an effective watershed management plan is the provision of sewers in the area surrounding Collard Lake, where there are numerous relatively small lots. Much of the development expected as a result of lifting the moratorium will occur here. There is strong opposition from local residents to paying for sewer service in the area. Given this strong opposition, there are a number of challenges to installing sewers as described below:

1. The area around Collard Lake was subdivided prior to adoption of state land use laws, and is outside of city limits and even outside an urban growth boundary. Sewers are considered an urban service, and prior to extending sewers various amendments to Lane County and the City of Florence's comprehensive plans must be made.

2. The City of Florence is willing to provide sewer service to the area, providing that they can do so in compliance with the applicable planning laws and providing that the sewers are paid for. Sewer extensions like this are typically paid for by the landowners benefiting (that is, the properties that will be served by the new sewers). Most Collard Lake residents are not willing to pay for the sewers, and without their support there may not be a legal mechanism to require them to pay for the sewers.

3. The Commission probably has authority to require that sewers be installed by rule. However, the circumstances here are somewhat unusual, and it is highly likely that a court challenge will result. Sewers could not be required if they were contrary to approved land use plans, which means there would have to be the cooperation of the City and County in amending those plans.

4. There is no general agreement in the area that there will be a serious water quality problem in the two lakes as a result of the increased development. Additional studies in the area could be helpful both to increase public support for possible protective measures, and also to support the Department's position in any litigation (likely to occur if sewers are required in the future).

5. In order to conduct further studies, there has to be an entity with both the funding and expertise/basic organization to carry out the work. In addition, if the designated entity is not willing to carry out the study on a voluntary basis, there has to be a legal mechanism to require that the study be done. The Department does not have the staff or funds to carry out a comprehensive study at this time.

6. If comprehensive groundwater studies are done, it may be difficult to find suitable sites for groundwater monitoring wells on a voluntary basis.

The Department reviewed the possible alternatives for protecting water quality in the two lakes, taking into account the various legal and practical difficulties listed above. These alternatives are discussed later in the report.

Authority of the Commission with Respect to the Issue

The Commission has the authority to amend administrative rules relating to water quality, under Oregon Revised Statutes (ORS) 183.335, 454.625, 468.020. 468B.010, and 468B.020.

Alternatives and Evaluation

At the October 11, 1996 Commission meeting, various Commissioners expressed concern about the fate of Clear and Collard Lakes, and what options would be available to protect the water quality in those lakes. The Department agreed to look into various options for protecting the watershed, and return with those options at the time of permanent rule making.

1. Lift the moratorium. This is the recommended alternative, and is identical to the temporary rules adopted by the Commission on October 11, 1996. Judge Coffin ruled that if the moratorium stays in place, it will constitute a takings. This ruling gives the Commission no reasonable choice other than to lift the moratorium. The Department believes that substantial new development will occur if the moratorium is lifted. Over time, the additional development will likely increase nutrient levels in both Collard Lake and Clear Lake which, in turn, will promote algal growth. In order to lift the moratorium, it will be necessary that OAR 340-41-270, sections 5 through 10 be deleted. The Department recommends that the TMDL remain in place (sections 1 through 4 of the rule). In addition, OAR 340-71-400(2) and OAR 340-71-460 should be amended to reflect the lifting of the moratorium. The TMDL provides a basis for developing and evaluating a watershed management plan should one be required.

Although the moratorium was effective in limiting new sources of nutrients in the watershed, it is clear that it is no longer an appropriate tool. As an alternative, the Department intends to develop and implement a long-term lake monitoring program. In addition to periodic collection and analysis of water samples from the lakes, the Department, as part of the monitoring program, will develop data analysis procedures that can detect water quality trends. The Department believes that these trends analyses will allow the Department to detect the advent of water quality

degradation. Once degradation is detected, the Department will be in a better position to garner support from the local constituents to begin mitigation measures. Upon the lifting of the moratorium ,the Department believes full development will not occur instantaneously, but over some period of time. Impact on the lakes will, therefore, also increase over time. The lake monitoring program should be able to detect the progress of water quality degradation in sufficient time for the Department to take corrective action before irreparable harm occurs to the water quality of the lakes..

Any useful monitoring data gathered by other entities (such as the Heceta Water District) will be used, to minimize duplicated efforts. If and when a significant change in water quality is seen, the Department would re-evaluate the circumstances and alternatives available. Future actions, should water quality degrade in the lakes, could include: work with local residents and entities to achieve a voluntary management plan; conduct further groundwater or surface water studies, to further identify the sources of pollution (this would then be used to recommend further action, possibly by the Commission); or wait until Department or local funds are available to carry out further studies or development of a management plan.

2. **Take no action, and allow the temporary rule to expire, which will have the effect of re-instating the moratorium.** The judge's order says that after October 15, 1996, if the moratorium is still in place it will constitute a "takings" under law. What that means is that the Department would be liable for additional damage claims by property owners, and would likely end up in additional litigation. This alternative is not recommended.

3. **Require that sewers be installed by rule.** Oregon Revised Statutes (ORS) 468B.020 gives broad authority for the Department to prevent new pollution and abate existing pollution. The Commission has never required the installation of sewers under the authority of ORS 468B.020, however it may be possible to do so under this broad authority. The Department recommends that this action only be considered if water quality is seriously degraded, and local entities are not taking effective measures to preserve water quality.

4. **Require new residents to install groundwater monitoring wells when notified by Department, but have the Department carry out the groundwater and surface water studies at some point in the future.** In addition, the new residents would be required as a condition of their on-site system permits to allow the Department access for the purposes of collecting samples from either groundwater monitoring wells or the septic tank/drainfield. The proposed rule that went out for public comment included these provisions. The draft rule was intended to get around one of the obstacles to carrying out future studies, namely the concern that there might not be enough suitable groundwater monitoring sites available on a voluntary basis.

Many comments were received opposed to this portion of the draft rule. The cost of the monitoring wells is about $3000 each, and more than one well could be required for a given lot. The Department did make it clear that our intentions are to only require the monitoring wells if funds are available for the Department to pay for the wells. However, it was possible that the property owners would have to pay for the wells. The financial burden was objected to, as well as what was perceived as an unreasonable intrusion onto private property. Some questions were

raised about whether such a requirement, if enacted, would constitute a takings and therefore require compensation from the Department. Some people submitting comments disagreed that groundwater studies were needed. There were no comments received in support of further groundwater studies.

Upon further review, the Department is no longer recommending the rule that was placed out for public comment for several reasons. First, the requirement for groundwater monitoring wells at some indefinite future time would put a significant financial risk/burden on some property owners. Second, if and when groundwater monitoring wells are installed, it is likely that only a few properties would be required to install the wells, even though many residents would be equally affecting groundwater (fairness issue). Third, there is likely to be some difficulty in implementing this rule. It is likely to be five years or more before groundwater studies would be started, and there may well be significant resistance from the property owners (property may have changed owners, or the owners may have forgotten about the potential monitoring requirement). Fourth, there will likely be litigation on this rule immediately if adopted, and could also be litigation by future property owners if and when the Department determines it is time to install monitoring wells. The legal arguments raised in the comments have been reviewed. Under current court decisions, the AG's office has advised us that they are confident that the Department would likely prevail in court today. However, the area of law relating to takings claims is an active one, with changes in court interpretations, and there could be some risk for future litigation.

Instead of placing requirements for groundwater monitoring in the proposed rule, the Department recommends that we rely upon voluntary monitoring sites, if and when groundwater studies are done.

Summary of Public Input Opportunity

Because of time constraints with the temporary rule expiring soon, and because of the lengthy debate over many years with no consensus reached, the Department did not attempt to put together an advisory committee on this issue. There was a 35 day public comment period, and a public hearing held in Florence. Fifteen people attended the hearing, and five people either gave oral testimony or submitted written comments at the hearing.

A summary of the comments submitted, and the Department's response is included in Attachment D. The presiding officer's report is also included in Attachment D. In summary, the comments from the various people submitting comments tended to fall in the following categories:

1. There is no pollution problem now, nor will there be with full development. The Department should go away and leave the residents alone.

2. Legal issues were raised relating to installing groundwater monitoring wells.

3. The additional development will result in an environmental disaster, and the moratorium should stay in place.

Conclusions

Despite years of effort to find a balanced solution to protecting the watershed, no agreement that is generally acceptable has been reached. The 1994 mediated agreement does form the framework for protecting the watershed and allowing some development. However, there does not appear to be a consensus in the area and support for the agreement is declining.

It is likely that some degradation of water quality will occur with the lifting of the moratorium and resulting additional development. However, given the current legal status of lengthy moratoriums and the lawsuit settlement reached, staff believes that the Commission has little choice other than to lift the moratorium. The Department will continue to monitor the water quality status of the lakes, and may return to the Commission for further action if water quality degrades.

Intended Future Actions

The Department intends to appear and testify in favor of protective ordinances proposed by Lane County. Those ordinances are expected to be discussed by the Lane County Commissioners in February, 1997. The Department also intends to institute a monitoring program to track the water quality in Collard and Clear Lakes.

Department Recommendation

The Department recommends that OAR 340-41-270 be amended, and sections 5 through 10 be deleted. OAR 340-71-460(6) should be deleted. OAR 340-71-400(2) should be modified to delete the reference to OAR 340-71-460(6) and to add a metes and bounds description of the Clear Lake watershed.

Attachments

Attachment A - Copies of the existing, permanent rules: OAR 340-41-270, OAR 340-71-400, and OAR 340-71-460

Attachment B - Copies of proposed modified rules for OAR 340-41-270, OAR 340-71-400, and OAR 340-71-460, as recommended in this report

Attachment C - Copies of the draft modified rules and supporting documents that were sent out for public comment.

Attachment D - Presiding Officers report, and the Department's response to comments submitted during the public comment period.

Approved:

Section: Barbara Burton

Division: Barbara Burton for Steve Greenwood

Report Prepared By: Barbara Burton

Phone: (503) 378-8240, extension 264

Date Prepared: January 30, 1997

ATTACHMENT A

EXISTING RULES

OAR 340-41-270, OAR 340-71-400, AND OAR 340-71-460

Special Policies and Guidelines

340-41-270 In order to preserve the existing high quality water in Clear Lake north of Florence for use as a public water supply source requiring only minimal filtration, it is the policy of the Environmental Quality Commission to protect the Clear Lake watershed including both surface and groundwaters, from existing and potential contamination sources with the following requirements:

(1) The total phosphorus maximum annual loading discharged into Clear Lake shall not exceed 241 pounds per year from all sources.

(2) The total phosphorus maximum annual loading for the Clear Lake watershed shall be deemed exceeded if the median concentration of total phosphorus from samples collected in the epilimnion between May 1 and September 30 exceed nine micrograms per liter during two consecutive years.

(3) Of the total phosphorus loading of 241 pounds per year specified in section (1) of this rule, 192 pounds per year shall be considered current background and Department reserve and shall not be available to other sources.

(4) The total phosphorus maximum annual loading discharged into Collard Lake shall not exceed 123 pounds per year.

(5) Lane County or any other jurisdiction shall not issue permits allowing connection of development in the Clear Lake watershed to a sewerage facility and the Department or its contract agent shall not issue on-site sewage system construction-installation permits or favorable site evaluation reports for on-site sewage systems within the Clear Lake watershed until a plan is submitted to and approved by the Department showing how total phosphorus loadings limitations required by this rule will be achieved and maintained. The plan shall include, but not be limited to, the following:

(a) Projected phosphorus loadings for existing development and future planned development within the Clear Lake watershed. Technical bases for the projections shall be cited. The plan shall include phosphorus loadings from storm runoff during and after construction, on-site sewage disposal systems and other management activities in the watershed including, but not limited to, forest harvesting;

(b) Adopted ordinances as necessary to carry out the provisions of the plan;

(c) Agreements, contracts and other information as needed to show how and what entity will effectively implement each provision of the plan.

(6) The plan required by section (5) of this rule shall address necessary controls to reduce phosphorus loadings into Collard Lake to levels less than 60 pounds per year. The Department may approve a plan with annual loadings greater than 60 pounds per year, but only if the plan demonstrates that controls necessary to achieve less than 60 pounds per year are unreasonable and overly burdensome.

(7) If the plan required by section (5) of this rule proposes that Clear Lake and/or Collard Lake loading limits be increased from levels established in section (1) and/or section (4) of this rule, the plan shall include the social and economic justification for such increases as required by Oregon Administrative Rule (OAR) 340-41-026. The justification shall show the costs of achieving the loading limits established in this rule as well as the economic and social benefits of increasing the loads. The Commission shall not approve any plan that will not achieve a lake loading limit for Collard Lake of 140 pounds or less of phosphorus per year. The Commission shall not approve any plan that will not achieve a lake loading limit for Clear Lake of 251 pounds or less of phosphorus per year.

(8) No construction of a sewerage facility to serve the Clear Lake watershed or a portion thereof shall begin until or unless:

(a) The facilities plan report and engineering plans and specifications have been approved in writing by the Department;

(b) It is constructed and operated by a municipality with authority for the operation and maintenance of sewerage facilities;

(c) Before construction starts, the responsible municipality shall demonstrate that it has a reliable source of funding to assure proper construction, operation, maintenance, and replacement of the required sewerage facilities.

(9) No on-site sewage system construction-installation permits, favorable site evaluation reports, or sanitary sewer connection permits shall be issued until a plan for monitoring the water quality of Clear Lake is submitted to and approved by the Department. The plan shall include contracts or memorandums of agreement that assure that the monitoring will be conducted.

(10) Unless it is demonstrated that stormwater runoff treatment and control systems are not necessary to meet the total maximum annual loading for total phosphorus, any off-site or on-site control facilities for stormwater quality control necessary to comply with this rule shall be under the control of a municipality.

Stat. Auth.: ORS 468.020, 468.705 & 468.710
Hist.: DEQ 3-1983, f. & ef. 4-13-83; DEQ 44-1990, f. & cert.

340-71-400 GEOGRAPHIC AREA SPECIAL CONSIDERATIONS.

(1) River Road — Santa Clara Area, Lane County:

(a) Within the areas set forth in subsection (b) of this section the Agent may issue either construction permits for new subsurface sewage disposal systems or favorable reports of evaluation of site suitability to construct systems under the following circumstances:

(A) The system complies with all rules in effect at the time the permit is issued; and

(B) The system will not in itself contribute, or in combination with other new sources after April 18, 1980, contribute more than sixteen and seven-tenths (16.7) pounds nitrate-nitrogen per acre per year to the local groundwater. The applicant shall assure compliance with this condition by showing his ownership or control of adequate land through easements or equivalent.

(b) Subsection (a) of this section shall apply to all of the following area generally known as River Road — Santa Clara, and defined by the boundary submitted by the Board of County Commissioners for Lane County, which is bounded on the south by the City of Eugene, on the west by the Southern Pacific Railroad, on the north by Beacon Drive, and on the east by the Willamette River, and containing all or portions of T16S, R4W, Sections 33, 34, 35, 36; T17S, R4W, Sections 1, 2, 3, 4, 10, 11, 12, 13, 14, 15, 22, 23, 24, 25; and T17S, R1E, Sections 6, 7, 18, Willamette Meridian;

340-71-460 MORATORIUM AREAS

(1) Whenever the Commission finds that construction of subsurface or alternative sewage disposal systems should be limited or prohibited in an area, it shall issue an order limiting or prohibiting such construction.

(2) The order shall be issued only after public hearing for which more than thirty (30) days' notice is given.

(3) The order shall be a rule of this division which contains a general description of the moratorium area. A more detailed description of the area, if needed, shall be an appendix to these rules.

(4) No permit or site evaluation report shall be issued for construction of a new or expanded system which would violate any order of the Commission issued pursuant to ORS 454.685.

(5) Criteria For Establishing Moratoriums: In issuing an order under this section the Commission shall consider the factors contained in ORS 454.685(2).

(6) Specific Moratorium Areas: Pursuant to ORS 454.685, the Agent shall not issue sewage system construction-installation permits or approved site evaluation reports within the boundaries of the following areas of the state:

Lane County - Clear Lake Watershed of the North Florence Dunal Aquifer Area, as follows: The area hereby known as the Clear Lake Watershed of the North Florence Dunal Aquifer Area defined by the hydrologic boundaries identified in the June 1982, **208 North Florence Dunal Aquifer Study** which is the area beginning at a point known as Tank One, located in Section One,

Township 18 South, Range 12 West, of the Willamette Meridian, Lane County, Oregon:

Run thence S. 67° 50' 51.5" E. 97.80 ft. to the True Point of Beginning;
Run thence S. 05° 40' 43.0" W. 1960.62 ft. to a point;
Run thence S. 04° 58' 45.4" W. 1301.91 ft. to a point;
Run thence S. 52° 44' 01.0" W. 231.21 ft. to a point;
Run thence S. 15° 20' 45.4" W. 774.62 ft. to a point;
Run thence S. 31° 44' 14.0" W. 520.89 ft. to a point;
Run thence S. 00° 24' 43.9" W. 834.02 ft. to a point;
Run thence S. 07° 49' 01.8" W. 1191.07 ft. to a point;
Run thence S. 50° 26' 06.3" W. 731.61 ft. to a point;
Run thence S. 02° 51' 10.5" W. 301.37 ft. to a point;
Run thence S. 36° 37' 58.2" W. 918.41 ft. to a point;
Run thence S. 47° 12' 26.3" W. 1321.86 ft. to a point;
Run thence S. 72° 58' 54.2" W. 498.84 ft. to a point;
Run thence S. 85° 44' 21.3" W. 955.64 ft. to a point;
Which is N. 11° 39' 16.9" W. 5434.90 ft. from a point known as Green Two (located in Section 13 in said Township and Range);
Run thence N. 58° 09' 44.1" W. 1630.28 ft. to a point;
Run thence N. 25° 23' 10.1" W. 1978.00 ft. to a point;
Run thence N. 16° 34' 21.0" W. 1731.95 ft. to a point;
Run thence N. 06° 13' 18.0" W. 747.40 ft. to a point;
Run thence N. 03° 50' 32.8" E. 671.51 ft. to a point;
Run thence N. 59° 33' 18.9" E. 1117.02 ft. to a point;
Run thence N. 59° 50' 06.0" E. 2894.56 ft. to a point;
Run thence N. 48° 28' 40.0" E. 897.56 ft. to a point;
Run thence N. 31° 29' 50.7" E. 920.64 ft. to a point;
Run thence N. 19° 46' 39.6" E. 1524.95 ft. to a point;
Run thence S. 76° 05' 37.1" E. 748.95 ft. to a point;
Run thence S. 57° 33' 30.2" E. 445.53 ft. to a point;
Run thence S. 78° 27' 44.9" E. 394.98 ft. to a point;
Run thence S. 61° 55' 39.0" E. 323.00 ft. to a point;
Run thence N. 89° 04' 46.8" E. 249.03 ft. to a point;
Run thence S. 67° 43' 17.4" E. 245.31 ft. to a point;
Run thence S. 79° 55' 09.8" E. 45.71 ft. to a point;
Run thence S. 83° 59' 27.6" E. 95.52 ft. to a point;
Run thence N. 42° 02' 57.2" E. 68.68 ft. to a point;
Run thence S. 80° 41' 24.2" E. 61.81 ft. to a point;
Run thence S. 10°47' 03.5" E. 128.27 ft. to the True Point of Beginning; and containing all or portions of T17S, R12W, Sections 35 and 36; and T18S, R12W, Sections 1, 2, 11 and 12; W.M., Lane County.

(c) This rule is subject to modification or repeal by the Commission on an area-by-area basis upon petition by the appropriate local agency or agencies. Such petition either shall provide reasonable evidence that development using subsurface sewage disposal systems will not cause unacceptable degradation of groundwater quality or surface water quality or shall provide equally adequate evidence that degradation of groundwater or surface water quality will not occur as a result of such modification or repeal;

(d) Subsections (a) and (b) of this section shall not apply to any construction permit application based on a favorable report of evaluation of site suitability issued by the Agent pursuant to ORS 454.755(1)(b), where such report was issued prior to the effective date of this rule.

(2) General North Florence Aquifer, North Florence Dunal Aquifer Area, Lane County:

(a) Within the area set forth in subsection (2)(b) of this rule, the agent may issue construction permits for new on-site sewage disposal systems or favorable reports of evaluation of site suitability to construct individual or community on-site sewage disposal systems under the following circumstances:

(A) The lot and proposed system shall comply with all rules in effect at the time the permit or favorable report of site suitability is issued; or

(B) The lot and proposed system complies with paragraph 2(a)(A) of this rule, except for the projected daily sewage loading rates, and the system in combination with all other previously approved systems owned or legally controlled by the applicant shall be projected by the Department to contribute to the local groundwater not more than fifty-eight (58) pounds nitrate-nitrogen NO_3-N per year per acre owned or controlled by the applicant.

(b) Subsection (2)(a) of this rule shall apply to all of the following area hereby known as the General North Florence Aquifer of the North Florence Dunal Area and is defined by the hydrologic boundaries identified in the June 1982, 208 North Florence Dunal Aquifer Study, which is the area bounded on the west by the Pacific Ocean; on the southwest and south by the Siuslaw River; on the east by the North Fork of the Siuslaw River and the ridge line at the approximate elevation of four hundred (400) feet above mean sea level directly east of Munsel Lake, Clear Lake and Collard Lake; and on the north by Mercer Lake, Mercer Creek, Sutton Lake and Sutton Creek; and containing all or

portions of T17S, R12W, Sections 27, 28, 33, 34, 35, 36, and T18S, T12W, sections 1, 2, 3, 4, 9, 10, 11, 12, 13, 14, 15, 16, 22, 23, 24, 25, 26, 27; W.M., Lane County, except that portion defined as the Clear Lake Watershed more particularly described by OAR 340-71-460(6)(f).

ATTACHMENT B

PROPOSED MODIFIED RULES

OAR 340-41-270, OAR 340-71-400, AND OAR 340-71-460

[Note - there are two sets of these rules. The first set shows the existing rules with the changes marked. The second set is a "clean" copy of the rules with the proposed modifications included]

Special Policies and Guidelines

340-41-270 In order to preserve the existing high quality water in Clear Lake north of Florence for use as a public water supply source requiring only minimal filtration, it is the policy of the Environmental Quality Commission to protect the Clear Lake watershed including both surface and groundwaters, from existing and potential contamination sources with the following requirements:

(1) The total phosphorus maximum annual loading discharged into Clear Lake shall not exceed 241 pounds per year from all sources.

(2) The total phosphorus maximum annual loading for the Clear Lake watershed shall be deemed exceeded if the median concentration of total phosphorus from samples collected in the epilimnion between May 1 and September 30 exceed nine micrograms per liter during two consecutive years.

(3) Of the total phosphorus loading of 241 pounds per year specified in section (1) of this rule, 192 pounds per year shall be considered current background and Department reserve and shall not be available to other sources.

(4) The total phosphorus maximum annual loading discharged into Collard Lake shall not exceed 123 pounds per year.

~~(5) Lane County or any other jurisdiction shall not issue permits allowing connection of development in the Clear Lake watershed to a sewerage facility and the Department or its contract agent shall not issue on-site sewage system construction-installation permits or favorable site evaluation reports for on-site sewage systems within the Clear Lake watershed until a plan is submitted to and approved by the Department showing how total phosphorus loadings limitations required by this rule will be achieved and maintained. The plan shall include, but not be limited to, the following:~~

~~(a)Projected phosphorus loadings for existing development and future planned development within the Clear Lake watershed. Technical bases for the projections shall be cited. The plan shall include phosphorus loadings from storm runoff during and after construction, on site sewage disposal systems and other management activities in the watershed including, but not limited to, forest harvesting;~~

~~(b) Adopted ordinances as necessary to carry out the provisions of the plan;~~

~~(c) Agreements, contracts and other information as needed to show how and what entity will effectively implement each provision of the plan.~~

~~(6) The plan required by section (5)of this rule shall address necessary controls to reduce phosphorus loadings into Collard Lake to levels less than 60 pounds per year. The Department may approve a plan with annual loadings greater than 60 pounds per year, but only if the plan demonstrates that controls necessary to achieve less than 60 pounds per year are unreasonable and overly burdensome.~~

~~(7)If the plan required by section (5) of this rule proposes that Clear Lake and/or Collard Lake loading limits be increased from levels established in section (1)and/or section (4)of this rule, the plan shall include the social and economic justification for such increases as required by Oregon Administrative Rule (OAR) 340-41-026. The justification shall show the costs of achieving the loading limits established in this rule as well as the economic and social benefits of increasing the loads. The Commission shall not approve any plan that will not achieve a lake loading limit for Collard Lake of 140 pounds or less of phosphorus per~~

~~year. The Commission shall not approve any plan that will not achieve a lake loading limit for Clear Lake of 251 pounds or less of phosphorus per year.~~

~~(8) No construction of a sewerage facility to serve the Clear Lake watershed or a portion thereof shall begin until or unless:~~

~~(a) The facilities plan report and engineering plans and specifications have been approved in writing by the Department;~~

~~(b) It is constructed and operated by a municipality with authority for the operation and maintenance of sewerage facilities;~~

~~(c)Before construction starts, the responsible municipality shall demonstrate that it has a reliable source of funding to assure proper construction, operation, maintenance, and replacement of the required sewerage facilities.~~

~~(9) No on-site sewage system construction installation permits, favorable site evaluation reports, or sanitary sewer connection permits shall be issued until a plan for monitoring the water quality of Clear Lake is submitted to and approved by the Department. The plan shall include contracts or memorandums of agreement that assure that the monitoring will be conducted.~~

~~(10) Unless it is demonstrated that stormwater runoff treatment and control systems are not necessary to meet the total maximum annual loading for total phosphorus, any off site or on site control facilities for stormwater quality control necessary to comply with this rule shall be under the control of a municipality.~~

~~—~~Stat. Auth.: ORS 183.335, 454.625, 468.020, ~~468.705 & 468.710~~, 468B.010 and 468B.020.
Stat. Implemented: ORS 454.685
Hist.: DEQ 3-1983, f. & ef. 4-18-83; DEQ 44-1990, f. & cert. ef. 12-19-90

340-71-400

Geographic Area Special Considerations.

(1) River Road — Santa Clara Area, Lane County:

(a) Within the areas set forth in subsection (b) of this section the Agent may issue either construction permits for new subsurface sewage disposal systems or favorable reports of evaluation of site suitability to construct systems under the following circumstances:

(A) The system complies with all rules in effect at the time the permit is issued; and

(B) The system will not in itself contribute, or in combination with other new sources after April 18, 1980, contribute more than sixteen and seven-tenths (16.7) pounds nitrate-nitrogen per acre per year to the local groundwater. The applicant shall assure compliance with this condition by showing his ownership or control of adequate land through easements or equivalent.

(b) Subsection (a) of this section shall apply to all of the following area generally known as River Road — Santa Clara, and defined by the boundary submitted by the Board of County Commissioners for Lane County, which is bounded on the south by the City of Eugene, on the west by the Southern Pacific Railroad, on the north by Beacon Drive, and on the east by the Willamette River, and containing all or portions of T16S, R4W, Sections 33, 34, 35, 36; T17S, R4W, Sections 1, 2, 3, 4, 10, 11, 12, 13, 14, 15, 22, 23, 24, 25; and T17S, R1E, Sections 6, 7, 18, Willamette Meridian;

(c) This rule is subject to modification or repeal by the Commission on an area-by-area basis upon petition by the appropriate local agency or agencies. Such petition either shall provide reasonable evidence that development using subsurface sewage disposal systems will not cause unacceptable degradation of groundwater quality or surface water quality or shall provide equally adequate evidence that degradation of groundwater or surface water quality will not occur as a result of such modification or repeal;

(d) Subsections (a) and (b) of this section shall not apply to any construction permit application based on a favorable report of evaluation of site suitability issued by the Agent pursuant to ORS 454.755(1)(b), where such report was issued prior to the effective date of this rule.

(2) General North Florence Aquifer, North Florence Dunal Aquifer Area, Lane County:

(a) Within the area set forth in subsection (2)(b) of this rule, the agent may issue construction permits for new on-site sewage disposal systems or favorable reports of evaluation of site suitability to construct individual or community on-site sewage disposal systems under the following circumstances:

(A) The lot and proposed system shall comply with all rules in effect at the time the permit or favorable report of site suitability is issued; or

(B) The lot and proposed system complies with paragraph 2(a)(A) of this rule, except for the projected daily sewage loading rates, and the system in combination with all other previously approved systems owned or legally controlled by the applicant shall be projected by the Department to contribute to the local groundwater not more than fifty-eight (58) pounds nitrate-nitrogen NO_3-N per year per acre owned or controlled by the applicant.

(b) Subsection (2)(a) of this rule shall apply to all of the following area hereby known as the General North Florence Aquifer of the North Florence Dunal Area and is defined by the hydrologic boundaries identified in the June 1982, 208 North Florence Dunal Aquifer Study, which is the area bounded on the west by the Pacific Ocean; on the southwest and south by the Siuslaw River; on the east by the North Fork of the Siuslaw River and the ridge line at the approximate elevation of four hundred (400) feet above mean sea level directly east of Munsel Lake, Clear Lake and Collard Lake; and on the north by Mercer Lake, Mercer Creek, Sutton Lake and Sutton Creek; and containing all or portions of T17S, R12W, Sections 27, 28, 33, 34, 35, 36, and T18S, T12W, sections 1, 2, 3, 4, 9, 10, 11, 12, 13, 14, 15, 16, 22, 23, 24, 25, 26, 27; W.M., Lane County, except that portion defined as the Clear Lake Watershed more particularly described by ~~OAR 340-71-460(6)(f).~~ Township 18 South, Range 12 West, of the Willamette Meridian, Lane County, Oregon:

Run thence S. 67° 50' 51.5" E. 97.80 ft. to the True Point of Beginning; Run thence S. 05° 40' 43.0" W. 1960.62 ft. to a point; Run thence S. 04° 58' 45.4" E. 1301.91 ft. to a point; Run thence S. 52° 44' 01.0" W. 231.21 ft. to a point; Run thence S. 15° 20' 45.4" E. 774.62 ft. to a point; Run thence S. 31°44' 14.0" W. 520.89.ft. to a point; Run thence S. 00° 24' 43.9" W. 834.02 ft. to a point; Run thence S. 07° 49' 01.8" W. 1191.07 ft. to a point; Run thence S. 50° 26' 06.3" W. 731.61 ft. to a point; Run thence S. 02° 51' 10.5" W. 301.37 ft. to a point; Run thence 36° 37' 58.2" W. 918.41 ft. to a point; Run thence S. 47° 12' 26.3" W. 1321.86 ft. to a point; Run thence S. 72° 58' 54.2" W. 498.84 ft. to a point; Run thence S. 85° 44' 21.3" W. 955.64 ft. to a point; Which is N. 11° 39' 16.9" W. 5434.90 ft. from a point known as Green Two (located in Section 13 in said Township and Range); Run thence N. 58° 09' 44.1" W. 1630.28 ft. to a point; Run thence N. 25° 23' 10.1" W. 1978.00 ft. to a point; Run thence N. 16° 34' 21.0" W. 1731.95 ft. to a point; Run thence N. 06° 13' 18.0" W. 747.40 ft. to a point; Run thence N. 03° 50' 32.8" E. 671.51 ft. to a point; Run thence N. 59° 33' 18.9" E. 1117.02 ft. to a point; Run thence N. 59° 50' 06.0" E. 1894.56 ft. to a point; Run thence N. 48° 28' 40.0" E. 897.56 ft. to a point; Run thence N. 31° 29' 50.7" E. 920.64 ft. to a point; Run thence N. 19° 46' 39.6" E. 1524.95 to a point; Run thence S. 76° 05' 37.1" E. 748.95 ft. to a point; Run thence S. 57° 33' 30.2" E. 445.53 ft. to a point; Run thence S. 78° 27' 44.9" E. 394.98 ft. to a point; Run thence S. 61° 55' 39.0" E. 323.00 ft. to a point; Run thence N. 89° 04' 46.8" E. 249.03 ft. to a point; Run thence S. 67° 43' 17.4" E. 245.31 ft. to a point; Run thence S. 79° 55' 09.8" E. 45.71 ft. to a point; Run thence S. 83° 59' 27.6" E. 95.52 ft. to a point; Run thence N. 42° 02' 57.2" E. 68.68 ft. to a point; Run thence S. 80° 41' 24.2" E. 61.81 ft. to a point; Run thence S. 10° 47' 03.5" E. 128.27 ft. to the True Point of Beginning; and containing all or portions of T17S, R12W, Sections 35 and 36; and T18S, R12W, Sections 1, 2, 11 and 12; W.M., Lane County.

(3) Lands Overlaying the Alsea Dunal Aquifer:

(a) Within the area set forth in subsection (3)(c) of this rule, the Agent may issue a construction permit for a new on-site sewage disposal system or a favorable report of evaluation of site suitability to construct a single on-site system on lots that were lots of record prior to January 1, 1981; or on lots in partitions or subdivisions that have received preliminary planning, zoning, and on-site sewage disposal approval prior to January 1,

1981, providing one of the following can be met:

(A) At the time the permit or favorable report of site suitability is issued the lot complies with OAR 340-71-100 through 340-71-360 and OAR 340-71-410 through 340-71-520; or

(B) The lot is found through site evaluation not to comply with OAR 340-71-100 through 340-71-360 and OAR 340-71-410 through 340-71-520, but does meet all of the following conditions when a pressurized seepage bed is utilized:

(i) Groundwater levels shall not be closer than four (4) feet from the ground surface or closer than three (3) feet from the bottom of the seepage bed;

(ii) The seepage bed shall be constructed in accordance with OAR 340-71-275(4) and (5);

(iii) The seepage bed shall be sized on the basis of two hundred (200) square feet of bottom area per one hundred fifty (150) gallons projected daily sewage flow;

(iv) Projected daily sewage flows shall be limited to not more than three hundred seventy-five (375) gallons per lot, except those lots which have a certificate of favorable site evaluation which provides for a larger flow;

(v) All setbacks identified in **Table 1** can be met, except that lots of record prior to May 1, 1973, shall maintain a minimum fifty (50) feet separation to surface public waters;

(vi) Sufficient area exists on the lot to install a seepage bed and a replacement seepage bed. The area reserved for replacement may be waived pursuant to the exception in OAR 340-71-150(4)(a)(B).

(C) The lot is found through site evaluation not to comply with OAR 340-71-100 through 340-71-360 and OAR 340-71-410 through 340-71-520, but does meet all of the following conditions when a conventional sand filter without a bottom is utilized:

(i) Groundwater levels shall not be closer than one (1) foot from the ground surface and not closer than one (1) foot from the bottom of the sand filter;

(ii) Sewage flows shall be limited to not more than three hundred seventy-five (375) gallons per day per lot, except those lots which have a certificate of favorable site evaluation which provides for a larger flow;

(iii) The sand filter shall be sized at one (1) square foot of bottom area for each gallon of projected daily sewage flow;

(iv) The conventional sand filter without a bottom shall be constructed in accordance with OAR 340-71-295(3);

(v) All setbacks identified in **Table 1** can be met, except that lots of record prior to May 1, 1973, shall maintain a minimum fifty (50) feet separation to surface public waters;

(vi) Sufficient area exists on the lot to install a bottomless conventional sand filter and a replacement bottomless conventional sand filter. The area for replacement may be waived pursuant to the exception contained in OAR 340-71-150(4)(a)(B).

(b) Within the area set forth in subsection (3)(c) of this rule, for lots created on or after January 1, 1981, and/or when the on-site system will serve a commercial facility, the Agent may issue a construction permit for a new on-site sewage disposal system or a favorable report of evaluation of site suitability if it is determined that all rules of the Commission can be met;

(c) The Alsea Dunal Aquifer is defined as all the land bounded on the East by Highway 101, the Pacific Ocean on the West, and from Driftwood Beach Wayside South

to the southern tip of the Alsea Bay Spit;

(d) If the results of groundwater monitoring in the Alsea Dunal Aquifer indicate unacceptable levels of degradation or if it appears necessary or desirable to pursue development of the aquifer as a source of drinking water, sewage collection and off-site treatment and disposal facilities shall be installed unless further study demonstrates that such facilities are not necessary or effective to protect the beneficial use.

(4) Christmas Valley Townsite, Lake County:

(a) Within the area set forth in subsection (4)(b) of this rule, the agent may consider the shallow groundwater table, if present, in the same manner as a temporary water table when preparing and/or issuing site evaluation reports and construction-installation permits;

(b) The Christmas Valley Townsite is defined as all land within the Christmas Valley Townsite plat located within Sections 9, 10, 11, 14, 15 and 16 of Township 27 South, Range 17 East, Willamette Meridian, in Lake County.

(5) Clatsop Plains Aquifer, Clatsop County: The Clatsop Plains Groundwater Protection Plan, prepared by R.W. Beck and Associates and adopted by Clatsop County, provides a basis for continued use of on-site sewage disposal systems while protecting the quality of groundwater for future water supplies. For the plan to be successful, the following components must be accomplished:

(a) By not later than January 1, 1983, Clatsop County shall identify and set aside aquifer reserve areas for future water supply development containing a minimum of two and one half (2-1/2) square miles. The reserve areas shall be controlled so that the potential for groundwater contamination from nitrogen and other possible pollutants is kept to a minimum;

(b) The Agent may issue construction installation permits for new on-site sewage disposal systems or favorable reports of site evaluation to construct on-site systems within the area generally known as the Clatsop Plains, which is bounded by the Columbia River to the North; the Pacific Ocean to the west; the Necanicum River, Neawanna Creek, and County Road 157 on the south; and the Carnahan Ditch-Skipanon River and the foothills of the Coast Range to the east, providing:

(A) The lot or parcel was created in compliance with the appropriate comprehensive plan for Gearhart (adopted by County Ordinance 80-3), Seaside (adopted by County Ordinance 80-10), Warrenton (adopted by County Ordinance 82-15), or the Clatsop County plan adopted through Ordinance No. 79-10; and either

(B) The lot or parcel does not violate any rule of this Division; or

(C) Lot or parcel does not violate the Department's Water Quality Management Plan or any rule of this Division, except the projected maximum sewage loading rate would exceed the ratio of four hundred fifty (450) gallons per one-half (1/2) acre per day. The on-site system shall be either a sand filter system or a pressurized distribution system with a design sewage flow not to exceed four hundred fifty (450) gallons per day; or

(D) The Department may approve the use of standard on-site systems to serve single family dwellings within planned developments or clustered-lot subdivisions providing:

(i) The planned development or clustered-lot subdivision is not located within Gearhart, Seaside, Warrenton, or their urban growth boundaries; and

(ii) The lots do not violate any rule of this Division, except the projected maximum sewage loading rate may exceed the ratio of four hundred fifty (450) gallons per acre per

day; and

(iii) The Department is provided satisfactory evidence through a detailed groundwater study that the use of standard systems will not constitute a greater threat to groundwater quality than would occur with the use of sand filter systems or pressurized distribution systems.

(6) Within areas east of the Cascade Range where the annual precipitation does not exceed twenty (20) inches, and after evaluating the site, the Agent may issue a construction-installation permit authorizing installation of a standard system to serve a single family dwelling, provided the requirements in subsections (6)(a) and (b) of this rule are met:

(a) Minimum Site Criteria:

(A) The property is ten (10) acres or larger in size. The minimum parcel size considered under this rule is designated by the County, but in no event shall it be less than ten (10) acres;

(B) The slope gradient does not exceed thirty (30) percent;

(C) The soils are diggable with a backhoe to a depth of at least twenty-four (24) inches;

(D) The site is found to comply with the provisions of OAR 340-71-220(1)(b,e,f,g,h, and i).

(b) Minimum Construction Requirements:

(A) The system shall contain not less than two hundred twenty-five (225) linear feet of disposal trench for projected sewage flows not exceeding four hundred fifty (450) gallons per day. Larger sewage flows shall be sized on the basis of seventy-five (75) linear feet per each one hundred fifty (150) gallons of projected flow;

(B) The system shall be constructed and backfilled in compliance with OAR 340-71-220: sections (3), (4), (5), (7) , (8), (9), (10), and (11) of this rule.

(c) At the discretion and request of the owner or the owner's authorized representative, a single application may be submitted to the Agent for both a site evaluation report and a construction-installation permit. The application would include the sum of the fees for both activities, pursuant to OAR 340-71-140(1)(a)(A) and OAR 340-71-140(1)(b)(A)(i), as well as the following:

(A) Favorable land use compatibility statement from the appropriate land use authority signifying that the proposed land use is compatible with the Land Conservation and Development Commission acknowledged comprehensive plan or complies with the statewide planning goals;

(B) Property development plan acceptable to the Agent showing the location of existing and proposed improvements, including the locations of the dwelling and sewage disposal system;

(C) All other exhibits the Agent finds are necessary to complete the application.

(d) The Agent may waive the pre-cover inspection for a system installed pursuant to this section, provided the system installer submits the following information to the Agent at the time construction of the system is complete:

(A) A detailed and accurate as-built plan of the constructed system; and

(B) A list of all material used in the construction of the system; and

(C) A written certification (on a form acceptable to the Department) that the

construction was in accordance with the permit and rules of the Commission.

(7) Within areas east of the Cascade Range where the annual precipitation does not exceed twenty (20) inches, the Agent may issue a construction-installation permit authorizing installation of a standard system to serve a single family dwelling, provided the requirements in subsections (7)(a) and (b) of this rule are met. The Agent may waive the site evaluation for a single family dwelling provided:

(a) Minimum Site Criteria:

(A) The property is eighty (80) acres or larger in size. The minimum parcel size considered under this rule is designated by the County, but in no event shall it be less than eighty (80) acres;

(B) The separation distance between the proposed on-site system and the nearest dwelling, other than that being served by the proposed system, is at least one-quarter mile;

(C) The nearest property line to the proposed system is at least 100 feet, the nearest domestic water source is at least 200 feet, and the nearest surface public water is at least 200 feet; and

(D) In the opinion of the Agent, sufficient topographical and soils information, including but not limited to slope, terrain, landform, and rock outcrops, is submitted with the application to determine the property can be approved for on-site sewage disposal in conformance with the purpose of these rules as stated in OAR 340-71-110.

(b) Minimum Construction Requirements:

(A) Sizing requirements of **Tables 4 and 5** shall be followed as closely as possible. In any case, the system shall contain not less than two hundred twenty-five (225) linear feet of disposal trench for projected sewage flows not exceeding four hundred fifty (450) gallons per day. Larger sewage flows shall be sized on the basis of seventy-five (75) linear feet per each one hundred fifty (150) gallons of projected flow;

(B) The system shall be constructed and backfilled as closely as possible to the requirements contained in OAR 340-71-220.

(c) At the request of the owner or the owner's authorized representative, a single application may be submitted to the Agent for both a site evaluation report and a construction-installation permit. The application would include the fee for a site evaluation, pursuant to OAR 340-71-140, as well as the following:

(A) Favorable land use compatibility statement from the appropriate land use authority signifying that the proposed land use is compatible with the Land Conservation and Development Commission acknowledged comprehensive plan or complies with the statewide planning goals;

(B) Property development plan acceptable to the Agent showing the location of existing and proposed improvements, including the locations of the dwelling and sewage disposal system;

(C) All other exhibits the Agent finds are necessary to complete the application;

(D) If the decision is made to waive the site evaluation, the fee will be transferred to the permit.

(d) The Agent may waive the pre-cover inspection for a system installed pursuant to this section, provided the system installer submits the following information to the Agent at the time construction of the system is complete:

(A) A detailed and accurate as-built plan of the constructed system; and

(B) A list of all material used in the construction of the system; and

(C) A written certification (on a form acceptable to the Department) that the construction was in accordance with the permit and rules of the Commission.

(e) The conditions for OAR 340-71-400(7) shall be set forth in an addendum to the memorandum of agreement (contract) between the County and the Department.

Stat. Author.: ORS 183.335, 454.625, 468.020, 468B.010 and 468B.020.
Stat. Impl.: ORS 454.610, 454.615

340-71-460
Moratorium Areas

(1) Whenever the Commission finds that construction of subsurface or alternative sewage disposal systems should be limited or prohibited in an area, it shall issue an order limiting or prohibiting such construction.

(2) The order shall be issued only after public hearing for which more than thirty (30) days' notice is given.

(3) The order shall be a rule of this division which contains a general description of the moratorium area. A more detailed description of the area, if needed, shall be an appendix to these rules.

(4) No permit or site evaluation report shall be issued for construction of a new or expanded system which would violate any order of the Commission issued pursuant to ORS 454.685.

(5) Criteria For Establishing Moratoriums: In issuing an order under this section the Commission shall consider the factors contained in ORS 454.685(2).

~~(6) Specific Moratorium Areas: Pursuant to ORS 454.685, the Agent shall not issue sewage system construction-installation permits or approved site evaluation reports within the boundaries of the following areas of the state:~~

~~Lane County - Clear Lake Watershed of the North Florence Dunal Aquifer Area, as follows: The area hereby known as the Clear Lake Watershed of the North Florence Dunal Aquifer Area defined by the hydrologic boundaries identified in the June 1982, **208 North Florence Dunal Aquifer Study** which is the area beginning at a point known as Tank One, located in Section One, Township 18 South, Range 12 West, of the Willamette Meridian, Lane County, Oregon:~~

~~Run thence S. 67° 50' 51.5" E. 97.80 ft. to the True Point of Beginning; Run thence S. 05° 40' 43.0" W. 1960.62 ft. to a point; Run thence S. 04° 58' 45.4" W. 1301.91 ft. to a point; Run thence S. 52° 44' 01.0" W. 231.21 ft. to a point; Run thence S. 15° 20' 45.4" W. 774.62 ft. to a point; Run thence S. 31° 44' 14.0" W. 520.89 ft. to a point; Run thence S. 00° 24' 43.9" W. 834.02 ft. to a point; Run thence S. 07° 49' 01.8" W. 1191.07 ft. to a point; Run thence S. 50° 26' 06.3" W. 731.61 ft. to a point; Run thence S. 02° 51' 10.5" W. 301.37 ft. to a point; Run thence S. 36° 37' 58.2" W. 918.41 ft. to a point; Run thence S. 47° 12' 26.3" W. 1321.86 ft. to a point; Run thence S. 72° 58' 54.2" W. 498.84 ft. to a point; Run thence S. 85° 44' 21.3" W. 955.64 ft. to a point; Which is N. 11° 39' 16.9" W. 5434.90 ft. from a point known as Green Two (located in Section 13 in said Township and Range);~~

~~Run thence N. 58° 09' 44.1" W. 1630.28 ft. to a point; Run thence N. 25° 23' 10.1" W. 1978.00 ft. to a point; Run thence N. 16° 34' 21.0" W. 1731.95 ft. to a point; Run thence N. 06° 13' 18.0" W. 747.40 ft. to a point; Run thence N. 03° 50' 32.8" E. 671.51 ft. to a point; Run thence N. 59° 33' 18.9" E. 1117.02 ft. to a point; Run thence N. 59° 50' 06.0" E. 2894.56 ft. to a point; Run thence N. 48° 28' 40.0" E. 897.56 ft. to a point; Run thence N. 31° 29' 50.7" E. 920.64 ft. to a point; Run thence N. 19° 46' 39.6" E. 1524.95 ft. to a point; Run thence S. 76° 05' 37.1" E. 748.95 ft. to a point; Run thence S. 57° 33' 30.2" E. 445.53 ft. to a point; Run thence S. 78° 27' 44.9" E. 394.98 ft. to a point; Run thence S. 61° 55' 39.0" E. 323.00 ft. to a point; Run thence N. 89° 04' 46.8" E. 249.03 ft. to a point; Run thence S. 67° 43' 17.4" E. 245.31 ft. to a point; Run thence S. 79° 55' 09.8" E. 45.71 ft. to a point; Run thence S. 83° 59' 27.6" E. 95.52 ft. to a point; Run thence N. 42° 02' 57.2" E. 68.68 ft. to a point; Run thence S. 80° 41' 24.2" E. 61.81 ft. to a point; Run thence S. 10°47' 03.5" E. 128.27 ft. to the True Point of beginning; and containing all or portions of T17S, R12W, Sections 35 and 36; and T18S, R12W, Sections 1, 2, 11 and 12; W.M., Lane County.~~

Stat. Author.: ORS 183.335, 454.625, 468.020, 468B.010 and 468B.020.
Stat. Impl.: ORS 454.685

Special Policies and Guidelines

340-41-270 In order to preserve the existing high quality water in Clear Lake north of Florence for use as a public water supply source requiring only minimal filtration, it is the policy of the Environmental Quality Commission to protect the Clear Lake watershed including both surface and groundwaters, from existing and potential contamination sources with the following requirements:

(1) The total phosphorus maximum annual loading discharged into Clear Lake shall not exceed 241 pounds per year from all sources.

(2) The total phosphorus maximum annual loading for the Clear Lake watershed shall be deemed exceeded if the median concentration of total phosphorus from samples collected in the epilimnion between May 1 and September 30 exceed nine micrograms per liter during two consecutive years.

(3) Of the total phosphorus loading of 241 pounds per year specified in section (1) of this rule, 192 pounds per year shall be considered current background and Department reserve and shall not be available to other sources.

(4) The total phosphorus maximum annual loading discharged into Collard Lake shall not exceed 123 pounds per year.

Stat. Auth.: ORS 183.335, 454.625, 468.020,, 468B.010 and 468B.020.
Stat. Implemented: ORS 454.685
Hist.: DEQ 3-1983, f. & ef. 4-18-83; DEQ 44-1990, f. & cert. ef. 12-19-90

340-71-400

Geographic Area Special Considerations.

(1) River Road — Santa Clara Area, Lane County:

(a) Within the areas set forth in subsection (b) of this section the Agent may issue either construction permits for new subsurface sewage disposal systems or favorable reports of evaluation of site suitability to construct systems under the following circumstances:

(A) The system complies with all rules in effect at the time the permit is issued; and

(B) The system will not in itself contribute, or in combination with other new sources after April 18, 1980, contribute more than sixteen and seven-tenths (16.7) pounds nitrate-nitrogen per acre per year to the local groundwater. The applicant shall assure compliance with this condition by showing his ownership or control of adequate land through easements or equivalent.

(b) Subsection (a) of this section shall apply to all of the following area generally known as River Road — Santa Clara, and defined by the boundary submitted by the Board of County Commissioners for Lane County, which is bounded on the south by the City of Eugene, on the west by the Southern Pacific Railroad, on the north by Beacon Drive, and on the east by the Willamette River, and containing all or portions of T16S, R4W, Sections 33, 34, 35, 36; T17S, R4W, Sections 1, 2, 3, 4, 10, 11, 12, 13, 14, 15, 22, 23, 24, 25; and T17S, R1E, Sections 6, 7, 18, Willamette Meridian;

(c) This rule is subject to modification or repeal by the Commission on an area-by-area basis upon petition by the appropriate local agency or agencies. Such petition either shall provide reasonable evidence that development using subsurface sewage disposal systems will not cause unacceptable degradation of groundwater quality or surface water quality or shall provide equally adequate evidence that degradation of groundwater or surface water quality will not occur as a result of such modification or repeal;

(d) Subsections (a) and (b) of this section shall not apply to any construction permit application based on a favorable report of evaluation of site suitability issued by the Agent pursuant to ORS 454.755(1)(b), where such report was issued prior to the effective date of this rule.

(2) General North Florence Aquifer, North Florence Dunal Aquifer Area, Lane County:

(a) Within the area set forth in subsection (2)(b) of this rule, the agent may issue construction permits for new on-site sewage disposal systems or favorable reports of evaluation of site suitability to construct individual or community on-site sewage disposal systems under the following circumstances:

(A) The lot and proposed system shall comply with all rules in effect at the time the permit or favorable report of site suitability is issued; or

(B) The lot and proposed system complies with paragraph 2(a)(A) of this rule, except for the projected daily sewage loading rates, and the system in combination with all other previously approved systems owned or legally controlled by the applicant shall be projected by the Department to contribute to the local groundwater not more than fifty-eight (58) pounds nitrate-nitrogen NO_3-N per year per acre owned or controlled by the applicant.

(b) Subsection (2)(a) of this rule shall apply to all of the following area hereby known as the General North Florence Aquifer of the North Florence Dunal Area and is defined by the hydrologic boundaries identified in the June 1982, 208 North Florence Dunal Aquifer Study, which is the area bounded on the west by the Pacific Ocean; on the southwest and south by the Siuslaw River; on the east by the North Fork of the Siuslaw River and the ridge line at the approximate elevation of four hundred (400) feet above mean sea level directly east of Munsel Lake, Clear Lake and Collard Lake; and on the north by Mercer Lake, Mercer Creek, Sutton Lake and Sutton Creek; and containing all or portions of T17S, R12W, Sections 27, 28, 33, 34, 35, 36, and T18S, T12W, sections 1, 2, 3, 4, 9, 10, 11, 12, 13, 14, 15, 16, 22, 23, 24, 25, 26, 27; W.M., Lane County, except that portion defined as the Clear Lake Watershed more particularly described byTownship 18 South, Range 12 West, of the Willamette Meridian, Lane County, Oregon:
Run thence S. 67° 50' 51.5" E. 97.80 ft. to the True Point of Beginning; Run thence S. 05° 40' 43.0" W. 1960.62 ft. to a point; Run thence S. 04° 58' 45.4" E.. 1301.91 ft. to a point; Run thence S. 52° 44' 01.0" W. 231.21 ft. to a point; Run thence S. 15° 20' 45.4" E. 774.62 ft. to a point; Run thence S. 31°44' 14.0" W. 520.89.ft. to a point; Run thence S. 00° 24' 43.9" W. 834.02 ft. to a point; Run thence S. 07° 49' 01.8" W. 1191.07 ft. to a point; Run thence S. 50° 26' 06.3" W. 731.61 ft. to a point; Run thence S. 02° 51' 10.5" W. 301.37 ft. to a point; Run thence 36° 37' 58.2" W. 918.41 ft. to a point; Run thence S. 47° 12' 26.3" W. 1321.86 ft. to a point; Run thence S. 72° 58' 54.2" W. 498.84 ft. to a point; Run thence S. 85° 44' 21.3" W. 955.64 ft. to a point; Which is N. 11° 39' 16.9" W. 5434.90 ft. from a point known as Green Two (located in Section 13 in said Township and Range); Run thence N. 58° 09' 44.1" W. 1630.28 ft. to a point; Run thence N. 25° 23' 10.1" W. 1978.00 ft. to a point; Run thence N. 16° 34' 21.0" W. 1731.95 ft. to a point; Run thence N. 06° 13' 18.0" W. 747.40 ft. to a point; Run thence N. 03° 50' 32.8" E. 671.51 ft. to a point; Run thence N. 59° 33' 18.9" E. 1117.02 ft. to a point; Run thence N. 59° 50' 06.0" E. 1894.56 ft. to a point; Run thence N. 48° 28' 40.0" E. 897.56 ft. to a point; Run thence N. 31° 29' 50.7" E. 920.64 ft. to a point; Run thence N. 19° 46' 39.6" E. 1524.95 to a point; Run thence S. 76° 05' 37.1" E. 748.95 ft. to a point; Run thence S. 57° 33' 30.2" E. 445.53 ft. to a point; Run thence S. 78° 27' 44.9" E. 394.98 ft. to a point; Run thence S. 61° 55' 39.0" E. 323.00 ft. to a point; Run thence N. 89° 04' 46.8" E, 249.03 ft. to a point; Run thence S. 67° 43' 17.4" E. 245.31 ft. to a point; Run thence S. 79° 55' 09.8" E. 45.71 ft. to a point; Run thence S. 83° 59' 27.6" E. 95.52 ft. to a point; Run thence N. 42° 02' 57.2" E. 68.68 ft. to a point; Run thence S. 80° 41' 24.2" E. 61.81 ft. to a point; Run thence S. 10° 47' 03.5" E. 128.27 ft. to the True Point of Beginning; and containing all or portions of T17S, R12W, Sections 35 and 36; and T18S, R12W, Sections 1, 2, 11 and 12; W.M., Lane County.

(3) Lands Overlaying the Alsea Dunal Aquifer:

(a) Within the area set forth in subsection (3)(c) of this rule, the Agent may issue a construction permit for a new on-site sewage disposal system or a favorable report of evaluation of site suitability to construct a single on-site system on lots that were lots of record prior to January 1, 1981; or on lots in partitions or subdivisions that have received preliminary planning, zoning, and on-site sewage disposal approval prior to January 1, 1981, providing one of the following can be met:

(A) At the time the permit or favorable report of site suitability is issued the lot complies with OAR 340-71-100 through 340-71-360 and OAR 340-71-410 through 340-71-520; or

(B) The lot is found through site evaluation not to comply with OAR 340-71-100 through 340-71-360 and OAR 340-71-410 through 340-71-520, but does meet all of the following conditions when a pressurized seepage bed is utilized:

(i) Groundwater levels shall not be closer than four (4) feet from the ground surface or closer than three (3) feet from the bottom of the seepage bed;

(ii) The seepage bed shall be constructed in accordance with OAR 340-71-275(4) and (5);

(iii) The seepage bed shall be sized on the basis of two hundred (200) square feet of bottom area per one hundred fifty (150) gallons projected daily sewage flow;

(iv) Projected daily sewage flows shall be limited to not more than three hundred seventy-five (375) gallons per lot, except those lots which have a certificate of favorable site evaluation which provides for a larger flow;

(v) All setbacks identified in **Table 1** can be met, except that lots of record prior to May 1, 1973, shall maintain a minimum fifty (50) feet separation to surface public waters;

(vi) Sufficient area exists on the lot to install a seepage bed and a replacement seepage bed. The area reserved for replacement may be waived pursuant to the exception in OAR 340-71-150(4)(a)(B).

(C) The lot is found through site evaluation not to comply with OAR 340-71-100 through 340-71-360 and OAR 340-71-410 through 340-71-520, but does meet all of the following conditions when a conventional sand filter without a bottom is utilized:

(i) Groundwater levels shall not be closer than one (1) foot from the ground surface and not closer than one (1) foot from the bottom of the sand filter;

(ii) Sewage flows shall be limited to not more than three hundred seventy-five (375) gallons per day per lot, except those lots which have a certificate of favorable site evaluation which provides for a larger flow;

(iii) The sand filter shall be sized at one (1) square foot of bottom area for each gallon of projected daily sewage flow;

(iv) The conventional sand filter without a bottom shall be constructed in accordance with OAR 340-71-295(3);

(v) All setbacks identified in **Table 1** can be met, except that lots of record prior to May 1, 1973, shall maintain a minimum fifty (50) feet separation to surface public waters;

(vi) Sufficient area exists on the lot to install a bottomless conventional sand filter and a replacement bottomless conventional sand filter. The area for replacement may be waived pursuant to the exception contained in OAR 340-71-150(4)(a)(B).

(b) Within the area set forth in subsection (3)(c) of this rule, for lots created on or after January 1, 1981, and/or when the on-site system will serve a commercial facility, the Agent may issue a construction permit for a new on-site sewage disposal system or a favorable report of evaluation of site suitability if it is determined that all rules of the Commission can be met;

(c) The Alsea Dunal Aquifer is defined as all the land bounded on the East by Highway 101, the Pacific Ocean on the West, and from Driftwood Beach Wayside South to the southern tip of the Alsea Bay Spit;

(d) If the results of groundwater monitoring in the Alsea Dunal Aquifer indicate unacceptable levels of degradation or if it appears necessary or desirable to pursue development of the aquifer as a source of drinking water, sewage collection and off-site treatment and disposal facilities shall be installed unless further study demonstrates that such facilities are not necessary or effective to protect the beneficial use.

(4) Christmas Valley Townsite, Lake County:

(a) Within the area set forth in subsection (4)(b) of this rule, the agent may consider the shallow groundwater table, if present, in the same manner as a temporary water table when preparing and/or issuing site evaluation reports and construction-installation permits;

(b) The Christmas Valley Townsite is defined as all land within the Christmas Valley Townsite plat located within Sections 9, 10, 11, 14, 15 and 16 of Township 27 South, Range 17 East, Willamette Meridian, in Lake County.

(5) Clatsop Plains Aquifer, Clatsop County: The Clatsop Plains Groundwater Protection Plan, prepared by R.W. Beck and Associates and adopted by Clatsop County, provides a basis for continued use of on-site sewage disposal systems while protecting the quality of groundwater for future water supplies. For the plan to be successful, the following components must be accomplished:

(a) By not later than January 1, 1983, Clatsop County shall identify and set aside aquifer reserve areas for future water supply development containing a minimum of two and one half (2-1/2) square miles. The reserve areas shall be controlled so that the potential for groundwater contamination from nitrogen and other possible pollutants is kept to a minimum;

(b) The Agent may issue construction installation permits for new on-site sewage disposal systems or favorable reports of site evaluation to construct on-site systems, within the area generally known as the Clatsop Plains, which is bounded by the Columbia River to the North; the Pacific Ocean to the west; the Necanicum River, Neawanna Creek, and County Road 157 on the south; and the Carnahan Ditch-Skipanon River and the foothills of the Coast Range to the east, providing:

(A) The lot or parcel was created in compliance with the appropriate comprehensive plan for Gearhart (adopted by County Ordinance 80-3), Seaside (adopted by County Ordinance 80-10), Warrenton (adopted by County Ordinance 82-15); or the Clatsop County plan adopted through Ordinance No. 79-10; and either

(B) The lot or parcel does not violate any rule of this Division; or

(C) Lot or parcel does not violate the Department's Water Quality Management Plan or any rule of this Division, except the projected maximum sewage loading rate would exceed the ratio of four hundred fifty (450) gallons per one-half (1/2) acre per day. The on-site system shall be either a sand filter system or a pressurized distribution system with a design sewage flow not to exceed four hundred fifty (450) gallons per day; or

(D) The Department may approve the use of standard on-site systems to serve single family dwellings within planned developments or clustered-lot subdivisions providing:

(i) The planned development or clustered-lot subdivision is not located within Gearhart, Seaside, Warrenton, or their urban growth boundaries; and

(ii) The lots do not violate any rule of this Division, except the projected maximum sewage loading rate may exceed the ratio of four hundred fifty (450) gallons per acre per day; and

(iii) The Department is provided satisfactory evidence through a detailed groundwater study that the use of standard systems will not constitute a greater threat to groundwater quality than would occur with the use of sand filter systems or pressurized distribution systems.

(6) Within areas east of the Cascade Range where the annual precipitation does not exceed twenty (20) inches, and after evaluating the site, the Agent may issue a construction-installation permit authorizing installation of a standard system to serve a single family dwelling, provided the requirements in subsections (6)(a) and (b) of this rule are met:

(a) Minimum Site Criteria:

(A) The property is ten (10) acres or larger in size. The minimum parcel size considered under this rule is designated by the County, but in no event shall it be less than ten (10) acres;

(B) The slope gradient does not exceed thirty (30) percent;

(C) The soils are diggable with a backhoe to a depth of at least twenty-four (24) inches;

(D) The site is found to comply with the provisions of OAR 340-71-220(1)(b,e,f,g,h, and i).

(b) Minimum Construction Requirements:

(A) The system shall contain not less than two hundred twenty-five (225) linear feet of disposal trench for projected sewage flows not exceeding four hundred fifty (450) gallons per day. Larger sewage flows shall be sized on the basis of seventy-five (75) linear feet per each one hundred fifty (150) gallons of projected flow;

(B) The system shall be constructed and backfilled in compliance with OAR 340-71-220: sections (3), (4), (5), (7) , (8), (9), (10), and (11) of this rule.

(c) At the discretion and request of the owner or the owner's authorized representative, a single application may be submitted to the Agent for both a site evaluation report and a construction-installation permit. The application would include the sum of the fees for both activities, pursuant to OAR 340-71-140(1)(a)(A) and OAR 340-71-140(1)(b)(A)(i), as well as the following:

(A) Favorable land use compatibility statement from the appropriate land use authority signifying that the proposed land use is compatible with the Land Conservation and Development Commission acknowledged comprehensive plan or complies with the statewide planning goals;

(B) Property development plan acceptable to the Agent showing the location of existing and proposed improvements, including the locations of the dwelling and sewage disposal system;

(C) All other exhibits the Agent finds are necessary to complete the application.

(d) The Agent may waive the pre-cover inspection for a system installed pursuant to this section, provided the system installer submits the following information to the Agent at the time construction of the system is complete:

(A) A detailed and accurate as-built plan of the constructed system; and

(B) A list of all material used in the construction of the system; and

(C) A written certification (on a form acceptable to the Department) that the construction was in accordance with the permit and rules of the Commission.

(7) Within areas east of the Cascade Range where the annual precipitation does not exceed twenty (20) inches, the Agent may issue a construction-installation permit authorizing installation of a standard system to serve a single family dwelling, provided the requirements in subsections (7)(a) and (b) of this rule are met. The Agent may waive the site evaluation for a single family dwelling provided:

(a) Minimum Site Criteria:

(A) The property is eighty (80) acres or larger in size. The minimum parcel size considered under this rule is designated by the County, but in no event shall it be less than eighty (80) acres;

(B) The separation distance between the proposed on-site system and the nearest dwelling, other than that being served by the proposed system, is at least one-quarter mile;

(C) The nearest property line to the proposed system is at least 100 feet, the nearest domestic water source is at least 200 feet, and the nearest surface public water is at least 200 feet; and

(D) In the opinion of the Agent, sufficient topographical and soils information, including but not limited to slope, terrain, landform, and rock outcrops, is submitted with the application to determine the property can be approved for on-site sewage disposal in conformance with the purpose of these rules as stated in OAR 340-71-110.

(b) Minimum Construction Requirements:

(A) Sizing requirements of **Tables 4 and 5** shall be followed as closely as possible. In any case, the system shall contain not less than two hundred twenty-five (225) linear feet of disposal trench for projected sewage flows not exceeding four hundred fifty (450) gallons per day. Larger sewage flows shall be sized on the basis of seventy-five (75) linear feet per each one hundred fifty (150) gallons of projected flow;

(B) The system shall be constructed and backfilled as closely as possible to the requirements contained in OAR 340-71-220.

(c) At the request of the owner or the owner's authorized representative, a single application may be submitted to the Agent for both a site evaluation report and a construction-installation permit. The application would include the fee for a site evaluation, pursuant to OAR 340-71-140, as well as the following:

(A) Favorable land use compatibility statement from the appropriate land use authority signifying that the proposed land use is compatible with the Land Conservation and Development Commission acknowledged comprehensive plan or complies with the statewide planning goals;

(B) Property development plan acceptable to the Agent showing the location of existing and proposed improvements, including the locations of the dwelling and sewage disposal system;

(C) All other exhibits the Agent finds are necessary to complete the application;

(D) If the decision is made to waive the site evaluation, the fee will be transferred to the permit.

(d) The Agent may waive the pre-cover inspection for a system installed pursuant to this section, provided the system installer submits the following information to the Agent at the time construction of the system is complete:

(A) A detailed and accurate as-built plan of the constructed system; and

(B) A list of all material used in the construction of the system; and

(C) A written certification (on a form acceptable to the Department) that the construction was in accordance with the permit and rules of the Commission.

(e) The conditions for OAR 340-71-400(7) shall be set forth in an addendum to the memorandum of agreement (contract) between the County and the Department.

Stat. Author.: ORS 183.335, 454.625, 468.020, 468B.010 and 468B.020.
Stat. Impl.: ORS 454.610, 454.615

340-71-460
Moratorium Areas

(1) Whenever the Commission finds that construction of subsurface or alternative sewage disposal systems should be limited or prohibited in an area, it shall issue an order limiting or prohibiting such construction.

(2) The order shall be issued only after public hearing for which more than thirty (30) days' notice is given.

(3) The order shall be a rule of this division which contains a general description of the moratorium area. A more detailed description of the area, if needed, shall be an appendix to these rules.

(4) No permit or site evaluation report shall be issued for construction of a new or expanded system which would violate any order of the Commission issued pursuant to ORS 454.685.

(5) Criteria For Establishing Moratoriums: In issuing an order under this section the Commission shall consider the factors contained in ORS 454.685(2).

Stat. Author.: ORS 183.335, 454.625, 468.020, 468B.010 and 468B.020.
Stat. Impl.: ORS 454.685

ATTACHMENT C

DRAFT RULE AND SUPPORTING DOCUMENTS SENT OUT FOR PUBLIC COMMENT

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

Date: November 22, 1996

To: Interested and Affected Public

Subject: Rulemaking Proposal and Rulemaking Statements - Rules Relating to On-site Sewage Disposal Systems in the Clear Lake Watershed Area in Lane County

This memorandum contains information on a proposal by the Department of Environmental Quality (DEQ) to adopt rule amendments regarding the Clear Lake watershed area. Pursuant to ORS 183.335, this memorandum also provides information about the Environmental Quality Commission's intended action to adopt a rule.

This proposal would have the effect of permanently lifting the on-site sewage disposal system moratorium in the area, and further would require certain actions that would allow the Department to conduct further studies in the area.

The Department has the statutory authority to address this issue under Oregon Revised Statutes (ORS) 183.335, 454.625, 468.020, 468B.010, 468B.020, and 468B.035

What's in this Package?

Attachments to this memorandum provide details on the proposal as follows:

Attachment A The official statement describing the fiscal and economic impact of the proposed rule. (required by ORS 183.335)

Attachment B A statement providing assurance that the proposed rules are consistent with statewide land use goals and compatible with local land use plans.

Attachment C Questions to be Answered to Reveal Potential Justification for Differing from Federal Requirements.

Attachment D The actual language of the proposed rule (amendments).

Hearing Process Details
The Department is conducting a public hearing at which comments will be accepted either orally or in writing. The hearing will be held as follows:

Date: January 21, 1997
Time: 6:00 PM
Place: Florence Event Center, 715 Quince Street, Florence, Oregon

Deadline for submittal of Written Comments: January 24, 1997

The Presiding Officer at the hearing has not yet been appointed.

Written comments can be presented at the hearing or to the Department any time prior to the date above. Comments should be sent to: Department of Environmental Quality, Attention Barbara Burton, 750 Front Street, NE, Salem, Oregon 97310.

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

What Happens After the Public Comment Period Closes

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

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

The EQC will consider the Department's recommendation for rule adoption during one of their regularly scheduled public meetings. The targeted meeting date for consideration of this rulemaking proposal is February 28, 1997. This date may be delayed if needed to provide additional time for evaluation and response to testimony received in the hearing process.

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

Background on Development of the Rulemaking Proposal
Why is there a need for the rule?

In response to concerns about water quality in Collard and Clear Lakes, the EQC adopted a moratorium for on-site sewage disposal systems in the watershed until such time as a management plan could be put in place to protect the two lakes. The moratorium was in effect from 1983 until October, 1996, when the EQC adopted a temporary rule lifting the moratorium. The EQC took this action because of an adverse court ruling against moratoriums of long or uncertain duration.

The EQC lifted the moratorium, despite concerns that no management plan was in place to protect the lakes. The proposed permanent rules are expected to accomplish the following:

Make permanent the temporary rules lifting the moratorium, in conformance with the court ruling. Permanent rule making is needed because temporary rules can remain in effect no more than 180 days under Oregon law.

Allow the Department access to some sites in the area, for the purpose of conducting further groundwater studies relating to the impact of on-site sewage disposal systems on groundwater and the lakes.

Allows the Department, should lake water quality deteriorate, to conduct further studies including groundwater monitoring in the area. In order to carry out these studies, it is necessary for there to be an adequate number and location of groundwater monitoring sites, and also that the Department have access to them. As part of a study, the proposed rule requires that property owners installing on-site sewage disposal systems in the area also install and maintain monitoring wells upon notification by the Department. Property owners may request that the Department install the wells on their property, at the Department's expense. However, the Department is not obligated to pay for the monitoring wells if requested. The Department will install monitoring wells at the request of applicants only if funds specifically designated for that purpose are available to the Department.

How was the rule developed

The rule was developed by Department staff. In developing this rule, the Department relied upon Oregon Revised Statutes (ORS) 183, 454, 468, and 468B, and Oregon Administrative Rules (OAR) 340, Divisions 41 and 71.

Copies of the documents relied upon in the development of this rulemaking proposal can be reviewed at the Department of Environmental Quality's office at 1102 Lincoln Street, Suite 210, Eugene, Oregon. Please contact Julie Berndt at (541) 686-7838, extension 234 for times when the documents are available for review.

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

The rule affects property owners in the Clear Lake watershed who apply for on-site sewage disposal system construction permits. It will also affect users of Collard and Clear Lake, including the Heceta Water District and the City of Florence and their drinking water customers. The proposed rule may also affect other users of the aquifer in the watershed. Lane County is the Department's contract agent for the on-site sewage disposal system program for the area, and will be affected.

How will the rule be implemented

The Department intends to monitor Collard and Clear Lakes on a periodic basis for phosphorous, nitrogen, and other pollutants of concern. If phosphorous levels or other pollutant levels are seen to rise significantly, the Department may institute further studies of groundwater and surface waters in the area. The purpose of the study, if done, will be to determine the impact of drainfields and other sources of contaminants on groundwater and lake water quality, and if necessary prepare recommendations for corrective actions to reduce phosphorous or other pollutant levels in the lakes. Depending on the study results, the Department may return to rule-making and require corrective actions, such as requiring that sewers be installed around the Collard Lake area. It is anticipated that the study, if done, will not be started for at least five years.

In order to carry out the studies described above, it is necessary for there to be an adequate number and location of groundwater monitoring sites, and also that the Department have access to them. The Department may also need information relating to septic tanks and pollutant loads in them. One goal of this rule is to insure that groundwater monitoring sites and septic systems monitoring sites will be available, if and when the Department determines that further studies are needed. This will be accomplished through permit conditions made part of the installation permits issued for new on-site sewage disposal system permits. The Department intends to provide guidance documents and example permit language to Lane County, which acts as the Department's agent for the on-site sewage disposal program.

At this point, the Department intends to only require the installation of monitoring wells if funds are available to the Department to pay for them if requested by the property owners. However, the Department may require that the property owners install the monitoring wells at their expense.

Are there time constraints

Yes. The temporary rule will expire in mid April, 1997. The February 28, 1997 EQC meeting is the last one prior to that date. If the temporary rule is allowed to expire without permanent rules in place to lift the moratorium, then the Department could be at risk for lawsuits filed by property owners.

Contact for more information

An informational meeting will be held at 5:30 on January 21, 1997, at the same place and just prior to the public hearing. If there are other questions about the proposed rule, contact Barbara Burton at (503) 378-8240, extension 264 AFTER JANUARY 13, 1997.

ATTACHMENT A

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking Proposal
for
Water Quality Rules Relating to the Clear Lake Watershed in Lane County

Fiscal and Economic Impact Statement

Introduction

The proposed rule has three primary components, of varying fiscal impact. In summary, these three components are:

- The proposed rule permanently lifts the on-site sewage disposal system moratorium in the Clear Lake watershed. This will allow the affected property owners to build on their sites, which they have not been able to do for the past 13 years. The ability to build is of significant value to the property owners. The increased development (expected to occur using individual on-site systems) is expected to increase the level of algae in Collard and Clear Lakes, over time. Clear Lake is a drinking water source. High levels of algae, if it occurs, will increase the cost of treating the water.

- The proposed rules require that persons applying for on-site sewage disposal system permits in the Clear Lake watershed must install one or more monitoring wells on their property, upon notification by the Department. If the Department detects significant degradation of water quality in Collard and Clear lakes, further groundwater and surface water studies in the area may be conducted. The Department does not expect to start this study for at least five years, and no groundwater monitoring wells will likely be required until the Department initiates the study. Sample results from the groundwater monitoring wells would be used in the larger study to be conducted by the Department. All lots are zoned residential. There are approximately 60 lots that are likely to be developed. Based on the time constraints, study requirements, and location of the lots, some of these lots will not be required to install monitoring wells. Staff estimates that a total of no more than 40 wells will be required, at a total average cost of about $3000 for each well ($120,000 total). If the Department proceeds with the study, separate grant funds to pay for the monitoring wells would probably be pursued. If such funds become available, the proposed rule allows the affected property owners to request that the Department install the wells at the Department's expense.

- The third component of the proposed rule is to allow the Department access to the on-site systems, plus any monitoring wells on site, for the purposes of sampling. This periodic access by the Department is not expected to have a cost associated with it for the property owners, however it will cost the Department in terms of staff time if the sampling occurs.

General Public

The primary fiscal impact of this rule will be to allow affected property owners the use of their property for the purposes of constructing and using a residence. For those property owners not wishing to develop, this rule will likely raise the value of their property if they wish to sell. There are 68 lots affected by the raising of the moratorium, although not all are expected to be developed. The value of the expanded use of the properties would depend on the property. Assuming an typical increase of value of $28,750 per lot, the total increase in value would be about $2,012,000.

The Department expects that the additional development of the area on septic tanks and drainfields will cause the phosphorous and algae levels in the two nearby lakes to increase, and that sewers in the Collard lake area will likely be required. However, prior to requiring sewers, the Department is likely to conduct further studies in the area. It is possible that the studies and recommended corrective actions will not be completed in time to prevent unacceptable levels of algae in the lakes. This could mean an increase in the cost of treatment by the Heceta Water District, which would be passed on to District customers including the City of Florence.

If relatively high levels of algae develop in Clear Lake, the following impacts on the water treatment plant would be as follows:

- There would be a decrease in capacity of the treatment plant, since there would have to be more backflushes of the filter (to be installed). Backflushes take the filters out of service, and also require large amounts of finished water. A decrease in capacity would mean that the treatment plant would have to be expanded "prematurely", as the Florence area grows and demand for drinking water increases. The increase in backflushes would also mean additional operation costs.

- There will be an increase in chemical usage.

- If there are taste and odor problems (associated with some kinds of algae), then additional treatment will be required such as the use of activated charcoal.

Overall, it is estimated that treatment costs could be up to 25% higher if a significant algae problem develops in Clear Lake. Assuming a $20/residence base rate, and the equivalent of 5700 residential customers for the one million gallons per day treatment plant, this could add up to approximately $340,000 per year in additional costs to water users.

Monitoring wells are estimated at about $3000 per well. In addition, it may take some time for the property owners to secure the services of a certified well driller, and possibly to be on site during the drilling activity. It is estimated that each site should take no more than 20 hours per property owner. Some sites may require two or three monitoring wells. It is expected that those sites with more than one well will not require more of the property owner's time, but will require an additional $3000 per well. Maintaining the well should not involve any additional time or expense. Any monitoring and additional evaluations done will be done by the Department, and at the Department's expense. If the Department is able to secure additional special grant funds, the Department will pay for the wells upon request of affected property owners.

Small Business

All affected sites are residential, so there will be no impact on small business.

Large Business

All affected sites are residential, so there will be no impact on large businesses.

Local Governments

Lane County is the Department's contract agent for the on-site sewage disposal system program. There may be some time required by County staff to explain these additional requirements to applicants. However, the Department intends to prepare informational material and guidance for Lane County, and further intends to be the main contact for questions and approval of monitoring well sites. It is expected that Lane County staff will spend an additional 50 hours total because of the proposed rule.

Heceta Water District will be affected as described above, but is likely to pass on any increased cost of operation to its customers.

State Agencies

DEQ - This rule will enable the Department to conduct a larger study in the area relating to phosphorous and nitrogen in drainfields, groundwater, and the lakes. The rule does not require that the Department conduct this study, however. If the Department did conduct the larger study, it is estimated that it will take a total of 1500 hours of staff time spread over a four to five year period. This includes time spent by the person heading the study, and time spent by the Department's laboratory. The study, if and when it is done, could either be done by existing DEQ staff and using existing funding sources, or it could be funded by a special grant if one is located. The rule itself will require that the Department spend approximately 100 hours for the following: preparing guidance materials and

handouts for Lane County and applicants and talking to applicants with questions about the rule requirements.

Other Agencies - The Water Resources Department would issue permits for any required monitoring wells. However, they charge a fee for this activity and so the fiscal impact is expected to be negligible.

Housing Cost Impact

The Department estimates that this rulemaking will have minimal impact, if any, on the cost of development of a 6,000 square foot parcel and the construction of a 1,200 square foot detached single family dwelling on that parcel. Some property owners may be required to install groundwater monitoring wells on their property, in the event that the Department requires further studies in the area. The cost of the wells are expected to be about $3000 each, and there may be as many as three wells required on an individual site.

Assumptions

As described above, the following assumptions were used:

- Monitoring wells will be 2 inches, 20 to 25 feet deep on average, at a cost of $3000 each
- There will be no more than 40 monitoring wells required.
- Benefit to affected property owners will vary by lot, but a typical lot (Broeker lot used) would benefit about $28,750.
- About 60 more lots will be developed in the area.
- High levels of algae could increase drinking water treatment costs up to 25%
- The existing Heceta Water District plant is rated at 1 million gallons per day. Assuming 70 gallons water usage per capita per day, and assuming 2.5 people average residential occupancy, this computes to an equivalent of 5700 residential customers.
- A typical monthly service charge for a smaller water treatment plant with filtration would be $20. Note - Heceta Water District does not currently filter water from Clear Lake, however they are under an order by the Oregon Health Division to provide filtration in conformance with U.S. Environmental Protection Agency requirements.

ATTACHMENT B
State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking Proposal
for
Water Quality Rules Relating to the Clear Lake Watershed in Lane County

Land Use Evaluation Statement

1. Explain the purpose of the proposed rules.

There are two purposes of these proposed rules. The proposed rules will have the effect of permanently removing the on-site sewage disposal system moratorium for the Clear Lake watershed, and will also allow further studies to be conducted in the area by the Department.

2. Do the proposed rules affect existing rules, programs or activities that are considered land use programs in the DEQ State Agency Coordination (SAC) Program?

Yes_X_ No____

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

These rules will affect the on-site sewage disposal system program, which is included in 340-018-030(5)(d)

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

Yes_X_ No_____ (if no, explain):

Under current DLCD rules, local government review and approval of a Land Use Compatibility Statement is required before on-site sewage disposal system permits can be issued.

c. **If no, apply the following criteria to the proposed rules.**

In the space below, state if the proposed rules are considered programs affecting land use. State the criteria and reasons for the determination.

3. **If the proposed rules have been determined a land use program under 2. above, but are not subject to existing land use compliance and compatibility procedures, explain the new procedures the Department will use to ensure compliance and compatibility.**

Not applicable

Division	Intergovernmental Coord.	Date

ATTACHMENT C

Questions to be Answered to Reveal Potential Justification for Differing from Federal Requirements.

1. Are there federal requirements that are applicable to this situation? If so, exactly what are they?

The Clean Water Act requires that delegated states such as Oregon must set Total Maximum Daily Loads (TMDL's) for water bodies that are water quality limited (that is, the water body exceeds one or more instream water quality standard). The Clean Water Act also allows states to set TMDL's where there is a potential for exceeding one or more standards. The Environmental Quality Commission did set a TMDL for Collard and Clear Lakes, because there was an expectation that water quality standards would be exceeded. The proposed rule lifts the on-site system moratorium, which may cause the TMDL to be exceeded. However, the proposed rule also allows the Department to conduct further studies which will be used in developing a strategy to prevent the two lakes from exceeding water quality standards. The water quality standards at issue were adopted by the Environmental Quality Commission, pursuant to the Clean Water Act.

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

Performance based. The federal requirements are based on achieving water quality standards and protecting beneficial uses.

3. Do the applicable federal requirements specifically address the issues that are of concern in Oregon? Was data or information that would reasonably reflect Oregon's concern and situation considered in the federal process that established the federal requirements?

Not known.

4. Will the proposed requirement improve the ability of the regulated community to comply in a more cost effective way by clarifying confusing or potentially conflicting requirements (within or cross-media), increasing certainty, or preventing or reducing the need for costly retrofit to meet more stringent requirements later?

Yes. The proposed rule will allow the Department to conduct studies, which will help determine whether further controls are necessary.

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

There are no time frames included within the general federal requirements. However, the longer that studies are delayed, the more likely that Collard and Clear Lakes will exceed water quality standards before an effective management plan can be put in place.

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

Yes.

7. Does the proposed requirement establish or maintain reasonable equity in the requirements for various sources? (level the playing field)

Yes and no. By lifting the on-site moratorium, all property owners can build on their sites if the site meets zoning and physical requirements for an on-site system. Monitoring wells will only be put on the properties of person applying for on-site construction permits, and property owners who volunteer to allow the Department access to their property for the purpose of monitoring.

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

Probably yes. The Department expects the water quality in Collard and Clear Lakes to degrade with the increased number of on-site systems, which will likely result in increased costs for treatment of drinking water taken from Clear Lake. The additional cost would be borne by the customers of Heceta Water District, which includes the City of Florence.

9. Does the proposed requirement include procedural requirements, reporting or monitoring requirements that are different from applicable federal requirements? If so, Why? What is the "compelling reason" for different procedural, reporting or monitoring requirements?

Federal rules do not specify how management plans are to be developed, nor does it require that individual property owners install groundwater monitoring wells. The Department has reviewed groundwater studies done in the area, which show a connection

between groundwater and the two lakes. Based on this connection, the Department believes that further studies of groundwater and surface water are needed prior to developing a management plan to protect water quality in the lakes.

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

Yes.

11. Will the proposed requirement contribute to the prevention of pollution or address a potential problem and represent a more cost effective environmental gain?

Yes and no. By lifting the moratorium and allowing the construction of additional on-site systems, the Department expects water quality in the lakes to degrade. By putting into place a rule that allows the Department to conduct an effective study of the area, the amount of impact can be minimized and an effective management plan put in place.

ATTACHMENT D

PROPOSED RULE LANGUAGE

Special Policies and Guidelines

340-41-270 In order to preserve the existing high quality water in Clear Lake north of Florence for use as a public water supply source requiring only minimal filtration, it is the policy of the Environmental Quality Commission to protect the Clear Lake watershed including both surface and groundwaters, from existing and potential contamination sources with the following requirements:

(1) The total phosphorus maximum annual loading discharged into Clear Lake shall not exceed 241 pounds per year from all sources.

(2) The total phosphorus maximum annual loading for the Clear Lake watershed shall be deemed exceeded if the median concentration of total phosphorus from samples collected in the epilimnion between May 1 and September 30 exceed nine micrograms per liter during two consecutive years.

(3) Of the total phosphorus loading of 241 pounds per year specified in section (1) of this rule, 192 pounds per year shall be considered current background and Department reserve and shall not be available to other sources.

(4) The total phosphorus maximum annual loading discharged into Collard Lake shall not exceed 123 pounds per year.

(5) Permittees holding on-site sewage disposal system construction permits issued after the effective date of this rule in the Clear Lake watershed shall install monitoring wells unless otherwise waived by the Department, and allow the Department and/or its designees access for the purposes of collecting samples, as described more fully in OAR 340-71-400(2).

Stat. Auth.: ORS 183.335, 454.625, 468.020,, 468B.010 and 468B.020.

Stat. Implemented: ORS 454.685

Hist.: DEQ 3-1983, f. & ef. 4-18-83; DEQ 44-1990, f. & cert. ef. 12-19-90

340-71-400

Geographic Area Special Considerations.

(1) River Road — Santa Clara Area, Lane County:

(a) Within the areas set forth in subsection (b) of this section the Agent may issue either construction permits for new subsurface sewage disposal systems or favorable reports of evaluation of site suitability to construct systems under the following circumstances:

(A) The system complies with all rules in effect at the time the permit is issued; and

(B) The system will not in itself contribute, or in combination with other new sources after April 18, 1980, contribute more than sixteen and seven-tenths (16.7) pounds nitrate-nitrogen per acre per year to the local groundwater. The applicant shall assure compliance with this condition by showing his ownership or control of adequate land through easements or equivalent.

(b) Subsection (a) of this section shall apply to all of the following area generally known as River Road — Santa Clara, and defined by the boundary submitted by the Board of County Commissioners for Lane County, which is bounded on the south by the City of Eugene, on the west by the Southern Pacific Railroad, on the north by Beacon Drive, and on the east by the Willamette River, and containing all or portions of T16S, R4W, Sections 33, 34, 35, 36; T17S, R4W, Sections 1, 2, 3, 4, 10, 11, 12, 13, 14, 15, 22, 23, 24, 25; and T17S, R1E, Sections 6, 7, 18, Willamette Meridian;

(c) This rule is subject to modification or repeal by the Commission on an

area-by-area basis upon petition by the appropriate local agency or agencies. Such petition either shall provide reasonable evidence that development using subsurface sewage disposal systems will not cause unacceptable degradation of groundwater quality or surface water quality or shall provide equally adequate evidence that degradation of groundwater or surface water quality will not occur as a result of such modification or repeal;

(d) Subsections (a) and (b) of this section shall not apply to any construction permit application based on a favorable report of evaluation of site suitability issued by the Agent pursuant to ORS 454.755(1)(b), where such report was issued prior to the effective date of this rule.

(2) General North Florence Aquifer, North Florence Dunal Aquifer Area, Lane County:

(a) Within the area set forth in subsection (2)(b) of this rule, the agent may issue construction permits for new on-site sewage disposal systems or favorable reports of evaluation of site suitability to construct individual or community on-site sewage disposal systems under the following circumstances:

(A) The lot and proposed system shall comply with all rules in effect at the time the permit or favorable report of site suitability is issued; or

(B) The lot and proposed system complies with paragraph 2(a)(A) of this rule, except for the projected daily sewage loading rates, and the system in combination with all other previously approved systems owned or legally controlled by the applicant shall be projected by the Department to contribute to the local groundwater not more than fifty-eight (58) pounds nitrate-nitrogen NO_3-N per year per acre owned or controlled by the applicant.

(b) Subsection (2)(a) of this rule shall apply to all of the following area hereby known as the General North Florence Aquifer of the North Florence Dunal Area and is defined by the hydrologic boundaries identified in the June 1982, 208 North Florence Dunal Aquifer Study, which is the area bounded on the west by the Pacific Ocean; on the southwest and south by the Siuslaw River; on the east by the North Fork of the Siuslaw River and the ridge line at the approximate elevation of four hundred (400) feet above mean sea level directly east of Munsel Lake, Clear Lake and Collard Lake; and on the north by Mercer Lake, Mercer Creek, Sutton Lake and Sutton Creek; and containing all or portions of T17S, R12W, Sections 27, 28, 33, 34, 35, 36, and T18S, T12W, sections 1, 2, 3, 4, 9, 10, 11, 12, 13, 14, 15, 16, 22, 23, 24, 25, 26, 27; W.M., Lane County, except that portion defined as the Clear Lake Watershed which is the area beginning at a point known as Tank One, located in Section One, Township 18 South, Range 12 West, of the Willamette Meridian, Lane County, Oregon:

Run thence S. 67° 50' 51.5" E. 97.80 ft. to the True Point of Beginning; Run thence S. 05° 40' 43.0" W. 1960.62 ft. to a point; Run thence S. 04° 58' 45.4" E. 1301.91 ft. to a point; Run thence S. 52° 44' 01.0" W. 231.21 ft. to a point; Run thence S. 15° 20' 45.4" E. 774.62 ft. to a point; Run thence S. 31°44' 14.0" W. 520.89.ft. to a point; Run thence S. 00° 24' 43.9" W. 834.02 ft. to a point; Run thence S. 07° 49' 01.8" W. 1191.07 ft. to a point; Run thence S. 50° 26' 06.3" W. 731.61 ft. to a point; Run thence S. 02° 51' 10.5" W. 301.37 ft. to a point; Run thence 36° 37' 58.2" W. 918.41 ft. to a point; Run thence S. 47° 12' 26.3" W. 1321.86 ft. to a point; Run thence S. 72° 58' 54.2" W.

498.84 ft. to a point; Run thence S. 85° 44' 21.3" W. 955.64 ft. to a point; Which is N. 11° 39' 16.9" W. 5434.90 ft. from a point known as Green Two (located in Section 13 in said Township and Range); Run thence N. 58° 09' 44.1" W. 1630.28 ft. to a point; Run thence N. 25° 23' 10.1" W. 1978.00 ft. to a point; Run thence N. 16° 34' 21.0" W. 1731.95 ft. to a point; Run thence N. 06° 13' 18.0" W. 747.40 ft. to a point; Run thence N. 03° 50' 32.8" E. 671.51 ft. to a point; Run thence N. 59° 33' 18.9" E. 1117.02 ft. to a point; Run thence N. 59° 50' 06.0" E. 1894.56 ft. to a point; Run thence N. 48° 28' 40.0" E. 897.56 ft. to a point; Run thence N. 31° 29' 50.7" E. 920.64 ft. to a point; Run thence N. 19° 46' 39.6" E. 1524.95 to a point; Run thence S. 76° 05' 37.1" E. 748.95 ft. to a point; Run thence S. 57° 33' 30.2" E. 445.53 ft. to a point; Run thence S. 78° 27' 44.9" E. 394.98 ft. to a point; Run thence S. 61° 55' 39.0" E. 323.00 ft. to a point; Run thence N. 89° 04' 46.8" E, 249.03 ft. to a point; Run thence S. 67° 43' 17.4" E. 245.31 ft. to a point; Run thence S. 79° 55' 09.8" E. 45.71 ft. to a point; Run thence S. 83° 59' 27.6" E. 95.52 ft. to a point; Run thence N. 42° 02' 57.2" E. 68.68 ft. to a point; Run thence S. 80° 41' 24.2" E. 61.81 ft. to a point; Run thence S. 10° 47' 03.5" E. 128.27 ft. to the True Point of Beginning; and containing all or portions of T17S, R12W, Sections 35 and 36; and T18S, R12W, Sections 1, 2, 11 and 12; W.M., Lane County.

(c) The Department may conduct further studies in the Clear Lake watershed, including groundwater monitoring. Within 90 days of notification by the Department, unless otherwise agreed to in writing by the Department, holders of on-site sewage disposal system permits issued after the effective date of this rule in the Clear Lake watershed, as defined in this rule, shall install and maintain one or more monitoring wells on the permittee's site. The monitoring wells shall be installed and operated at the expense of the permittee and following the conditions set by the Department, including but not limited to the location, depth of well and the screened interval. The permittee may request in writing a waiver of this requirement or request that the Department install the monitoring well or wells at the Department's expense. The sole criteria for the Department granting a waiver are: the site is not needed to conduct groundwater studies, as determined by the Department; or the Department has determined that further groundwater studies will not be conducted. The Department will install monitoring wells at the request of permittees and at the expense of the Department only if funds specifically designated for that purpose are available to the Department.

(d) Permittees holding on-site sewage disposal system construction permits in the Clear Lake watershed shall allow the Department and/or its designees reasonable access to the permittee's property for the purpose of collecting samples from the septic tank and drainfield, and for the purpose of collecting samples from any monitoring wells. The permittee shall allow the Department and/or designees to dispose on the permittee's property water purged from the sampling well prior to sampling, after consultation with the permittee as to preferred location of disposal. The on-site construction permit shall include conditions allowing the Department and/or its designees access to the permittee's property as described in this rule. All other applicable requirements in Division 71 relating to application for and construction of the on-site sewage disposal system must also be met prior to issuance of the on-site sewage disposal system construction permit.

(3) Lands Overlaying the Alsea Dunal Aquifer:

(a) Within the area set forth in subsection (3)(c) of this rule, the Agent may issue a

construction permit for a new on-site sewage disposal system or a favorable report of evaluation of site suitability to construct a single on-site system on lots that were lots of record prior to January 1, 1981; or on lots in partitions or subdivisions that have received preliminary planning, zoning, and on-site sewage disposal approval prior to January 1, 1981, providing one of the following can be met:

(A) At the time the permit or favorable report of site suitability is issued the lot complies with OAR 340-71-100 through 340-71-360 and OAR 340-71-410 through 340-71-520; or

(B) The lot is found through site evaluation not to comply with OAR 340-71-100 through 340-71-360 and OAR 340-71-410 through 340-71-520, but does meet all of the following conditions when a pressurized seepage bed is utilized:

(i) Groundwater levels shall not be closer than four (4) feet from the ground surface or closer than three (3) feet from the bottom of the seepage bed;

(ii) The seepage bed shall be constructed in accordance with OAR 340-71-275(4) and (5);

(iii) The seepage bed shall be sized on the basis of two hundred (200) square feet of bottom area per one hundred fifty (150) gallons projected daily sewage flow;

(iv) Projected daily sewage flows shall be limited to not more than three hundred seventy-five (375) gallons per lot, except those lots which have a certificate of favorable site evaluation which provides for a larger flow;

(v) All setbacks identified in **Table 1** can be met, except that lots of record prior to May 1, 1973, shall maintain a minimum fifty (50) feet separation to surface public waters;

(vi) Sufficient area exists on the lot to install a seepage bed and a replacement seepage bed. The area reserved for replacement may be waived pursuant to the exception in OAR 340-71-150(4)(a)(B).

(C) The lot is found through site evaluation not to comply with OAR 340-71-100 through 340-71-360 and OAR 340-71-410 through 340-71-520, but does meet all of the following conditions when a conventional sand filter without a bottom is utilized:

(i) Groundwater levels shall not be closer than one (1) foot from the ground surface and not closer than one (1) foot from the bottom of the sand filter;

(ii) Sewage flows shall be limited to not more than three hundred seventy-five (375) gallons per day per lot, except those lots which have a certificate of favorable site evaluation which provides for a larger flow;

(iii) The sand filter shall be sized at one (1) square foot of bottom area for each gallon of projected daily sewage flow;

(iv) The conventional sand filter without a bottom shall be constructed in accordance with OAR 340-71-295(3);

(v) All setbacks identified in **Table 1** can be met, except that lots of record prior to May 1, 1973, shall maintain a minimum fifty (50) feet separation to surface public waters;

(vi) Sufficient area exists on the lot to install a bottomless conventional sand filter and a replacement bottomless conventional sand filter. The area for replacement may be waived pursuant to the exception contained in OAR 340-71-150(4)(a)(B).

(b) Within the area set forth in subsection (3)(c) of this rule, for lots created on or after January 1, 1981, and/or when the on-site system will serve a commercial facility, the Agent may issue a construction permit for a new on-site sewage disposal system or a

favorable report of evaluation of site suitability if it is determined that all rules of the Commission can be met;

(c) The Alsea Dunal Aquifer is defined as all the land bounded on the East by Highway 101, the Pacific Ocean on the West, and from Driftwood Beach Wayside South to the southern tip of the Alsea Bay Spit;

(d) If the results of groundwater monitoring in the Alsea Dunal Aquifer indicate unacceptable levels of degradation or if it appears necessary or desirable to pursue development of the aquifer as a source of drinking water, sewage collection and off-site treatment and disposal facilities shall be installed unless further study demonstrates that such facilities are not necessary or effective to protect the beneficial use.

(4) Christmas Valley Townsite, Lake County:

(a) Within the area set forth in subsection (4)(b) of this rule, the agent may consider the shallow groundwater table, if present, in the same manner as a temporary water table when preparing and/or issuing site evaluation reports and construction-installation permits;

(b) The Christmas Valley Townsite is defined as all land within the Christmas Valley Townsite plat located within Sections 9, 10, 11, 14, 15 and 16 of Township 27 South, Range 17 East, Willamette Meridian, in Lake County.

(5) Clatsop Plains Aquifer, Clatsop County: The Clatsop Plains Groundwater Protection Plan, prepared by R.W. Beck and Associates and adopted by Clatsop County, provides a basis for continued use of on-site sewage disposal systems while protecting the quality of groundwater for future water supplies. For the plan to be successful, the following components must be accomplished:

(a) By not later than January 1, 1983, Clatsop County shall identify and set aside aquifer reserve areas for future water supply development containing a minimum of two and one half (2-1/2) square miles. The reserve areas shall be controlled so that the potential for groundwater contamination from nitrogen and other possible pollutants is kept to a minimum;

(b) The Agent may issue construction installation permits for new on-site sewage disposal systems or favorable reports of site evaluation to construct on-site systems, within the area generally known as the Clatsop Plains, which is bounded by the Columbia River to the North; the Pacific Ocean to the west; the Necanicum River, Neawanna Creek, and County Road 157 on the south; and the Carnahan Ditch-Skipanon River and the foothills of the Coast Range to the east, providing:

(A) The lot or parcel was created in compliance with the appropriate comprehensive plan for Gearhart (adopted by County Ordinance 80-3), Seaside (adopted by County Ordinance 80-10), Warrenton (adopted by County Ordinance 82-15), or the Clatsop County plan adopted through Ordinance No. 79-10; and either

(B) The lot or parcel does not violate any rule of this Division; or

(C) Lot or parcel does not violate the Department's Water Quality Management Plan or any rule of this Division, except the projected maximum sewage loading rate would exceed the ratio of four hundred fifty (450) gallons per one-half (1/2) acre per day. The on-site system shall be either a sand filter system or a pressurized distribution system with a design sewage flow not to exceed four hundred fifty (450) gallons per day; or

(D) The Department may approve the use of standard on-site systems to serve single family dwellings within planned developments or clustered-lot subdivisions providing:

(i) The planned development or clustered-lot subdivision is not located within Gearhart, Seaside, Warrenton, or their urban growth boundaries; and

(ii) The lots do not violate any rule of this Division, except the projected maximum sewage loading rate may exceed the ratio of four hundred fifty (450) gallons per acre per day; and

(iii) The Department is provided satisfactory evidence through a detailed groundwater study that the use of standard systems will not constitute a greater threat to groundwater quality than would occur with the use of sand filter systems or pressurized distribution systems.

(6) Within areas east of the Cascade Range where the annual precipitation does not exceed twenty (20) inches, and after evaluating the site, the Agent may issue a construction-installation permit authorizing installation of a standard system to serve a single family dwelling, provided the requirements in subsections (6)(a) and (b) of this rule are met:

(a) Minimum Site Criteria:

(A) The property is ten (10) acres or larger in size. The minimum parcel size considered under this rule is designated by the County, but in no event shall it be less than ten (10) acres;

(B) The slope gradient does not exceed thirty (30) percent;

(C) The soils are diggable with a backhoe to a depth of at least twenty-four (24) inches;

(D) The site is found to comply with the provisions of OAR 340-71-220(1)(b,e,f,g,h, and i).

(b) Minimum Construction Requirements:

(A) The system shall contain not less than two hundred twenty-five (225) linear feet of disposal trench for projected sewage flows not exceeding four hundred fifty (450) gallons per day. Larger sewage flows shall be sized on the basis of seventy-five (75) linear feet per each one hundred fifty (150) gallons of projected flow;

(B) The system shall be constructed and backfilled in compliance with OAR 340-71-220: sections (3), (4), (5), (7) , (8), (9), (10), and (11) of this rule.

(c) At the discretion and request of the owner or the owner's authorized representative, a single application may be submitted to the Agent for both a site evaluation report and a construction-installation permit. The application would include the sum of the fees for both activities, pursuant to OAR 340-71-140(1)(a)(A) and OAR 340-71-140(1)(b)(A)(i), as well as the following:

(A) Favorable land use compatibility statement from the appropriate land use authority signifying that the proposed land use is compatible with the Land Conservation and Development Commission acknowledged comprehensive plan or complies with the statewide planning goals;

(B) Property development plan acceptable to the Agent showing the location of existing and proposed improvements, including the locations of the dwelling and sewage disposal system;

(C) All other exhibits the Agent finds are necessary to complete the application.

(d) The Agent may waive the pre-cover inspection for a system installed pursuant to this section, provided the system installer submits the following information to the Agent

at the time construction of the system is complete:

(A) A detailed and accurate as-built plan of the constructed system; and

(B) A list of all material used in the construction of the system; and

(C) A written certification (on a form acceptable to the Department) that the construction was in accordance with the permit and rules of the Commission.

(7) Within areas east of the Cascade Range where the annual precipitation does not exceed twenty (20) inches, the Agent may issue a construction-installation permit authorizing installation of a standard system to serve a single family dwelling, provided the requirements in subsections (7)(a) and (b) of this rule are met. The Agent may waive the site evaluation for a single family dwelling provided:

(a) Minimum Site Criteria:

(A) The property is eighty (80) acres or larger in size. The minimum parcel size considered under this rule is designated by the County, but in no event shall it be less than eighty (80) acres;

(B) The separation distance between the proposed on-site system and the nearest dwelling, other than that being served by the proposed system, is at least one-quarter mile;

(C) The nearest property line to the proposed system is at least 100 feet, the nearest domestic water source is at least 200 feet, and the nearest surface public water is at least 200 feet; and

(D) In the opinion of the Agent, sufficient topographical and soils information, including but not limited to slope, terrain, landform, and rock outcrops, is submitted with the application to determine the property can be approved for on-site sewage disposal in conformance with the purpose of these rules as stated in OAR 340-71-110.

(b) Minimum Construction Requirements:

(A) Sizing requirements of **Tables 4 and 5** shall be followed as closely as possible. In any case, the system shall contain not less than two hundred twenty-five (225) linear feet of disposal trench for projected sewage flows not exceeding four hundred fifty (450) gallons per day. Larger sewage flows shall be sized on the basis of seventy-five (75) linear feet per each one hundred fifty (150) gallons of projected flow;

(B) The system shall be constructed and backfilled as closely as possible to the requirements contained in OAR 340-71-220.

(c) At the request of the owner or the owner's authorized representative, a single application may be submitted to the Agent for both a site evaluation report and a construction-installation permit. The application would include the fee for a site evaluation, pursuant to OAR 340-71-140, as well as the following:

(A) Favorable land use compatibility statement from the appropriate land use authority signifying that the proposed land use is compatible with the Land Conservation and Development Commission acknowledged comprehensive plan or complies with the statewide planning goals;

(B) Property development plan acceptable to the Agent showing the location of existing and proposed improvements, including the locations of the dwelling and sewage disposal system;

(C) All other exhibits the Agent finds are necessary to complete the application;

(D) If the decision is made to waive the site evaluation, the fee will be transferred to the permit.

(d) The Agent may waive the pre-cover inspection for a system installed pursuant to this section, provided the system installer submits the following information to the Agent at the time construction of the system is complete:

(A) A detailed and accurate as-built plan of the constructed system; and

(B) A list of all material used in the construction of the system; and

(C) A written certification (on a form acceptable to the Department) that the construction was in accordance with the permit and rules of the Commission.

(e) The conditions for OAR 340-71-400(7) shall be set forth in an addendum to the memorandum of agreement (contract) between the County and the Department.

Stat. Author.: ORS 183.335, 454.625, 468.020, 468B.010 and 468B.020.
Stat. Impl.: ORS 454.610, 454.615

340-71-460
Moratorium Areas

(1) Whenever the Commission finds that construction of subsurface or alternative sewage disposal systems should be limited or prohibited in an area, it shall issue an order limiting or prohibiting such construction.

(2) The order shall be issued only after public hearing for which more than thirty (30) days' notice is given.

(3) The order shall be a rule of this division which contains a general description of the moratorium area. A more detailed description of the area, if needed, shall be an appendix to these rules.

(4) No permit or site evaluation report shall be issued for construction of a new or expanded system which would violate any order of the Commission issued pursuant to ORS 454.685.

(5) Criteria For Establishing Moratoriums: In issuing an order under this section the Commission shall consider the factors contained in ORS 454.685(2).

Stat. Author.: ORS 183.335, 454.625, 468.020, 468B.010 and 468B.020.
Stat. Impl.: ORS 454.685

ATTACHMENT D

PRESIDING OFFICERS REPORT, AND DEPARTMENT RESPONSE TO COMMENTS

State of Oregon
Department of Environmental Quality Memorandum

Date: January 31, 1997

To: Environmental Quality Commission

From: Bill Young

Subject: Presiding Officer's Report for Rulemaking Hearing
Hearing Date and Time: January 21, 1997, beginning at 6:00 PM
Hearing Location: Florence Events Center, Florence, Oregon

Title of Proposal: Propose Rules Relating to On-Site Sewage Disposal Systems in the Clear Lake Watershed Area

The rulemaking hearing on the above titled proposal was convened at 6:00 PM. People were asked to sign witness registration forms if they wished to present testimony. People were also advised that the hearing was being recorded and of the procedures to be followed.

15 people were in attendance, 5 people signed up to give testimony.

Prior to receiving testimony, Barbara Burton briefly explained the specific rulemaking proposal, the reason for the proposal, and responded to questions from the audience.

Summary of Oral Testimony

One person testified that the current rules regarding protection of Clear Lake has been ineffective.

One person testified that the Department of Environmental Quality does not know that Heceta Water District is monitoring the lake.

One person was concerned about Lane County preventing the construction of a water treatment plant by Heceta Water District. The water treatment plant is required by the federal government and would remove contaminants from water taken from Clear Lake to supply Heceta Water District.

One person was concerned about expansion of the Florence Urban Growth Boundary (UGB) to include the Clear Lake watershed.

One person was concerned about who would have to pay for sewers homeowners in the watershed be required to connect to the sewers.

One person was concerned about the quality of water in Clear Lake and was concerned about why no one was regulating the use of dune buggies and clear cutting or other activities in the watershed that might affect water quality.

One person was concerned about who was going to monitor the lakes to determine if pollution was increasing.
One person noted that the proposed rule would require construction and use of groundwater monitoring wells only if pollutant levels in the lake indicated that water quality was deteriorating. This person wanted to know how the need for installation of monitoring wells would be determined?

One person wanted to know how the monitoring would be correlated to algal levels in the lakes.

One person wanted to know where the monitoring wells would be located.

One person wanted to know where the Total Maximum Daily Load (TMDL) in the current rule came from. How was it derived and what use is it?

One person felt that lake monitoring should include phosphorus and nitrogen levels.

One person felt that existing septic tanks in the watershed should be required to be pumped on a frequent, regular basis.

One person felt that about 10,000 people relied on good water quality from Clear Lake and that people who own lots in the watershed shouldn't be allowed to put in septic systems if it is going to impair the drinking water supply.

One person wondered what happened to the past rule that required that house not be located closer than 300 feet from the lake.

One person had a concern about lake monitoring being delayed five years.

One person stated that access to Clear Lake should be restricted.

One person requested that information provided to the Department during the original rule-making process that established the Clear Lake watershed septic system moratorium be entered into the record of this hearing.

One person stated that the settlement agreement between DEQ and the plaintiffs in the Merz lawsuit was reached without public input and forces the EQC to lift the moratorium and that public input at the hearing will not change the fate of the moratorium.

One person felt that the lawsuit was instituted by a number of the large landowners whose property included portions that were outside the moratorium boundary. These portions outside the boundary were not restricted by the moratorium. Since septic systems could be put in these areas outside the moratorium, for these properties, there was no "takings." Parcels located entirely in the watershed were completed affected by the moratorium and probably constituted a "takings." The settlement would treat all of the parcels the same, when, in fact, there were not.

One person felt the revised rules lifting the moratorium should require any parcel which has at least one-half acre outside the watershed to locate its on-site sewage disposal systems outside the watershed.

One person felt that any parcel which does not have a least one-half acre outside the watershed should be allowed to develop only if they install a monitoring well on their property, at their expense.

One person stated that the revised Clear Lake rule should mandate that DEQ fund and initiate a program, within a specific time limit, to monitor water quality in Collard and Clear Lakes.

One person said that the regulation should mandate that DEQ fund and initiate a program, within a specific time limit, to supervised the monitoring wells which will be installed.

This person also said that DEQ should adopt regulations that mandate Lane county's proposed Watershed Protection Regulations require that benefiting property owners pay for the monitoring and testing programs.

Written Testimony

The following people handed in written comments but did not present oral testimony:

Gordon Howard and Walter Drew

There was no further testimony and the hearing was closed at approximately 6:45 PM.

PUBLIC COMMENT SUMMARY AND DEPARTMENT RESPONSE TO TESTIMONY

Proposed Rules relating to On-Site Sewage Disposal Systems in the Clear Lake Watershed Area near Florence in Lane County

On Tuesday, January 21, 1997, a hearing was held in Florence, Oregon at the Florence Event Center, 715 Quince Street, Florence, Oregon. The hearing was to receive public testimony concerning the Department of Environmental Quality's proposed rules relating to On-Site Sewage Disposal Systems in the Clear Lake Watershed Area near Florence in Lane County. The hearing was conducted by Mr. Bill Young and began about 6 PM. The hearing was preceded by a short presentation of the proposal by Barbara Burton of the Department of Environmental Quality.

Following is a summary of the written and oral testimony submitted to the Department both at the hearing itself and during the written public comment period, which lasted from December 20, 1996, to January 24, 1997.. This report is presented with a summary of each point followed by the Department's response to that point.

One person testified that the current rules regarding protection of Clear Lake has been ineffective.

> The Department agrees in part. The current, permanent rules contain a moratorium which prevents issuance of on-site sewage disposal permits until a watershed management plan for controlling pollutants was developed. The Department believes that the moratorium has been effective in protecting water quality in Collard and Clear Lakes. Unfortunately, local government was unable to consummate and implement the watershed management plan. In response to a suit filed against the Department, the Department has agreed to modify the rule to eliminate the moratorium. The Department intends to monitor the lakes and, should the advent of significant degradation be determined, take appropriate steps to reduce or control the pollution.

One person testified that the Department of Environmental Quality does not know that Heceta Water District is monitoring the lake.

> The Department is aware that the District is conducting or has conducted some monitoring on the lake. However, we have not reviewed the sampling techniques, locations, or analytical methods being used. Whatever monitoring is being done is welcome, and the information will be used if possible. The Department believes monitoring will be very important if the moratorium is lifted and intends to

coordinate its monitoring with that being done by the District or any other jurisdiction.

One person was concerned about Lane County preventing the construction of a water treatment plant by Heceta Water District. The water treatment plant is required by the federal government and would remove contaminants from water taken from Clear Lake to supply Heceta Water District.

The federal Safe Drinking Water Act (SDWA) does require drinking water systems that obtain their water from a surface water source to filter that water before supplying it to their constituents. In Oregon, the Oregon Health Division is responsible for administering the SDWA for the federal government. While the Department believes treatment of drinking water is a prudent step, the Department does not have the authority to compel Lane County or the District to resolve their differences and construct the plant.

One person was concerned about expansion of the Florence Urban Growth Boundary (UGB) to include the Clear Lake watershed.

Although a watershed management plan for Clear Lake was never adopted, one was proposed. This plan did contemplate extension of the UGB to include the watershed as a means to assure protection of the watershed. The City of Florence had proposed to extend the Urban Growth Boundary to include the Clear Lake Watershed, however that proposal has been withdrawn. The City is currently conducting a more comprehensive review of the location of a possible extension of the Urban Growth Boundary. In any case, extension of the UGB requires approval from both the City of Florence, Lane County, and the Oregon Department of Land Conservation and Development.

One person was concerned about who would have to pay for sewers if homeowners in the watershed were required to connect to the sewers.

At this point, there is no definite plan to provide sewer service to the watershed and, as a result, there is no established plan for how the sewers would be financed. Historically in Oregon, the costs of sewer service has been borne by the homeowners with, in some cases, some subsidy from state and/or federal agencies. The general policy for paying for wastewater control in Oregon is that the cost is borne by the creator of the pollution not the user of the water into which the pollutants are placed.

One person was concerned about the quality of water in Clear Lake and was concerned about why no one was regulating the use of dune buggies and clear cutting or other activities in the watershed that might affect water quality.

The Department has no statutory authority to regulate either the use of dune buggies or clear cutting. Only property owners have the authority to regulate the

use of dune buggies on their own property. The Oregon Department of Forestry, not DEQ would have the authority to regulate clear cutting. The Department does have authority to regulate the siting and use of septic systems and other source of wastewater that might affect the lake's water quality.

One person was concerned about who was going to monitor the lakes to determine if pollution was increasing.

Within the constraints of its budget and other priorities, the Department intends to develop a limited water quality monitoring plan for the lake. The Department will coordinate its monitoring efforts with other activities that may be conducted by other jurisdictions such as Heceta Water District.

One person noted that the proposed rule would require construction and use of groundwater monitoring wells only if pollutant levels in the lake indicated that water quality was deteriorating. This person wanted to know how the need for installation of monitoring wells would be determined?

The intent of the proposed rules was to locate groundwater monitoring wells to monitor the drainage under drainfields, the water quality in groundwater upgradient (and unaffected) by the drainfields, and downgradient from the drainfields where effluent from the drainfields would be detected. The Department had also intended to monitor the aquifer at various points in the water shed, to help determine the sources and concentrations of phosphorous and/or nitrates. However, based on public comment and further review, the Department is proposing to revise the rules, to remove the requirement for groundwater monitoring wells.

One person wanted to know how the monitoring would be correlated to algal levels in the lakes.

Part of the lake monitoring plan will likely include the testing for chlorophyll *a* which is an indicator chemical constituent of algal growth.

One person wanted to know where the monitoring wells would be located.

See the answer above.

One person wanted to know where the Total Maximum Daily Load (TMDL) in the current rule came from. How was it derived and what use is it?

The TMDL (actually it is an annual loading limit) was calculated using water quality data collected from Collard and Clear Lakes in the summer of 1985 and mathematical relationships developed by Robert Gilliom in a paper written in 1983. In summary, using this information, a total loading on the lake was calculated

which would maintain the Clear Lake at its current oligotrophic state (very low levels of nutrients that cause algal growth) and bring Collard Lake back to near oligotrophic.

One person felt that lake monitoring should include phosphorus and nitrogen levels.

The Department agrees and will include these parameters in its monitoring plan.

One person felt that existing septic tanks in the watershed should be required to be pumped on a frequent, regular basis.

The Department believes that frequent pumping of septic tanks is useful and desirable. Periodic pumping will increase the life of a septic system. Septic systems that do not have their tanks pumped will likely fail sooner than otherwise and, if not repaired, would likely increase the level of nutrients discharged into the lakes. While the proposed rule could include a requirement for properties owners to periodically pump their tanks, the Department has no practical means to ensure and enforce such a requirement and does not recommend that the proposed rule contain this provision.

One person felt that about 10,000 people relied on good water quality from Clear Lake and that people who own lots in the watershed shouldn't be allowed to put in septic systems if it is going to impair the drinking water supply.

The courts have told DEQ that the moratorium must be lifted or landowners must be compensated for the loss of their property. The Department is not in a position, either legally or financially, to provide compensation. Therefore, the Department is obligated to recommend to the Environmental Quality Commission that the moratorium be terminated.

One person wondered what happened to the past rule that required that house not be located closer than 300 feet from the lake.

DEQ has never had a rule that prohibited construction of house within 300 feet of any lake. DEQ's rules for septic systems (state-wide) would require a set-back of 100 feet for the drainfield system, however. The watershed management plan for the lake may have contemplated such a set-back requirement, but it was never adopted as a rule for DEQ.

One person had a concern about lake monitoring being delayed five years.

The Department intends to start monitoring of the lakes sooner than five years. However, it is unlikely that further studies such as groundwater studies would be started for at least five years.

One person stated that access to Clear Lake should be restricted.

The Department has no authority to restrict access to private property.

One person wrote objecting to the Department's fiscal impact statement noting that the lifting of the moratorium did not enhance the value of property in the Clear Lake watershed, it "merely stops its 14 year taking of that value from plaintiffs as the court indicated it must do."

The lifting of the moratorium will enhance the property values over what they were with a moratorium in place.

One person wrote that requiring monitoring wells violates the settlement agreement in the Merz lawsuit. This person claims that the settlement states that "No new restrictions on Plaintiffs' property shall be imposed as part of this rule-making..."

The Department agrees that the settlement agreement would exclude the plaintiffs from the proposed requirement for groundwater monitoring wells. However, upon further review, the Department is removing the requirement for groundwater monitoring wells entirely.

One person wrote that the TMDLs for phosphorus are unreasonably tight and impose a standard that cannot even be accurately measured. There is no evidence that such a low standard is needed to achieve the rule's stated purpose of avoiding increased filtration costs.

The TMDL is based upon limited data which was the only data available at the time. The TMDL is based upon the most conservative approach because of the limited data. The Department recognizes that highly regarded scientists may not agree with the Department's approach and its conclusions.

With the limited existing data, it is not known exactly how much phosphorus concentrations will increase in Clear and Collard Lakes as a result of increased development that uses septic systems for sewage treatment and disposal. We do believe that concentrations will increase, however. Collard Lake's watershed has much more development than that around Clear Lake and Collard Lake has significantly higher phosphorus levels than Clear Lake. This fact alone would indicate that some phosphorus is entering the lake due to its higher level of development and that phosphorus is not completely retained within the soil.

One person requested that information provided to the Department during the original rule-making process that established the Clear Lake watershed septic system moratorium be entered into the record of this hearing.

The Department believes this request is intended to have the hearing record contain the information and analysis that supported the creation of the moratorium.

The Department does not believe such a request is needed. The court case filed against the Department and settled in mid-1996 gives the Department and the Environmental Quality Commission no practical alternative to lifting the moratorium. The Department believes that water quality in Collard and Clear Lakes will suffer some level of degradation if significant development occurs in the watershed without mitigation of pollutant impacts. The moratorium was intended to protect water quality and provide time for a watershed plan to be developed and implemented that would ensure necessary mitigation. The watershed plan was never adopted and, as a result, the moratorium never achieved the results that were intended. The purpose of these proposed rule revisions is to lift the moratorium. As a protection measure, the Department intends to monitor the water quality in the watershed. If further degradation is seen, then the Department will re-visit the issue of a watershed management plan.

One person stated that the settlement agreement between DEQ and the plaintiffs in the Merz lawsuit was reached without public input and forces the EQC to lift the moratorium and that public input at the hearing will not change the fate of the moratorium.

The Department agrees that the settlement agreement gives the EQC no practical alternative to lifting the moratorium, however it does not require the EQC to lift the moratorium. In order to maintain the moratorium, the affected property owners would have to receive compensation for the taking of their property on into the future, as the Department does not have the legal ability to purchase property. The Department does not have the financial resources to provide this compensation. The court sponsored settlement meetings did not change the rule, only the EQC has the authority to do so, and so had no legal requirement for public participation in the negotiations. The legally required public participation process has been followed in this rule making.

One person felt that the lawsuit was instituted by a number of the large landowners whose property included portions that were outside the moratorium boundary. These portions outside the boundary were not restricted by the moratorium. Since septic systems could be put in these areas outside the moratorium, for these properties, there was no "takings." Parcels located entirely in the watershed were affected by the moratorium and probably constituted a "takings." The settlement treated all of the parcels the same, when, in fact, they were not.

The Department does not believe this statement is correct. The revisions of OAR 340-41-270 that occurred in 1990 also prohibited connection of development in the watershed to sewerage facilities until a watershed plan was approved by DEQ. This prevented properties owners from connecting their houses located in the watershed to drainfields located outside the watershed. The reason for this was to

assure that stormwater runoff impacts were addressed as well as that from septic systems.

One person felt the revised rules lifting the moratorium should require any parcel which has at least one-half acre outside the watershed to locate its on-site sewage disposal systems outside the watershed.

The proposed change would be possible, although there would have to be some provision in case the area outside of the watershed was not suitable for an on-site system. There will be relatively few developable sites where this change could apply, and therefore it would probably not have a significant impact on water quality. The Department believes this change would add an unnecessary complication without significant water quality benefits.

One person felt that any parcel which does not have a least one-half acre outside the watershed should be allowed to develop only if they install a monitoring well on their property, at their expense.

The Department has reviewed the public comments received, and will be changing the rule recommended to the EQC to drop the requirement for groundwater monitoring wells.

One person stated that the revised Clear Lake rule should mandate that DEQ fund and initiate a program, within a specific time limit, to monitor water quality in Collard and Clear Lakes.

The Department does not recommend that the EQC adopt a rule that mandates funding of specific activities. Generally, funding decisions for the Department are made by the legislature which is not obligated to follow administrative rules. The Department intends to fund a monitoring program for Clear and Collard Lakes to the extent that funding is available and in consideration of DEQ's statewide monitoring priorities.

One person said that the regulation should mandate that DEQ fund and initiate a program, within a specific time limit, to supervised the monitoring wells which will be installed.

As described above, the moneys are not currently available to carry out the study.

This person also said that DEQ should adopt regulations that mandate Lane county's proposed Watershed Protection Regulations require that benefiting property owners pay for the monitoring and testing programs.

The EQC does not have the authority to require that Lane County assess and collect fees for monitoring and testing. The Department did consider the possibility of including in the proposed rule some mechanism for the benefiting property owners to conduct and pay for the studies. The Department dropped this because of practical considerations, as follows: how to equitably assess costs between property owners; what overall organization would oversee the studies; the lack of water quality expertise likely for the property owners; and the lack of expertise likely needed to oversee the selection and work of the consultant needed to complete the studies. The concept of the Department assessing property owners a fee, and the Department conducting the study was dropped as we have no legal authority to do this.

Several people wrote that they were opposed to lifting the moratorium because it would endanger their water supply and they did not want to pay the added costs for treating the water.

The Department does believe that additional development in the Clear Lake watershed will result in some degradation of water quality and probably additional costs for treating the water by Heceta Water District for public consumption. The Department is being required via the court settlement to recommend to the EQC that the moratorium be lifted because it is an inappropriate tool. It is an inappropriate tool because it deprives property owners of the use of their property without compensation and this is considered a "takings." By revising the rule that imposes the moratorium, the Department is eliminating the moratorium as a means for protecting water quality, but is also proposing other means to protect the lake's water quality.

One person wrote stating that they had heard that people were getting sick and having to go to the hospital due to the drinking water from Heceta Water District, specifically from chlorine.

The Oregon Health Division, the Lane County Health Department and Peace Harbor Hospital in Florence were contacted. An administrator at the hospital contacted the person who made this comment, checked the hospital records, and concluded there was no basis for this comment.

One person wrote that he felt DEQ was being pressured to lift the moratorium by elected state officials to appease some of the large property holders in the Clear Lake basin.

No member of DEQ has been contact by either the Governor's office or any legislator relative to this proposed rule revision. The court settlement was reached based on advice of legal counsel and based on the legal merits of the case and likely outcome in court.

One person wrote that EQC members should not vote on this proposed rule change because they are named in the suit and will not be unbiased because of a conflict of interest.

The parties named in the lawsuit are not required to adopt the rule lifting the moratorium, and so will not be in personal legal jeopardy if the moratorium is not lifted. The agreement reached was for the Department to present the proposed rule to the EQC, but not that the EQC would be required under the terms of the settlement to adopt the rule. If the EQC chooses not to lift the moratorium, however, there will likely be significant financial claims filed against the Department. These claims would be paid for out of the Department's budget, not out of the pockets of any named person in the lawsuit.

One person wrote that a hearing was scheduled for March 24 with Judge Coffin which could overturn the settlement such that lifting the moratorium would not be necessary.

There are no meetings scheduled with Judge Coffin and the Department or its attorneys. However there is a meeting scheduled involving the Heceta Water District.

One person wrote that lifting the moratorium would violate state wide land use goals.

The Department does not agree. State-wide land use goals do not require the use of a moratorium to protect water quality. The Department is proposing to protect water quality for its beneficial uses by monitoring the lakes, and will take appropriate action if further degradation is seen.

Several people wrote that the moratorium and other controls on septic tanks was not necessary to protect the lake because the soil in the watershed would prevent phosphorus from achieving the lake. Their conclusions about the soil's ability to capture phosphorus is based upon conversations with scientists.

The Department recognizes that there is disagreement between the Department and other experts in the field. In addition, the Department does not know exactly

how much phosphorus will reach the lake due to additional development. While fine soils can bind up phosphorous at least for a period of time, rapidly draining sands do not have much capacity for preventing phosphorous from entering groundwater from drainfields. The Department does know that Collard Lake, which has much more development around it, has significantly higher levels of phosphorus than Clear Lake which has only sparse development. Upon this basis, the Department believes that some phosphorus is reaching the lake due to existing development and that this will increase as more development occurs.

One person wrote objecting to the requirement to install monitoring wells as part of the proposed rules.

Based upon comments received, and a further discussion with staff, the Department will be dropping this part of the rule in the recommended rule that goes to the EQC for final action.

One person wrote that he was concerned that DEQ did not require monitoring in the past nor that DEQ was unaware of current monitoring being conducted by others.

DEQ is aware of monitoring being conducted by Heceta Water District and any future monitoring will be coordinated with the District to minimize costs. The Department did include monitoring requirements to be part of the watershed plan developed to control pollution of the lake. This requirement is listed in OAR 340-41-270(9). Since the plan was never adopted or implemented, no monitoring was ever done.

One person disagreed that additional drinking water treatment by Heceta Water District would cost $340,000 per year and that property values would increase by $2,012,000 as a result of the lifting of the moratorium.

The assumptions used for these estimates are described in the Fiscal Impact statement included with the rule package. Briefly, the additional water treatment costs are a rough estimate, and would only be incurred if significant levels of algae were to develop in Clear Lake. The increase in property values is also a very rough estimate, based on one typical lot, and it's increase in value that was reviewed and confirmed by the State's appraiser. The purpose of the fiscal impact statement is not to do an in-depth and lengthy study, but rather to use reliable information readily available, and to alert reviewers of the rule as to the areas of potential cost or benefit.

One person has several questions concerning the proposal. These are:

1. How will the measured nutrient concentrations in the test wells be correlated to algae growth in Clear Lake?

The purpose of monitoring wells is to get a handle on the amount of phosphorus and other nutrients in the groundwater discharging to the lake. From this, the Department believes it could estimate the amount of phosphorus entering the lake and, using relationships developed by Gilliom, it could determine resulting phosphorus concentrations in the lake. Increasing phosphorus levels in the lake will likely induce increasing growth of algae. We have not in the past used a model to predict algal levels.

2. Which mathematical models will be used to simulate algae growth?

We have not decided upon a particular model and may choose not to use one. In addition, new mathematical models are developed periodically. The model to be used, if any, will be determined by the Department either as part of the monitoring plan for the lake, or prior to further studies if water quality in the lakes degrades.

3. Are there any previous test results at other locations with similar geological conditions to calibrate the model?

Not that the Department is aware of.

4. Where are the test wells located relative to the drainfields?

The original intent was to locate the wells based on usefulness to the overall study, if and when it occurs. The Department is recommending that this portion of the rule be dropped. If and when further studies occur, the locations will be determined based upon the overall study needs and willing property owners.

One person wrote that the TMDL in the current rule should be eliminated because they are not very useful. These should be replaced by concentration criteria that could be directly measured. In addition, a concentration criteria of 100 ug/l of nitrogen should be included. This person felt that actual measurement of algae would be better than using nutrient criteria.

The Department believes the mass loadings described as TMDLs may ultimately be useful should a watershed management plan be developed. Therefore, we do not wish to delete them from the rule.

One person wrote stating that a buyout of property in the watershed is a preferable alternative and requesting the EQC to maintain the moratorium until local governments can consider such a buyout.

The Department believes a buyout of some properties would be beneficial. The Department does not recommend that lifting of the moratorium be delayed until local governments can consider the buyout, however. Lifting of the moratorium does not prevent the buyout and, in fact, may encourage local governments to proceed.

One person wrote that she was concerned about the additional costs that Heceta Water District may incur if additional development in the basin causes water quality in the lakes to deteriorate.

The Department believes that additional development in the watershed without mitigation will likely increase nutrient loads to the lakes that will degrade water quality. The Department hopes to monitor the lakes and, should the advent of significant degradation be determined, take necessary action to reduce and control this pollution.

One person wrote asking how older septic systems on existing homes would be monitored. In addition, how can monitoring be done on new home sites if there is no provision for obtaining funds?

If and when further groundwater studies are done in the area, the Department will rely upon willing study participants. As discussed above, the Department is proposing to drop the groundwater monitoring requirements from the rule. In terms of available funding, the most likely source appears to be special grants available from the U.S. EPA, although no such funds are currently available. If further studies are indicated, the Department will again review possible funding and grant options.

One person wrote wanting to know if Lane County, as DEQ's agent for issuing septic permits, would follow the rules as adopted by the EQC.

Lane County is the Department's agent for administering to Oregon's state-wide on-site sewage disposal program in Lane County. This arrangement is established under a contract between DEQ and the county. The contract requires Lane County to follow the regulations as adopted by the EQC. Should the Department learn that the county is not following the rules, the Department will take steps to ensure that the contract requirements are met.

ATTACHMENT A

EXISTING RULES

OAR 340-41-270, OAR 340-71-400, AND OAR 340-71-460

Special Policies and Guidelines

340-41-270 In order to preserve the existing high quality water in Clear Lake north of Florence for use as a public water supply source requiring only minimal filtration, it is the policy of the Environmental Quality Commission to protect the Clear Lake watershed including both surface and groundwaters, from existing and potential contamination sources with the following requirements:

(1) The total phosphorus maximum annual loading discharged into Clear Lake shall not exceed 241 pounds per year from all sources.

(2) The total phosphorus maximum annual loading for the Clear Lake watershed shall be deemed exceeded if the median concentration of total phosphorus from samples collected in the epilimnion between May 1 and September 30 exceed nine micrograms per liter during two consecutive years.

(3) Of the total phosphorus loading of 241 pounds per year specified in section (1) of this rule, 192 pounds per year shall be considered current background and Department reserve and shall not be available to other sources.

(4) The total phosphorus maximum annual loading discharged into Collard Lake shall not exceed 123 pounds per year.

(5) Lane County or any other jurisdiction shall not issue permits allowing connection of development in the Clear Lake watershed to a sewerage facility and the Department or its contract agent shall not issue on-site sewage system construction-installation permits or favorable site evaluation reports for on-site sewage systems within the Clear Lake watershed until a plan is submitted to and approved by the Department showing how total phosphorus loadings limitations required by this rule will be achieved and maintained. The plan shall include, but not be limited to, the following:

(a) Projected phosphorus loadings for existing development and future planned development within the Clear Lake watershed. Technical bases for the projections shall be cited. The plan shall include phosphorus loadings from storm runoff during and after construction, on-site sewage disposal systems and other management activities in the watershed including, but not limited to, forest harvesting;

(b) Adopted ordinances as necessary to carry out the provisions of the plan;

(c) Agreements, contracts and other information as needed to show how and what entity will effectively implement each provision of the plan.

(6) The plan required by section (5) of this rule shall address necessary controls to reduce phosphorus loadings into Collard Lake to levels less than 60 pounds per year. The Department may approve a plan with annual loadings greater than 60 pounds per year, but only if the plan demonstrates that controls necessary to achieve less than 60 pounds per year are unreasonable and overly burdensome.

(7) If the plan required by section (5) of this rule proposes that Clear Lake and/or Collard Lake loading limits be increased from levels established in section (1) and/or section (4) of this rule, the plan shall include the social and economic justification for such increases as required by Oregon Administrative Rule (OAR) 340-41-026. The justification shall show the costs of achieving the loading limits established in this rule as well as the economic and social benefits of increasing the loads. The Commission shall not approve any plan that will not achieve a lake loading limit for Collard Lake of 140 pounds or less of phosphorus per year. The Commission shall not approve any plan that will not achieve a lake loading limit for Clear Lake of 251 pounds or less of phosphorus per year.

(8) No construction of a sewerage facility to serve the Clear Lake watershed or a portion thereof shall begin until or unless:

(a) The facilities plan report and engineering plans and specifications have been approved in writing by the Department;

(b) It is constructed and operated by a municipality with authority for the operation and maintenance of sewerage facilities;

(c) Before construction starts, the responsible municipality shall demonstrate that it has a reliable source of funding to assure proper construction, operation, maintenance, and replacement of the required sewerage facilities.

(9) No on-site sewage system construction-installation permits, favorable site evaluation reports, or sanitary sewer connection permits shall be issued until a plan for monitoring the water quality of Clear Lake is submitted to and approved by the Department. The plan shall include contracts or memorandums of agreement that assure that the monitoring will be conducted.

(10) Unless it is demonstrated that stormwater runoff treatment and control systems are not necessary to meet the total maximum annual loading for total phosphorus, any off-site or on-site control facilities for stormwater quality control necessary to comply with this rule shall be under the control of a municipality.

Stat. Auth.: ORS 468.020, 468.705 & 468.710
Hist.: DEQ 3-1983, f. & ef. 4-13-83; DEQ 44-1990, f. & cert.

340-71-400 GEOGRAPHIC AREA SPECIAL CONSIDERATIONS.

(1) River Road — Santa Clara Area, Lane County:

(a) Within the areas set forth in subsection (b) of this section the Agent may issue either construction permits for new subsurface sewage disposal systems or favorable reports of evaluation of site suitability to construct systems under the following circumstances:

(A) The system complies with all rules in effect at the time the permit is issued; and

(B) The system will not in itself contribute, or in combination with other new sources after April 18, 1980, contribute more than sixteen and seven-tenths (16.7) pounds nitrate-nitrogen per acre per year to the local groundwater. The applicant shall assure compliance with this condition by showing his ownership or control of adequate land through easements or equivalent.

(b) Subsection (a) of this section shall apply to all of the following area generally known as River Road — Santa Clara, and defined by the boundary submitted by the Board of County Commissioners for Lane County, which is bounded on the south by the City of Eugene, on the west by the Southern Pacific Railroad, on the north by Beacon Drive, and on the east by the Willamette River, and containing all or portions of T16S, R4W, Sections 33, 34, 35, 36; T17S, R4W, Sections 1, 2, 3, 4, 10, 11, 12, 13, 14, 15, 22, 23, 24, 25; and T17S, R1E, Sections 6, 7, 18, Willamette Meridian;

340-71-460 MORATORIUM AREAS

(1) Whenever the Commission finds that construction of subsurface or alternative sewage disposal systems should be limited or prohibited in an area, it shall issue an order limiting or prohibiting such construction.

(2) The order shall be issued only after public hearing for which more than thirty (30) days' notice is given.

(3) The order shall be a rule of this division which contains a general description of the moratorium area. A more detailed description of the area, if needed, shall be an appendix to these rules.

(4) No permit or site evaluation report shall be issued for construction of a new or expanded system which would violate any order of the Commission issued pursuant to ORS 454.685.

(5) Criteria For Establishing Moratoriums: In issuing an order under this section the Commission shall consider the factors contained in ORS 454.685(2).

(6) Specific Moratorium Areas: Pursuant to ORS 454.685, the Agent shall not issue sewage system construction-installation permits or approved site evaluation reports within the boundaries of the following areas of the state:

Lane County - Clear Lake Watershed of the North Florence Dunal Aquifer Area, as follows: The area hereby known as the Clear Lake Watershed of the North Florence Dunal Aquifer Area defined by the hydrologic boundaries identified in the June 1982, **208 North Florence Dunal Aquifer Study** which is the area beginning at a point known as Tank One, located in Section One,

Township 18 South, Range 12 West, of the Willamette Meridian, Lane County, Oregon:

Run thence S. 67° 50' 51.5" E. 97.80 ft. to the True Point of Beginning;
Run thence S. 05° 40' 43.0" W. 1960.62 ft. to a point;
Run thence S. 04° 58' 45.4" W. 1301.91 ft. to a point;
Run thence S. 52° 44' 01.0" W. 231.21 ft. to a point;
Run thence S. 15° 20' 45.4" W. 774.62 ft. to a point;
Run thence S. 31° 44' 14.0" W. 520.89 ft. to a point;
Run thence S. 00° 24' 43.9" W. 834.02 ft. to a point;
Run thence S. 07° 49' 01.8" W. 1191.07 ft. to a point;
Run thence S. 50° 26' 06.3" W. 731.61 ft. to a point;
Run thence S. 02° 51' 10.5" W. 301.37 ft. to a point;
Run thence S. 36° 37' 58.2" W. 918.41 ft. to a point;
Run thence S. 47° 12' 26.3" W. 1321.86 ft. to a point;
Run thence S. 72° 58' 54.2" W. 498.84 ft. to a point;
Run thence S. 85° 44' 21.3" W. 955.64 ft. to a point;
Which is N. 11° 39' 16.9" W. 5434.90 ft. from a point known as Green Two (located in Section 13 in said Township and Range);
Run thence N. 58° 09' 44.1" W. 1630.28 ft. to a point;
Run thence N. 25° 23' 10.1" W. 1978.00 ft. to a point;
Run thence N. 16° 34' 21.0" W. 1731.95 ft. to a point;
Run thence N. 06° 13' 18.0" W. 747.40 ft. to a point;
Run thence N. 03° 50' 32.8" E. 671.51 ft. to a point;
Run thence N. 59° 33' 18.9" E. 1117.02 ft. to a point;
Run thence N. 59° 50' 06.0" E. 2894.56 ft. to a point;
Run thence N. 48° 28' 40.0" E. 897.56 ft. to a point;
Run thence N. 31° 29' 50.7" E. 920.64 ft. to a point;
Run thence N. 19° 46' 39.6" E. 1524.95 ft. to a point;
Run thence S. 76° 05' 37.1" E. 748.95 ft. to a point;
Run thence S. 57° 33' 30.2" E. 445.53 ft. to a point;
Run thence S. 78° 27' 44.9" E. 394.98 ft. to a point;
Run thence S. 61° 55' 39.0" E. 323.00 ft. to a point;
Run thence N. 89° 04' 46.8" E. 249.03 ft. to a point;
Run thence S. 67° 43' 17.4" E. 245.31 ft. to a point;
Run thence S. 79° 55' 09.8" E. 45.71 ft. to a point;
Run thence S. 83° 59' 27.6" E. 95.52 ft. to a point;
Run thence N. 42° 02' 57.2" E. 68.68 ft. to a point;
Run thence S. 80° 41' 24.2" E. 61.81 ft. to a point;
Run thence S. 10°47' 03.5" E. 128.27 ft. to the True Point of Beginning; and containing all or portions of T17S, R12W, Sections 35 and 36; and T18S, R12W, Sections 1, 2, 11 and 12; W.M., Lane County.

(c) This rule is subject to modification or repeal by the Commission on an area-by-area basis upon petition by the appropriate local agency or agencies. Such petition either shall provide reasonable evidence that development using subsurface sewage disposal systems will not cause unacceptable degradation of groundwater quality or surface water quality or shall provide equally adequate evidence that degradation of groundwater or surface water quality will not occur as a result of such modification or repeal;

(d) Subsections (a) and (b) of this section shall not apply to any construction permit application based on a favorable report of evaluation of site suitability issued by the Agent pursuant to ORS 454.755(1)(b), where such report was issued prior to the effective date of this rule.

(2) General North Florence Aquifer, North Florence Dunal Aquifer Area, Lane County:

(a) Within the area set forth in subsection (2)(b) of this rule, the agent may issue construction permits for new on-site sewage disposal systems or favorable reports of evaluation of site suitability to construct individual or community on-site sewage disposal systems under the following circumstances:

(A) The lot and proposed system shall comply with all rules in effect at the time the permit or favorable report of site suitability is issued; or

(B) The lot and proposed system complies with paragraph 2(a)(A) of this rule, except for the projected daily sewage loading rates, and the system in combination with all other previously approved systems owned or legally controlled by the applicant shall be projected by the Department to contribute to the local groundwater not more than fifty-eight (58) pounds nitrate-nitrogen NO_3-N per year per acre owned or controlled by the applicant.

(b) Subsection (2)(a) of this rule shall apply to all of the following area hereby known as the General North Florence Aquifer of the North Florence Dunal Area and is defined by the hydrologic boundaries identified in the June 1982, 208 North Florence Dunal Aquifer Study, which is the area bounded on the west by the Pacific Ocean; on the southwest and south by the Siuslaw River; on the east by the North Fork of the Siuslaw River and the ridge line at the approximate elevation of four hundred (400) feet above mean sea level directly east of Munsel Lake, Clear Lake and Collard Lake; and on the north by Mercer Lake, Mercer Creek, Sutton Lake and Sutton Creek; and containing all or

portions of T17S, R12W, Sections 27, 28, 33, 34, 35, 36, and T18S, T12W, sections 1, 2, 3, 4, 9, 10, 11, 12, 13, 14, 15, 16, 22, 23, 24, 25, 26, 27; W.M., Lane County, except that portion defined as the Clear Lake Watershed more particularly described by OAR 340-71-460(6)(f).

ATTACHMENT B

PROPOSED MODIFIED RULES

OAR 340-41-270, OAR 340-71-400, AND OAR 340-71-460

[Note - there are two sets of these rules. The first set shows the existing rules with the changes marked. The second set is a "clean" copy of the rules with the proposed modifications included]

Special Policies and Guidelines

340-41-270 In order to preserve the existing high quality water in Clear Lake north of Florence for use as a public water supply source requiring only minimal filtration, it is the policy of the Environmental Quality Commission to protect the Clear Lake watershed including both surface and groundwaters, from existing and potential contamination sources with the following requirements:

(1) The total phosphorus maximum annual loading discharged into Clear Lake shall not exceed 241 pounds per year from all sources.

(2) The total phosphorus maximum annual loading for the Clear Lake watershed shall be deemed exceeded if the median concentration of total phosphorus from samples collected in the epilimnion between May 1 and September 30 exceed nine micrograms per liter during two consecutive years.

(3) Of the total phosphorus loading of 241 pounds per year specified in section (1) of this rule, 192 pounds per year shall be considered current background and Department reserve and shall not be available to other sources.

(4) The total phosphorus maximum annual loading discharged into Collard Lake shall not exceed 123 pounds per year.

~~(5) Lane County or any other jurisdiction shall not issue permits allowing connection of development in the Clear Lake watershed to a sewerage facility and the Department or its contract agent shall not issue on-site sewage system construction-installation permits or favorable site evaluation reports for on-site sewage systems within the Clear Lake watershed until a plan is submitted to and approved by the Department showing how total phosphorus loadings limitations required by this rule will be achieved and maintained. The plan shall include, but not be limited to, the following:~~

~~(a)Projected phosphorus loadings for existing development and future planned development within the Clear Lake watershed. Technical bases for the projections shall be cited. The plan shall include phosphorus loadings from storm runoff during and after construction, on-site sewage disposal systems and other management activities in the watershed including, but not limited to, forest harvesting;~~

~~(b) Adopted ordinances as necessary to carry out the provisions of the plan;~~

~~(c) Agreements, contracts and other information as needed to show how and what entity will effectively implement each provision of the plan.~~

~~(6) The plan required by section (5)of this rule shall address necessary controls to reduce phosphorus loadings into Collard Lake to levels less than 60 pounds per year. The Department may approve a plan with annual loadings greater than 60 pounds per year, but only if the plan demonstrates that controls necessary to achieve less than 60 pounds per year are unreasonable and overly burdensome.~~

~~(7)If the plan required by section (5) of this rule proposes that Clear Lake and/or Collard Lake loading limits be increased from levels established in section (1)and/or section (4)of this rule, the plan shall include the social and economic justification for such increases as required by Oregon Administrative Rule (OAR) 340-41-026. The justification shall show the costs of achieving the loading limits established in this rule as well as the economic and social benefits of increasing the loads. The Commission shall not approve any plan that will not achieve a lake loading limit for Collard Lake of 140 pounds or less of phosphorus per~~

~~year. The Commission shall not approve any plan that will not achieve a lake loading limit for Clear Lake of 251 pounds or less of phosphorus per year.~~

~~(8) No construction of a sewerage facility to serve the Clear Lake watershed or a portion thereof shall begin until or unless:~~

~~(a) The facilities plan report and engineering plans and specifications have been approved in writing by the Department;~~

~~(b) It is constructed and operated by a municipality with authority for the operation and maintenance of sewerage facilities;~~

~~(c)Before construction starts, the responsible municipality shall demonstrate that it has a reliable source of funding to assure proper construction, operation, maintenance, and replacement of the required sewerage facilities.~~

~~(9) No on-site sewage system construction-installation permits, favorable site evaluation reports, or sanitary sewer connection permits shall be issued until a plan for monitoring the water quality of Clear Lake is submitted to and approved by the Department. The plan shall include contracts or memorandums of agreement that assure that the monitoring will be conducted.~~

~~(10) Unless it is demonstrated that stormwater runoff treatment and control systems are not necessary to meet the total maximum annual loading for total phosphorus, any off-site or on-site control facilities for stormwater quality control necessary to comply with this rule shall be under the control of a municipality.~~

—Stat. Auth.: ORS 183.335, 454.625, 468.020, ~~468.705 & 468.710~~, 468B.010 and 468B.020.
Stat. Implemented: ORS 454.685
Hist.: DEQ 3-1983, f. & ef. 4-18-83; DEQ 44-1990, f. & cert. ef. 12-19-90

340-71-400

Geographic Area Special Considerations.

(1) River Road — Santa Clara Area, Lane County:

(a) Within the areas set forth in subsection (b) of this section the Agent may issue either construction permits for new subsurface sewage disposal systems or favorable reports of evaluation of site suitability to construct systems under the following circumstances:

(A) The system complies with all rules in effect at the time the permit is issued; and

(B) The system will not in itself contribute, or in combination with other new sources after April 18, 1980, contribute more than sixteen and seven-tenths (16.7) pounds nitrate-nitrogen per acre per year to the local groundwater. The applicant shall assure compliance with this condition by showing his ownership or control of adequate land through easements or equivalent.

(b) Subsection (a) of this section shall apply to all of the following area generally known as River Road — Santa Clara, and defined by the boundary submitted by the Board of County Commissioners for Lane County, which is bounded on the south by the City of Eugene, on the west by the Southern Pacific Railroad, on the north by Beacon Drive, and on the east by the Willamette River, and containing all or portions of T16S, R4W, Sections 33, 34, 35, 36; T17S, R4W, Sections 1, 2, 3, 4, 10, 11, 12, 13, 14, 15, 22, 23, 24, 25; and T17S, R1E, Sections 6, 7, 18, Willamette Meridian;

(c) This rule is subject to modification or repeal by the Commission on an area-by-area basis upon petition by the appropriate local agency or agencies. Such petition either shall provide reasonable evidence that development using subsurface sewage disposal systems will not cause unacceptable degradation of groundwater quality or surface water quality or shall provide equally adequate evidence that degradation of groundwater or surface water quality will not occur as a result of such modification or repeal;

(d) Subsections (a) and (b) of this section shall not apply to any construction permit application based on a favorable report of evaluation of site suitability issued by the Agent pursuant to ORS 454.755(1)(b), where such report was issued prior to the effective date of this rule.

(2) General North Florence Aquifer, North Florence Dunal Aquifer Area, Lane County:

(a) Within the area set forth in subsection (2)(b) of this rule, the agent may issue construction permits for new on-site sewage disposal systems or favorable reports of evaluation of site suitability to construct individual or community on-site sewage disposal systems under the following circumstances:

(A) The lot and proposed system shall comply with all rules in effect at the time the permit or favorable report of site suitability is issued; or

(B) The lot and proposed system complies with paragraph 2(a)(A) of this rule, except for the projected daily sewage loading rates, and the system in combination with all other previously approved systems owned or legally controlled by the applicant shall be projected by the Department to contribute to the local groundwater not more than fifty-eight (58) pounds nitrate-nitrogen NO_3-N per year per acre owned or controlled by the applicant.

(b) Subsection (2)(a) of this rule shall apply to all of the following area hereby known as the General North Florence Aquifer of the North Florence Dunal Area and is defined by the hydrologic boundaries identified in the June 1982, 208 North Florence Dunal Aquifer Study, which is the area bounded on the west by the Pacific Ocean; on the southwest and south by the Siuslaw River; on the east by the North Fork of the Siuslaw River and the ridge line at the approximate elevation of four hundred (400) feet above mean sea level directly east of Munsel Lake, Clear Lake and Collard Lake; and on the north by Mercer Lake, Mercer Creek, Sutton Lake and Sutton Creek; and containing all or portions of T17S, R12W, Sections 27, 28, 33, 34, 35, 36, and T18S, T12W, sections 1, 2, 3, 4, 9, 10, 11, 12, 13, 14, 15, 16, 22, 23, 24, 25, 26, 27; W.M., Lane County, except that portion defined as the Clear Lake Watershed more particularly described by ~~OAR 340-71-460(6)(f).~~ Township 18 South, Range 12 West, of the Willamette Meridian, Lane County, Oregon:

Run thence S. 67° 50' 51.5" E. 97.80 ft. to the True Point of Beginning; Run thence S. 05° 40' 43.0" W. 1960.62 ft. to a point; Run thence S. 04° 58' 45.4" E. 1301.91 ft. to a point; Run thence S. 52° 44' 01.0" W. 231.21 ft. to a point; Run thence S. 15° 20' 45.4" E. 774.62 ft. to a point; Run thence S. 31°44' 14.0" W. 520.89.ft. to a point; Run thence S. 00° 24' 43.9" W. 834.02 ft. to a point; Run thence S. 07° 49' 01.8" W. 1191.07 ft. to a point; Run thence S. 50° 26' 06.3" W. 731.61 ft. to a point; Run thence S. 02° 51' 10.5" W. 301.37 ft. to a point; Run thence 36° 37' 58.2" W. 918.41 ft. to a point; Run thence S. 47° 12' 26.3" W. 1321.86 ft. to a point; Run thence S. 72° 58' 54.2" W. 498.84 ft. to a point; Run thence S. 85° 44' 21.3" W. 955.64 ft. to a point; Which is N. 11° 39' 16.9" W. 5434.90 ft. from a point known as Green Two (located in Section 13 in said Township and Range); Run thence N. 58° 09' 44.1" W. 1630.28 ft. to a point; Run thence N. 25° 23' 10.1" W. 1978.00 ft. to a point; Run thence N. 16° 34' 21.0" W. 1731.95 ft. to a point; Run thence N. 06° 13' 18.0" W. 747.40 ft. to a point; Run thence N. 03° 50' 32.8" E. 671.51 ft. to a point; Run thence N. 59° 33' 18.9" E. 1117.02 ft. to a point; Run thence N. 59° 50' 06.0" E. 1894.56 ft. to a point; Run thence N. 48° 28' 40.0" E. 897.56 ft. to a point; Run thence N. 31° 29' 50.7" E. 920.64 ft. to a point; Run thence N. 19° 46' 39.6" E. 1524.95 to a point; Run thence S. 76° 05' 37.1" E. 748.95 ft. to a point; Run thence S. 57° 33' 30.2" E. 445.53 ft. to a point; Run thence S. 78° 27' 44.9" E. 394.98 ft. to a point; Run thence S. 61° 55' 39.0" E. 323.00 ft. to a point; Run thence N. 89° 04' 46.8" E. 249.03 ft. to a point; Run thence S. 67° 43' 17.4" E. 245.31 ft. to a point; Run thence S. 79° 55' 09.8" E. 45.71 ft. to a point; Run thence S. 83° 59' 27.6" E. 95.52 ft. to a point; Run thence N. 42° 02' 57.2" E. 68.68 ft. to a point; Run thence S. 80° 41' 24.2" E. 61.81 ft. to a point; Run thence S. 10° 47' 03.5" E. 128.27 ft. to the True Point of Beginning; and containing all or portions of T17S, R12W, Sections 35 and 36; and T18S, R12W, Sections 1, 2, 11 and 12; W.M., Lane County.

(3) Lands Overlaying the Alsea Dunal Aquifer:

(a) Within the area set forth in subsection (3)(c) of this rule, the Agent may issue a construction permit for a new on-site sewage disposal system or a favorable report of evaluation of site suitability to construct a single on-site system on lots that were lots of record prior to January 1, 1981; or on lots in partitions or subdivisions that have received preliminary planning, zoning, and on-site sewage disposal approval prior to January 1,

1981, providing one of the following can be met:

(A) At the time the permit or favorable report of site suitability is issued the lot complies with OAR 340-71-100 through 340-71-360 and OAR 340-71-410 through 340-71-520; or

(B) The lot is found through site evaluation not to comply with OAR 340-71-100 through 340-71-360 and OAR 340-71-410 through 340-71-520, but does meet all of the following conditions when a pressurized seepage bed is utilized:

(i) Groundwater levels shall not be closer than four (4) feet from the ground surface or closer than three (3) feet from the bottom of the seepage bed;

(ii) The seepage bed shall be constructed in accordance with OAR 340-71-275(4) and (5);

(iii) The seepage bed shall be sized on the basis of two hundred (200) square feet of bottom area per one hundred fifty (150) gallons projected daily sewage flow;

(iv) Projected daily sewage flows shall be limited to not more than three hundred seventy-five (375) gallons per lot, except those lots which have a certificate of favorable site evaluation which provides for a larger flow;

(v) All setbacks identified in **Table 1** can be met, except that lots of record prior to May 1, 1973, shall maintain a minimum fifty (50) feet separation to surface public waters;

(vi) Sufficient area exists on the lot to install a seepage bed and a replacement seepage bed. The area reserved for replacement may be waived pursuant to the exception in OAR 340-71-150(4)(a)(B).

(C) The lot is found through site evaluation not to comply with OAR 340-71-100 through 340-71-360 and OAR 340-71-410 through 340-71-520, but does meet all of the following conditions when a conventional sand filter without a bottom is utilized:

(i) Groundwater levels shall not be closer than one (1) foot from the ground surface and not closer than one (1) foot from the bottom of the sand filter;

(ii) Sewage flows shall be limited to not more than three hundred seventy-five (375) gallons per day per lot, except those lots which have a certificate of favorable site evaluation which provides for a larger flow;

(iii) The sand filter shall be sized at one (1) square foot of bottom area for each gallon of projected daily sewage flow;

(iv) The conventional sand filter without a bottom shall be constructed in accordance with OAR 340-71-295(3);

(v) All setbacks identified in **Table 1** can be met, except that lots of record prior to May 1, 1973, shall maintain a minimum fifty (50) feet separation to surface public waters;

(vi) Sufficient area exists on the lot to install a bottomless conventional sand filter and a replacement bottomless conventional sand filter. The area for replacement may be waived pursuant to the exception contained in OAR 340-71-150(4)(a)(B).

(b) Within the area set forth in subsection (3)(c) of this rule, for lots created on or after January 1, 1981, and/or when the on-site system will serve a commercial facility, the Agent may issue a construction permit for a new on-site sewage disposal system or a favorable report of evaluation of site suitability if it is determined that all rules of the Commission can be met;

(c) The Alsea Dunal Aquifer is defined as all the land bounded on the East by Highway 101, the Pacific Ocean on the West, and from Driftwood Beach Wayside South

to the southern tip of the Alsea Bay Spit;

(d) If the results of groundwater monitoring in the Alsea Dunal Aquifer indicate unacceptable levels of degradation or if it appears necessary or desirable to pursue development of the aquifer as a source of drinking water, sewage collection and off-site treatment and disposal facilities shall be installed unless further study demonstrates that such facilities are not necessary or effective to protect the beneficial use.

(4) Christmas Valley Townsite, Lake County:

(a) Within the area set forth in subsection (4)(b) of this rule, the agent may consider the shallow groundwater table, if present, in the same manner as a temporary water table when preparing and/or issuing site evaluation reports and construction-installation permits;

(b) The Christmas Valley Townsite is defined as all land within the Christmas Valley Townsite plat located within Sections 9, 10, 11, 14, 15 and 16 of Township 27 South, Range 17 East, Willamette Meridian, in Lake County.

(5) Clatsop Plains Aquifer, Clatsop County: The Clatsop Plains Groundwater Protection Plan, prepared by R.W. Beck and Associates and adopted by Clatsop County, provides a basis for continued use of on-site sewage disposal systems while protecting the quality of groundwater for future water supplies. For the plan to be successful, the following components must be accomplished:

(a) By not later than January 1, 1983, Clatsop County shall identify and set aside aquifer reserve areas for future water supply development containing a minimum of two and one half (2-1/2) square miles. The reserve areas shall be controlled so that the potential for groundwater contamination from nitrogen and other possible pollutants is kept to a minimum;

(b) The Agent may issue construction installation permits for new on-site sewage disposal systems or favorable reports of site evaluation to construct on-site systems, within the area generally known as the Clatsop Plains, which is bounded by the Columbia River to the North; the Pacific Ocean to the west; the Necanicum River, Neawanna Creek, and County Road 157 on the south; and the Carnahan Ditch-Skipanon River and the foothills of the Coast Range to the east, providing:

(A) The lot or parcel was created in compliance with the appropriate comprehensive plan for Gearhart (adopted by County Ordinance 80-3), Seaside (adopted by County Ordinance 80-10), Warrenton (adopted by County Ordinance 82-15), or the Clatsop County plan adopted through Ordinance No. 79-10; and either

(B) The lot or parcel does not violate any rule of this Division; or

(C) Lot or parcel does not violate the Department's Water Quality Management Plan or any rule of this Division, except the projected maximum sewage loading rate would exceed the ratio of four hundred fifty (450) gallons per one-half (1/2) acre per day. The on-site system shall be either a sand filter system or a pressurized distribution system with a design sewage flow not to exceed four hundred fifty (450) gallons per day; or

(D) The Department may approve the use of standard on-site systems to serve single family dwellings within planned developments or clustered-lot subdivisions providing:

(i) The planned development or clustered-lot subdivision is not located within Gearhart, Seaside, Warrenton, or their urban growth boundaries; and

(ii) The lots do not violate any rule of this Division, except the projected maximum sewage loading rate may exceed the ratio of four hundred fifty (450) gallons per acre per

day; and

(iii) The Department is provided satisfactory evidence through a detailed groundwater study that the use of standard systems will not constitute a greater threat to groundwater quality than would occur with the use of sand filter systems or pressurized distribution systems.

(6) Within areas east of the Cascade Range where the annual precipitation does not exceed twenty (20) inches, and after evaluating the site, the Agent may issue a construction-installation permit authorizing installation of a standard system to serve a single family dwelling, provided the requirements in subsections (6)(a) and (b) of this rule are met:

(a) Minimum Site Criteria:

(A) The property is ten (10) acres or larger in size. The minimum parcel size considered under this rule is designated by the County, but in no event shall it be less than ten (10) acres;

(B) The slope gradient does not exceed thirty (30) percent;

(C) The soils are diggable with a backhoe to a depth of at least twenty-four (24) inches;

(D) The site is found to comply with the provisions of OAR 340-71-220(1)(b,e,f,g,h, and i).

(b) Minimum Construction Requirements:

(A) The system shall contain not less than two hundred twenty-five (225) linear feet of disposal trench for projected sewage flows not exceeding four hundred fifty (450) gallons per day. Larger sewage flows shall be sized on the basis of seventy-five (75) linear feet per each one hundred fifty (150) gallons of projected flow;

(B) The system shall be constructed and backfilled in compliance with OAR 340-71-220: sections (3), (4), (5), (7) , (8), (9), (10), and (11) of this rule.

(c) At the discretion and request of the owner or the owner's authorized representative, a single application may be submitted to the Agent for both a site evaluation report and a construction-installation permit. The application would include the sum of the fees for both activities, pursuant to OAR 340-71-140(1)(a)(A) and OAR 340-71-140(1)(b)(A)(i), as well as the following:

(A) Favorable land use compatibility statement from the appropriate land use authority signifying that the proposed land use is compatible with the Land Conservation and Development Commission acknowledged comprehensive plan or complies with the statewide planning goals;

(B) Property development plan acceptable to the Agent showing the location of existing and proposed improvements, including the locations of the dwelling and sewage disposal system;

(C) All other exhibits the Agent finds are necessary to complete the application.

(d) The Agent may waive the pre-cover inspection for a system installed pursuant to this section, provided the system installer submits the following information to the Agent at the time construction of the system is complete:

(A) A detailed and accurate as-built plan of the constructed system; and

(B) A list of all material used in the construction of the system; and

(C) A written certification (on a form acceptable to the Department) that the

construction was in accordance with the permit and rules of the Commission.

(7) Within areas east of the Cascade Range where the annual precipitation does not exceed twenty (20) inches, the Agent may issue a construction-installation permit authorizing installation of a standard system to serve a single family dwelling, provided the requirements in subsections (7)(a) and (b) of this rule are met. The Agent may waive the site evaluation for a single family dwelling provided:

(a) Minimum Site Criteria:

(A) The property is eighty (80) acres or larger in size. The minimum parcel size considered under this rule is designated by the County, but in no event shall it be less than eighty (80) acres;

(B) The separation distance between the proposed on-site system and the nearest dwelling, other than that being served by the proposed system, is at least one-quarter mile;

(C) The nearest property line to the proposed system is at least 100 feet, the nearest domestic water source is at least 200 feet, and the nearest surface public water is at least 200 feet; and

(D) In the opinion of the Agent, sufficient topographical and soils information, including but not limited to slope, terrain, landform, and rock outcrops, is submitted with the application to determine the property can be approved for on-site sewage disposal in conformance with the purpose of these rules as stated in OAR 340-71-110.

(b) Minimum Construction Requirements:

(A) Sizing requirements of **Tables 4 and 5** shall be followed as closely as possible. In any case, the system shall contain not less than two hundred twenty-five (225) linear feet of disposal trench for projected sewage flows not exceeding four hundred fifty (450) gallons per day. Larger sewage flows shall be sized on the basis of seventy-five (75) linear feet per each one hundred fifty (150) gallons of projected flow;

(B) The system shall be constructed and backfilled as closely as possible to the requirements contained in OAR 340-71-220.

(c) At the request of the owner or the owner's authorized representative, a single application may be submitted to the Agent for both a site evaluation report and a construction-installation permit. The application would include the fee for a site evaluation, pursuant to OAR 340-71-140, as well as the following:

(A) Favorable land use compatibility statement from the appropriate land use authority signifying that the proposed land use is compatible with the Land Conservation and Development Commission acknowledged comprehensive plan or complies with the statewide planning goals;

(B) Property development plan acceptable to the Agent showing the location of existing and proposed improvements, including the locations of the dwelling and sewage disposal system;

(C) All other exhibits the Agent finds are necessary to complete the application;

(D) If the decision is made to waive the site evaluation, the fee will be transferred to the permit.

(d) The Agent may waive the pre-cover inspection for a system installed pursuant to this section, provided the system installer submits the following information to the Agent at the time construction of the system is complete:

(A) A detailed and accurate as-built plan of the constructed system; and

(B) A list of all material used in the construction of the system; and

(C) A written certification (on a form acceptable to the Department) that the construction was in accordance with the permit and rules of the Commission.

(e) The conditions for OAR 340-71-400(7) shall be set forth in an addendum to the memorandum of agreement (contract) between the County and the Department.

Stat. Author.: ORS 183.335, 454.625, 468.020, 468B.010 and 468B.020.
Stat. Impl.: ORS 454.610, 454.615

340-71-460
Moratorium Areas

(1) Whenever the Commission finds that construction of subsurface or alternative sewage disposal systems should be limited or prohibited in an area, it shall issue an order limiting or prohibiting such construction.

(2) The order shall be issued only after public hearing for which more than thirty (30) days' notice is given.

(3) The order shall be a rule of this division which contains a general description of the moratorium area. A more detailed description of the area, if needed, shall be an appendix to these rules.

(4) No permit or site evaluation report shall be issued for construction of a new or expanded system which would violate any order of the Commission issued pursuant to ORS 454.685.

(5) Criteria For Establishing Moratoriums: In issuing an order under this section the Commission shall consider the factors contained in ORS 454.685(2).

~~(6) Specific Moratorium Areas: Pursuant to ORS 454.685, the Agent shall not issue sewage system construction installation permits or approved site evaluation reports within the boundaries of the following areas of the state:~~

~~Lane County - Clear Lake Watershed of the North Florence Dunal Aquifer Area, as follows: The area hereby known as the Clear Lake Watershed of the North Florence Dunal Aquifer Area defined by the hydrologic boundaries identified in the June 1982, **208 North Florence Dunal Aquifer Study** which is the area beginning at a point known as Tank One, located in Section One, Township 18 South, Range 12 West, of the Willamette Meridian, Lane County, Oregon:~~

~~Run thence S. 67° 50' 51.5" E. 97.80 ft. to the True Point of Beginning; Run thence S. 05° 40' 43.0" W. 1960.62 ft. to a point; Run thence S. 04° 58' 45.4" W. 1301.91 ft. to a point; Run thence S. 52° 44' 01.0" W. 231.21 ft. to a point; Run thence S. 15° 20' 45.4" W. 774.62 ft. to a point; Run thence S. 31° 44' 14.0" W. 520.89 ft. to a point; Run thence S. 00° 24' 43.9" W. 834.02 ft. to a point; Run thence S. 07° 49' 01.8" W. 1191.07 ft. to a point; Run thence S. 50° 26' 06.3" W. 731.61 ft. to a point; Run thence S. 02° 51' 10.5" W. 301.37 ft. to a point; Run thence S. 36° 37' 58.2" W. 918.41 ft. to a point; Run thence S. 47° 12' 26.3" W. 1321.86 ft. to a point; Run thence S. 72° 58' 54.2" W. 498.84 ft. to a point; Run thence S. 85° 44' 21.3" W. 955.64 ft. to a point; Which is N. 11° 39' 16.9" W. 5434.90 ft. from a point known as Green Two (located in Section 13 in said Township and Range);~~

~~Run thence N. 58° 09' 44.1" W. 1630.28 ft. to a point; Run thence N. 25° 23' 10.1" W. 1978.00 ft. to a point; Run thence N. 16° 34' 21.0" W. 1731.95 ft. to a point; Run thence N. 06° 13' 18.0" W. 747.40 ft. to a point; Run thence N. 03° 50' 32.8" E. 671.51 ft. to a point; Run thence N. 59° 33' 18.9" E. 1117.02 ft. to a point; Run thence N. 59° 50' 06.0" E. 2894.56 ft. to a point; Run thence N. 48° 28' 40.0" E. 897.56 ft. to a point; Run thence N. 31° 29' 50.7" E. 920.64 ft. to a point; Run thence N. 19° 46' 39.6" E. 1524.95 ft. to a point; Run thence S. 76° 05' 37.1" E. 748.95 ft. to a point; Run thence S. 57° 33' 30.2" E. 445.53 ft. to a point; Run thence S. 78° 27' 44.9" E. 394.98 ft. to a point; Run thence S. 61° 55' 39.0" E. 323.00 ft. to a point; Run thence N. 89° 04' 46.8" E. 249.03 ft. to a point; Run thence S. 67° 43' 17.4" E. 245.31 ft. to a point; Run thence S. 79° 55' 09.8" E. 45.71 ft. to a point; Run thence S. 83° 59' 27.6" E. 95.52 ft. to a point; Run thence N. 42° 02' 57.2" E. 68.68 ft. to a point; Run thence S. 80° 41' 24.2" E. 61.81 ft. to a point; Run thence S. 10°47' 03.5" E. 128.27 ft. to the True Point of beginning; and containing all or portions of T17S, R12W, Sections 35 and 36; and T18S, R12W, Sections 1, 2, 11 and 12; W.M., Lane County.~~

Stat. Author.: ORS 183.335, 454.625, 468.020, 468B.010 and 468B.020.
Stat. Impl.: ORS 454.685

Special Policies and Guidelines

340-41-270 In order to preserve the existing high quality water in Clear Lake north of Florence for use as a public water supply source requiring only minimal filtration, it is the policy of the Environmental Quality Commission to protect the Clear Lake watershed including both surface and groundwaters, from existing and potential contamination sources with the following requirements:

(1) The total phosphorus maximum annual loading discharged into Clear Lake shall not exceed 241 pounds per year from all sources.

(2) The total phosphorus maximum annual loading for the Clear Lake watershed shall be deemed exceeded if the median concentration of total phosphorus from samples collected in the epilimnion between May 1 and September 30 exceed nine micrograms per liter during two consecutive years.

(3) Of the total phosphorus loading of 241 pounds per year specified in section (1) of this rule, 192 pounds per year shall be considered current background and Department reserve and shall not be available to other sources.

(4) The total phosphorus maximum annual loading discharged into Collard Lake shall not exceed 123 pounds per year.

Stat. Auth.: ORS 183.335, 454.625, 468.020,, 468B.010 and 468B.020.

Stat. Implemented: ORS 454.685

Hist.: DEQ 3-1983, f. & ef. 4-18-83; DEQ 44-1990, f. & cert. ef. 12-19-90

340-71-400

Geographic Area Special Considerations.

(1) River Road — Santa Clara Area, Lane County:

(a) Within the areas set forth in subsection (b) of this section the Agent may issue either construction permits for new subsurface sewage disposal systems or favorable reports of evaluation of site suitability to construct systems under the following circumstances:

(A) The system complies with all rules in effect at the time the permit is issued; and

(B) The system will not in itself contribute, or in combination with other new sources after April 18, 1980, contribute more than sixteen and seven-tenths (16.7) pounds nitrate-nitrogen per acre per year to the local groundwater. The applicant shall assure compliance with this condition by showing his ownership or control of adequate land through easements or equivalent.

(b) Subsection (a) of this section shall apply to all of the following area generally known as River Road — Santa Clara, and defined by the boundary submitted by the Board of County Commissioners for Lane County, which is bounded on the south by the City of Eugene, on the west by the Southern Pacific Railroad, on the north by Beacon Drive, and on the east by the Willamette River, and containing all or portions of T16S, R4W, Sections 33, 34, 35, 36; T17S, R4W, Sections 1, 2, 3, 4, 10, 11, 12, 13, 14, 15, 22, 23, 24, 25; and T17S, R1E, Sections 6, 7, 18, Willamette Meridian;

(c) This rule is subject to modification or repeal by the Commission on an area-by-area basis upon petition by the appropriate local agency or agencies. Such petition either shall provide reasonable evidence that development using subsurface sewage disposal systems will not cause unacceptable degradation of groundwater quality or surface water quality or shall provide equally adequate evidence that degradation of groundwater or surface water quality will not occur as a result of such modification or repeal;

(d) Subsections (a) and (b) of this section shall not apply to any construction permit application based on a favorable report of evaluation of site suitability issued by the Agent pursuant to ORS 454.755(1)(b), where such report was issued prior to the effective date of this rule.

(2) General North Florence Aquifer, North Florence Dunal Aquifer Area, Lane County:

(a) Within the area set forth in subsection (2)(b) of this rule, the agent may issue construction permits for new on-site sewage disposal systems or favorable reports of evaluation of site suitability to construct individual or community on-site sewage disposal systems under the following circumstances:

(A) The lot and proposed system shall comply with all rules in effect at the time the permit or favorable report of site suitability is issued; or

(B) The lot and proposed system complies with paragraph 2(a)(A) of this rule, except for the projected daily sewage loading rates, and the system in combination with all other previously approved systems owned or legally controlled by the applicant shall be projected by the Department to contribute to the local groundwater not more than fifty-eight (58) pounds nitrate-nitrogen NO_3-N per year per acre owned or controlled by the applicant.

(b) Subsection (2)(a) of this rule shall apply to all of the following area hereby known as the General North Florence Aquifer of the North Florence Dunal Area and is defined by the hydrologic boundaries identified in the June 1982, 208 North Florence Dunal Aquifer Study, which is the area bounded on the west by the Pacific Ocean; on the southwest and south by the Siuslaw River; on the east by the North Fork of the Siuslaw River and the ridge line at the approximate elevation of four hundred (400) feet above mean sea level directly east of Munsel Lake, Clear Lake and Collard Lake; and on the north by Mercer Lake, Mercer Creek, Sutton Lake and Sutton Creek; and containing all or portions of T17S, R12W, Sections 27, 28, 33, 34, 35, 36, and T18S, T12W, sections 1, 2, 3, 4, 9, 10, 11, 12, 13, 14, 15, 16, 22, 23, 24, 25, 26, 27; W.M., Lane County, except that portion defined as the Clear Lake Watershed more particularly described byTownship 18 South, Range 12 West, of the Willamette Meridian, Lane County, Oregon:
Run thence S. 67° 50' 51.5" E. 97.80 ft. to the True Point of Beginning; Run thence S. 05° 40' 43.0" W. 1960.62 ft. to a point; Run thence S. 04° 58' 45.4" E.. 1301.91 ft. to a point; Run thence S. 52° 44' 01.0" W. 231.21 ft. to a point; Run thence S. 15° 20' 45.4" E. 774.62 ft. to a point; Run thence S. 31°44' 14.0" W. 520.89.ft. to a point; Run thence S. 00° 24' 43.9" W. 834.02 ft. to a point; Run thence S. 07° 49' 01.8" W. 1191.07 ft. to a point; Run thence S. 50° 26' 06.3" W. 731.61 ft. to a point; Run thence S. 02° 51' 10.5" W. 301.37 ft. to a point; Run thence 36° 37' 58.2" W. 918.41 ft. to a point; Run thence S. 47° 12' 26.3" W. 1321.86 ft. to a point; Run thence S. 72° 58' 54.2" W. 498.84 ft. to a point; Run thence S. 85° 44' 21.3" W. 955.64 ft. to a point; Which is N. 11° 39' 16.9" W. 5434.90 ft. from a point known as Green Two (located in Section 13 in said Township and Range); Run thence N. 58° 09' 44.1" W. 1630.28 ft. to a point; Run thence N. 25° 23' 10.1" W. 1978.00 ft. to a point; Run thence N. 16° 34' 21.0" W. 1731.95 ft. to a point; Run thence N. 06° 13' 18.0" W. 747.40 ft. to a point; Run thence N. 03° 50' 32.8" E. 671.51 ft. to a point; Run thence N. 59° 33' 18.9" E. 1117.02 ft. to a point; Run thence N. 59° 50' 06.0" E. 1894.56 ft. to a point; Run thence N. 48° 28' 40.0" E. 897.56 ft. to a point; Run thence N. 31° 29' 50.7" E. 920.64 ft. to a point; Run thence N. 19° 46' 39.6" E. 1524.95 to a point; Run thence S. 76° 05' 37.1" E. 748.95 ft. to a point; Run thence S. 57° 33' 30.2" E. 445.53 ft. to a point; Run thence S. 78° 27' 44.9" E. 394.98 ft. to a point; Run thence S. 61° 55' 39.0" E. 323.00 ft. to a point; Run thence N. 89° 04' 46.8" E, 249.03 ft. to a point; Run thence S. 67° 43' 17.4" E. 245.31 ft. to a point; Run thence S. 79° 55' 09.8" E. 45.71 ft. to a point; Run thence S. 83° 59' 27.6" E. 95.52 ft. to a point; Run thence N. 42° 02' 57.2" E. 68.68 ft. to a point; Run thence S. 80° 41' 24.2" E. 61.81 ft. to a point; Run thence S. 10° 47' 03.5" E. 128.27 ft. to the True Point of Beginning; and containing all or portions of T17S, R12W, Sections 35 and 36; and T18S, R12W, Sections 1, 2, 11 and 12; W.M., Lane County.

(3) Lands Overlaying the Alsea Dunal Aquifer:

(a) Within the area set forth in subsection (3)(c) of this rule, the Agent may issue a construction permit for a new on-site sewage disposal system or a favorable report of evaluation of site suitability to construct a single on-site system on lots that were lots of record prior to January 1, 1981; or on lots in partitions or subdivisions that have received preliminary planning, zoning, and on-site sewage disposal approval prior to January 1, 1981, providing one of the following can be met:

(A) At the time the permit or favorable report of site suitability is issued the lot complies with OAR 340-71-100 through 340-71-360 and OAR 340-71-410 through 340-71-520; or

(B) The lot is found through site evaluation not to comply with OAR 340-71-100 through 340-71-360 and OAR 340-71-410 through 340-71-520, but does meet all of the following conditions when a pressurized seepage bed is utilized:

(i) Groundwater levels shall not be closer than four (4) feet from the ground surface or closer than three (3) feet from the bottom of the seepage bed;

(ii) The seepage bed shall be constructed in accordance with OAR 340-71-275(4) and (5);

(iii) The seepage bed shall be sized on the basis of two hundred (200) square feet of bottom area per one hundred fifty (150) gallons projected daily sewage flow;

(iv) Projected daily sewage flows shall be limited to not more than three hundred seventy-five (375) gallons per lot, except those lots which have a certificate of favorable site evaluation which provides for a larger flow;

(v) All setbacks identified in **Table 1** can be met, except that lots of record prior to May 1, 1973, shall maintain a minimum fifty (50) feet separation to surface public waters;

(vi) Sufficient area exists on the lot to install a seepage bed and a replacement seepage bed. The area reserved for replacement may be waived pursuant to the exception in OAR 340-71-150(4)(a)(B).

(C) The lot is found through site evaluation not to comply with OAR 340-71-100 through 340-71-360 and OAR 340-71-410 through 340-71-520, but does meet all of the following conditions when a conventional sand filter without a bottom is utilized:

(i) Groundwater levels shall not be closer than one (1) foot from the ground surface and not closer than one (1) foot from the bottom of the sand filter;

(ii) Sewage flows shall be limited to not more than three hundred seventy-five (375) gallons per day per lot, except those lots which have a certificate of favorable site evaluation which provides for a larger flow;

(iii) The sand filter shall be sized at one (1) square foot of bottom area for each gallon of projected daily sewage flow;

(iv) The conventional sand filter without a bottom shall be constructed in accordance with OAR 340-71-295(3);

(v) All setbacks identified in **Table 1** can be met, except that lots of record prior to May 1, 1973, shall maintain a minimum fifty (50) feet separation to surface public waters;

(vi) Sufficient area exists on the lot to install a bottomless conventional sand filter and a replacement bottomless conventional sand filter. The area for replacement may be waived pursuant to the exception contained in OAR 340-71-150(4)(a)(B).

(b) Within the area set forth in subsection (3)(c) of this rule, for lots created on or after January 1, 1981, and/or when the on-site system will serve a commercial facility, the Agent may issue a construction permit for a new on-site sewage disposal system or a favorable report of evaluation of site suitability if it is determined that all rules of the Commission can be met;

(c) The Alsea Dunal Aquifer is defined as all the land bounded on the East by Highway 101, the Pacific Ocean on the West, and from Driftwood Beach Wayside South to the southern tip of the Alsea Bay Spit;

(d) If the results of groundwater monitoring in the Alsea Dunal Aquifer indicate unacceptable levels of degradation or if it appears necessary or desirable to pursue development of the aquifer as a source of drinking water, sewage collection and off-site treatment and disposal facilities shall be installed unless further study demonstrates that such facilities are not necessary or effective to protect the beneficial use.

(4) Christmas Valley Townsite, Lake County:

(a) Within the area set forth in subsection (4)(b) of this rule, the agent may consider the shallow groundwater table, if present, in the same manner as a temporary water table when preparing and/or issuing site evaluation reports and construction-installation permits;

(b) The Christmas Valley Townsite is defined as all land within the Christmas Valley Townsite plat located within Sections 9, 10, 11, 14, 15 and 16 of Township 27 South, Range 17 East, Willamette Meridian, in Lake County.

(5) Clatsop Plains Aquifer, Clatsop County: The Clatsop Plains Groundwater Protection Plan, prepared by R.W. Beck and Associates and adopted by Clatsop County, provides a basis for continued use of on-site sewage disposal systems while protecting the quality of groundwater for future water supplies. For the plan to be successful, the following components must be accomplished:

(a) By not later than January 1, 1983, Clatsop County shall identify and set aside aquifer reserve areas for future water supply development containing a minimum of two and one half (2-1/2) square miles. The reserve areas shall be controlled so that the potential for groundwater contamination from nitrogen and other possible pollutants is kept to a minimum;

(b) The Agent may issue construction installation permits for new on-site sewage disposal systems or favorable reports of site evaluation to construct on-site systems, within the area generally known as the Clatsop Plains, which is bounded by the Columbia River to the North; the Pacific Ocean to the west; the Necanicum River, Neawanna Creek, and County Road 157 on the south; and the Carnahan Ditch-Skipanon River and the foothills of the Coast Range to the east, providing:

(A) The lot or parcel was created in compliance with the appropriate comprehensive plan for Gearhart (adopted by County Ordinance 80-3), Seaside (adopted by County Ordinance 80-10), Warrenton (adopted by County Ordinance 82-15); or the Clatsop County plan adopted through Ordinance No. 79-10; and either

(B) The lot or parcel does not violate any rule of this Division; or

(C) Lot or parcel does not violate the Department's Water Quality Management Plan or any rule of this Division, except the projected maximum sewage loading rate would exceed the ratio of four hundred fifty (450) gallons per one-half (1/2) acre per day. The on-site system shall be either a sand filter system or a pressurized distribution system with a design sewage flow not to exceed four hundred fifty (450) gallons per day; or

(D) The Department may approve the use of standard on-site systems to serve single family dwellings within planned developments or clustered-lot subdivisions providing:

(i) The planned development or clustered-lot subdivision is not located within Gearhart, Seaside, Warrenton, or their urban growth boundaries; and

(ii) The lots do not violate any rule of this Division, except the projected maximum sewage loading rate may exceed the ratio of four hundred fifty (450) gallons per acre per day; and

(iii) The Department is provided satisfactory evidence through a detailed groundwater study that the use of standard systems will not constitute a greater threat to groundwater quality than would occur with the use of sand filter systems or pressurized distribution systems.

(6) Within areas east of the Cascade Range where the annual precipitation does not exceed twenty (20) inches, and after evaluating the site, the Agent may issue a construction-installation permit authorizing installation of a standard system to serve a single family dwelling, provided the requirements in subsections (6)(a) and (b) of this rule are met:

(a) Minimum Site Criteria:

(A) The property is ten (10) acres or larger in size. The minimum parcel size considered under this rule is designated by the County, but in no event shall it be less than ten (10) acres;

(B) The slope gradient does not exceed thirty (30) percent;

(C) The soils are diggable with a backhoe to a depth of at least twenty-four (24) inches;

(D) The site is found to comply with the provisions of OAR 340-71-220(1)(b,e,f,g,h, and i).

(b) Minimum Construction Requirements:

(A) The system shall contain not less than two hundred twenty-five (225) linear feet of disposal trench for projected sewage flows not exceeding four hundred fifty (450) gallons per day. Larger sewage flows shall be sized on the basis of seventy-five (75) linear feet per each one hundred fifty (150) gallons of projected flow;

(B) The system shall be constructed and backfilled in compliance with OAR 340-71-220: sections (3), (4), (5), (7) , (8), (9), (10), and (11) of this rule.

(c) At the discretion and request of the owner or the owner's authorized representative, a single application may be submitted to the Agent for both a site evaluation report and a construction-installation permit. The application would include the sum of the fees for both activities, pursuant to OAR 340-71-140(1)(a)(A) and OAR 340-71-140(1)(b)(A)(i), as well as the following:

(A) Favorable land use compatibility statement from the appropriate land use authority signifying that the proposed land use is compatible with the Land Conservation and Development Commission acknowledged comprehensive plan or complies with the statewide planning goals;

(B) Property development plan acceptable to the Agent showing the location of existing and proposed improvements, including the locations of the dwelling and sewage disposal system;

(C) All other exhibits the Agent finds are necessary to complete the application.

(d) The Agent may waive the pre-cover inspection for a system installed pursuant to this section, provided the system installer submits the following information to the Agent at the time construction of the system is complete:

(A) A detailed and accurate as-built plan of the constructed system; and

(B) A list of all material used in the construction of the system; and

(C) A written certification (on a form acceptable to the Department) that the construction was in accordance with the permit and rules of the Commission.

(7) Within areas east of the Cascade Range where the annual precipitation does not exceed twenty (20) inches, the Agent may issue a construction-installation permit authorizing installation of a standard system to serve a single family dwelling, provided the requirements in subsections (7)(a) and (b) of this rule are met. The Agent may waive the site evaluation for a single family dwelling provided:

(a) Minimum Site Criteria:

(A) The property is eighty (80) acres or larger in size. The minimum parcel size considered under this rule is designated by the County, but in no event shall it be less than eighty (80) acres;

(B) The separation distance between the proposed on-site system and the nearest dwelling, other than that being served by the proposed system, is at least one-quarter mile;

(C) The nearest property line to the proposed system is at least 100 feet, the nearest domestic water source is at least 200 feet, and the nearest surface public water is at least 200 feet; and

(D) In the opinion of the Agent, sufficient topographical and soils information, including but not limited to slope, terrain, landform, and rock outcrops, is submitted with the application to determine the property can be approved for on-site sewage disposal in conformance with the purpose of these rules as stated in OAR 340-71-110.

(b) Minimum Construction Requirements:

(A) Sizing requirements of **Tables 4 and 5** shall be followed as closely as possible. In any case, the system shall contain not less than two hundred twenty-five (225) linear feet of disposal trench for projected sewage flows not exceeding four hundred fifty (450) gallons per day. Larger sewage flows shall be sized on the basis of seventy-five (75) linear feet per each one hundred fifty (150) gallons of projected flow;

(B) The system shall be constructed and backfilled as closely as possible to the requirements contained in OAR 340-71-220.

(c) At the request of the owner or the owner's authorized representative, a single application may be submitted to the Agent for both a site evaluation report and a construction-installation permit. The application would include the fee for a site evaluation, pursuant to OAR 340-71-140, as well as the following:

(A) Favorable land use compatibility statement from the appropriate land use authority signifying that the proposed land use is compatible with the Land Conservation and Development Commission acknowledged comprehensive plan or complies with the statewide planning goals;

(B) Property development plan acceptable to the Agent showing the location of existing and proposed improvements, including the locations of the dwelling and sewage disposal system;

(C) All other exhibits the Agent finds are necessary to complete the application;

(D) If the decision is made to waive the site evaluation, the fee will be transferred to the permit.

(d) The Agent may waive the pre-cover inspection for a system installed pursuant to this section, provided the system installer submits the following information to the Agent at the time construction of the system is complete:

(A) A detailed and accurate as-built plan of the constructed system; and

(B) A list of all material used in the construction of the system; and

(C) A written certification (on a form acceptable to the Department) that the construction was in accordance with the permit and rules of the Commission.

(e) The conditions for OAR 340-71-400(7) shall be set forth in an addendum to the memorandum of agreement (contract) between the County and the Department.

Stat. Author.: ORS 183.335, 454.625, 468.020, 468B.010 and 468B.020.
Stat. Impl.: ORS 454.610, 454.615

340-71-460
Moratorium Areas

(1) Whenever the Commission finds that construction of subsurface or alternative sewage disposal systems should be limited or prohibited in an area, it shall issue an order limiting or prohibiting such construction.

(2) The order shall be issued only after public hearing for which more than thirty (30) days' notice is given.

(3) The order shall be a rule of this division which contains a general description of the moratorium area. A more detailed description of the area, if needed, shall be an appendix to these rules.

(4) No permit or site evaluation report shall be issued for construction of a new or expanded system which would violate any order of the Commission issued pursuant to ORS 454.685.

(5) Criteria For Establishing Moratoriums: In issuing an order under this section the Commission shall consider the factors contained in ORS 454.685(2).

Stat. Author.: ORS 183.335, 454.625, 468.020, 468B.010 and 468B.020.
Stat. Impl.: ORS 454.685

ATTACHMENT C

DRAFT RULE AND SUPPORTING DOCUMENTS SENT OUT FOR PUBLIC COMMENT

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

Date: November 22, 1996

To: Interested and Affected Public

Subject: Rulemaking Proposal and Rulemaking Statements - Rules Relating to On-site Sewage Disposal Systems in the Clear Lake Watershed Area in Lane County

This memorandum contains information on a proposal by the Department of Environmental Quality (DEQ) to adopt rule amendments regarding the Clear Lake watershed area. Pursuant to ORS 183.335, this memorandum also provides information about the Environmental Quality Commission's intended action to adopt a rule.

This proposal would have the effect of permanently lifting the on-site sewage disposal system moratorium in the area, and further would require certain actions that would allow the Department to conduct further studies in the area.

The Department has the statutory authority to address this issue under Oregon Revised Statutes (ORS) 183.335, 454.625, 468.020, 468B.010, 468B.020, and 468B.035

What's in this Package?

Attachments to this memorandum provide details on the proposal as follows:

Attachment A The official statement describing the fiscal and economic impact of the proposed rule. (required by ORS 183.335)

Attachment B A statement providing assurance that the proposed rules are consistent with statewide land use goals and compatible with local land use plans.

Attachment C Questions to be Answered to Reveal Potential Justification for Differing from Federal Requirements.

Attachment D The actual language of the proposed rule (amendments).

Hearing Process Details

The Department is conducting a public hearing at which comments will be accepted either orally or in writing. The hearing will be held as follows:

Date: January 21, 1997
Time: 6:00 PM
Place: Florence Event Center, 715 Quince Street, Florence, Oregon

Deadline for submittal of Written Comments: January 24, 1997

The Presiding Officer at the hearing has not yet been appointed.

Written comments can be presented at the hearing or to the Department any time prior to the date above. Comments should be sent to: Department of Environmental Quality, Attention Barbara Burton, 750 Front Street, NE, Salem, Oregon 97310.

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

What Happens After the Public Comment Period Closes

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

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

The EQC will consider the Department's recommendation for rule adoption during one of their regularly scheduled public meetings. The targeted meeting date for consideration of this rulemaking proposal is February 28, 1997. This date may be delayed if needed to provide additional time for evaluation and response to testimony received in the hearing process.

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

Background on Development of the Rulemaking Proposal
Why is there a need for the rule?

In response to concerns about water quality in Collard and Clear Lakes, the EQC adopted a moratorium for on-site sewage disposal systems in the watershed until such time as a management plan could be put in place to protect the two lakes. The moratorium was in effect from 1983 until October, 1996, when the EQC adopted a temporary rule lifting the moratorium. The EQC took this action because of an adverse court ruling against moratoriums of long or uncertain duration.

The EQC lifted the moratorium, despite concerns that no management plan was in place to protect the lakes. The proposed permanent rules are expected to accomplish the following:

Make permanent the temporary rules lifting the moratorium, in conformance with the court ruling. Permanent rule making is needed because temporary rules can remain in effect no more than 180 days under Oregon law.

Allow the Department access to some sites in the area, for the purpose of conducting further groundwater studies relating to the impact of on-site sewage disposal systems on groundwater and the lakes.

Allows the Department, should lake water quality deteriorate, to conduct further studies including groundwater monitoring in the area. In order to carry out these studies, it is necessary for there to be an adequate number and location of groundwater monitoring sites, and also that the Department have access to them. As part of a study, the proposed rule requires that property owners installing on-site sewage disposal systems in the area also install and maintain monitoring wells upon notification by the Department. Property owners may request that the Department install the wells on their property, at the Department's expense. However, the Department is not obligated to pay for the monitoring wells if requested. The Department will install monitoring wells at the request of applicants only if funds specifically designated for that purpose are available to the Department.

How was the rule developed

The rule was developed by Department staff. In developing this rule, the Department relied upon Oregon Revised Statutes (ORS) 183, 454, 468, and 468B, and Oregon Administrative Rules (OAR) 340, Divisions 41 and 71.

Copies of the documents relied upon in the development of this rulemaking proposal can be reviewed at the Department of Environmental Quality's office at 1102 Lincoln Street, Suite 210, Eugene, Oregon. Please contact Julie Berndt at (541) 686-7838, extension 234 for times when the documents are available for review.

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

The rule affects property owners in the Clear Lake watershed who apply for on-site sewage disposal system construction permits. It will also affect users of Collard and Clear Lake, including the Heceta Water District and the City of Florence and their drinking water customers. The proposed rule may also affect other users of the aquifer in the watershed. Lane County is the Department's contract agent for the on-site sewage disposal system program for the area, and will be affected.

How will the rule be implemented

The Department intends to monitor Collard and Clear Lakes on a periodic basis for phosphorous, nitrogen, and other pollutants of concern. If phosphorous levels or other pollutant levels are seen to rise significantly, the Department may institute further studies of groundwater and surface waters in the area. The purpose of the study, if done, will be to determine the impact of drainfields and other sources of contaminants on groundwater and lake water quality, and if necessary prepare recommendations for corrective actions to reduce phosphorous or other pollutant levels in the lakes. Depending on the study results, the Department may return to rule-making and require corrective actions, such as requiring that sewers be installed around the Collard Lake area. It is anticipated that the study, if done, will not be started for at least five years.

In order to carry out the studies described above, it is necessary for there to be an adequate number and location of groundwater monitoring sites, and also that the Department have access to them. The Department may also need information relating to septic tanks and pollutant loads in them. One goal of this rule is to insure that groundwater monitoring sites and septic systems monitoring sites will be available, if and when the Department determines that further studies are needed. This will be accomplished through permit conditions made part of the installation permits issued for new on-site sewage disposal system permits. The Department intends to provide guidance documents and example permit language to Lane County, which acts as the Department's agent for the on-site sewage disposal program.

At this point, the Department intends to only require the installation of monitoring wells if funds are available to the Department to pay for them if requested by the property owners. However, the Department may require that the property owners install the monitoring wells at their expense.

Are there time constraints

Yes. The temporary rule will expire in mid April, 1997. The February 28, 1997 EQC meeting is the last one prior to that date. If the temporary rule is allowed to expire without permanent rules in place to lift the moratorium, then the Department could be at risk for lawsuits filed by property owners.

Contact for more information

An informational meeting will be held at 5:30 on January 21, 1997, at the same place and just prior to the public hearing. If there are other questions about the proposed rule, contact Barbara Burton at (503) 378-8240, extension 264 AFTER JANUARY 13, 1997.

ATTACHMENT A

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking Proposal
for
Water Quality Rules Relating to the Clear Lake Watershed in Lane County

Fiscal and Economic Impact Statement

Introduction

The proposed rule has three primary components, of varying fiscal impact. In summary, these three components are:

- The proposed rule permanently lifts the on-site sewage disposal system moratorium in the Clear Lake watershed. This will allow the affected property owners to build on their sites, which they have not been able to do for the past 13 years. The ability to build is of significant value to the property owners. The increased development (expected to occur using individual on-site systems) is expected to increase the level of algae in Collard and Clear Lakes, over time. Clear Lake is a drinking water source. High levels of algae, if it occurs, will increase the cost of treating the water.

- The proposed rules require that persons applying for on-site sewage disposal system permits in the Clear Lake watershed must install one or more monitoring wells on their property, upon notification by the Department. If the Department detects significant degradation of water quality in Collard and Clear lakes, further groundwater and surface water studies in the area may be conducted. The Department does not expect to start this study for at least five years, and no groundwater monitoring wells will likely be required until the Department initiates the study. Sample results from the groundwater monitoring wells would be used in the larger study to be conducted by the Department. All lots are zoned residential. There are approximately 60 lots that are likely to be developed. Based on the time constraints, study requirements, and location of the lots, some of these lots will not be required to install monitoring wells. Staff estimates that a total of no more than 40 wells will be required, at a total average cost of about $3000 for each well ($120,000 total). If the Department proceeds with the study, separate grant funds to pay for the monitoring wells would probably be pursued. If such funds become available, the proposed rule allows the affected property owners to request that the Department install the wells at the Department's expense.

- The third component of the proposed rule is to allow the Department access to the on-site systems, plus any monitoring wells on site, for the purposes of sampling. This periodic access by the Department is not expected to have a cost associated with it for the property owners, however it will cost the Department in terms of staff time if the sampling occurs.

General Public

The primary fiscal impact of this rule will be to allow affected property owners the use of their property for the purposes of constructing and using a residence. For those property owners not wishing to develop, this rule will likely raise the value of their property if they wish to sell. There are 68 lots affected by the raising of the moratorium, although not all are expected to be developed. The value of the expanded use of the properties would depend on the property. Assuming an typical increase of value of $28,750 per lot, the total increase in value would be about $2,012,000.

The Department expects that the additional development of the area on septic tanks and drainfields will cause the phosphorous and algae levels in the two nearby lakes to increase, and that sewers in the Collard lake area will likely be required. However, prior to requiring sewers, the Department is likely to conduct further studies in the area. It is possible that the studies and recommended corrective actions will not be completed in time to prevent unacceptable levels of algae in the lakes. This could mean an increase in the cost of treatment by the Heceta Water District, which would be passed on to District customers including the City of Florence.

If relatively high levels of algae develop in Clear Lake, the following impacts on the water treatment plant would be as follows:

- There would be a decrease in capacity of the treatment plant, since there would have to be more backflushes of the filter (to be installed). Backflushes take the filters out of service, and also require large amounts of finished water. A decrease in capacity would mean that the treatment plant would have to be expanded "prematurely", as the Florence area grows and demand for drinking water increases. The increase in backflushes would also mean additional operation costs.

- There will be an increase in chemical usage.

- If there are taste and odor problems (associated with some kinds of algae), then additional treatment will be required such as the use of activated charcoal.

Overall, it is estimated that treatment costs could be up to 25% higher if a significant algae problem develops in Clear Lake. Assuming a $20/residence base rate, and the equivalent of 5700 residential customers for the one million gallons per day treatment plant, this could add up to approximately $340,000 per year in additional costs to water users.

Monitoring wells are estimated at about $3000 per well. In addition, it may take some time for the property owners to secure the services of a certified well driller, and possibly to be on site during the drilling activity. It is estimated that each site should take no more than 20 hours per property owner. Some sites may require two or three monitoring wells. It is expected that those sites with more than one well will not require more of the property owner's time, but will require an additional $3000 per well. Maintaining the well should not involve any additional time or expense. Any monitoring and additional evaluations done will be done by the Department, and at the Department's expense. If the Department is able to secure additional special grant funds, the Department will pay for the wells upon request of affected property owners.

Small Business

All affected sites are residential, so there will be no impact on small business.

Large Business

All affected sites are residential, so there will be no impact on large businesses.

Local Governments

Lane County is the Department's contract agent for the on-site sewage disposal system program. There may be some time required by County staff to explain these additional requirements to applicants. However, the Department intends to prepare informational material and guidance for Lane County, and further intends to be the main contact for questions and approval of monitoring well sites. It is expected that Lane County staff will spend an additional 50 hours total because of the proposed rule.

Heceta Water District will be affected as described above, but is likely to pass on any increased cost of operation to its customers.

State Agencies

DEQ - This rule will enable the Department to conduct a larger study in the area relating to phosphorous and nitrogen in drainfields, groundwater, and the lakes. The rule does not require that the Department conduct this study, however. If the Department did conduct the larger study, it is estimated that it will take a total of 1500 hours of staff time spread over a four to five year period. This includes time spent by the person heading the study, and time spent by the Department's laboratory. The study, if and when it is done, could either be done by existing DEQ staff and using existing funding sources, or it could be funded by a special grant if one is located. The rule itself will require that the Department spend approximately 100 hours for the following: preparing guidance materials and

handouts for Lane County and applicants and talking to applicants with questions about the rule requirements.

Other Agencies - The Water Resources Department would issue permits for any required monitoring wells. However, they charge a fee for this activity and so the fiscal impact is expected to be negligible.

Housing Cost Impact

The Department estimates that this rulemaking will have minimal impact, if any, on the cost of development of a 6,000 square foot parcel and the construction of a 1,200 square foot detached single family dwelling on that parcel. Some property owners may be required to install groundwater monitoring wells on their property, in the event that the Department requires further studies in the area. The cost of the wells are expected to be about $3000 each, and there may be as many as three wells required on an individual site.

Assumptions

As described above, the following assumptions were used:

- Monitoring wells will be 2 inches, 20 to 25 feet deep on average, at a cost of $3000 each
- There will be no more than 40 monitoring wells required.
- Benefit to affected property owners will vary by lot, but a typical lot (Broeker lot used) would benefit about $28,750.
- About 60 more lots will be developed in the area.
- High levels of algae could increase drinking water treatment costs up to 25%
- The existing Heceta Water District plant is rated at 1 million gallons per day. Assuming 70 gallons water usage per capita per day, and assuming 2.5 people average residential occupancy, this computes to an equivalent of 5700 residential customers.
- A typical monthly service charge for a smaller water treatment plant with filtration would be $20. Note - Heceta Water District does not currently filter water from Clear Lake, however they are under an order by the Oregon Health Division to provide filtration in conformance with U.S. Environmental Protection Agency requirements.

ATTACHMENT B
State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking Proposal
for
Water Quality Rules Relating to the Clear Lake Watershed in Lane County

Land Use Evaluation Statement

1. Explain the purpose of the proposed rules.

There are two purposes of these proposed rules. The proposed rules will have the effect of permanently removing the on-site sewage disposal system moratorium for the Clear Lake watershed, and will also allow further studies to be conducted in the area by the Department.

2. Do the proposed rules affect existing rules, programs or activities that are considered land use programs in the DEQ State Agency Coordination (SAC) Program?

Yes__X__ No____

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

These rules will affect the on-site sewage disposal system program, which is included in 340-018-030(5)(d)

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

Yes__X__ No_____ (if no, explain):

Under current DLCD rules, local government review and approval of a Land Use Compatibility Statement is required before on-site sewage disposal system permits can be issued.

c. **If no, apply the following criteria to the proposed rules.**

In the space below, state if the proposed rules are considered programs affecting land use. State the criteria and reasons for the determination.

3. **If the proposed rules have been determined a land use program under 2. above, but are not subject to existing land use compliance and compatibility procedures, explain the new procedures the Department will use to ensure compliance and compatibility.**

Not applicable

Division	Intergovernmental Coord.	Date

ATTACHMENT C

Questions to be Answered to Reveal Potential Justification for Differing from Federal Requirements.

1. Are there federal requirements that are applicable to this situation? If so, exactly what are they?

The Clean Water Act requires that delegated states such as Oregon must set Total Maximum Daily Loads (TMDL's) for water bodies that are water quality limited (that is, the water body exceeds one or more instream water quality standard). The Clean Water Act also allows states to set TMDL's where there is a potential for exceeding one or more standards. The Environmental Quality Commission did set a TMDL for Collard and Clear Lakes, because there was an expectation that water quality standards would be exceeded. The proposed rule lifts the on-site system moratorium, which may cause the TMDL to be exceeded. However, the proposed rule also allows the Department to conduct further studies which will be used in developing a strategy to prevent the two lakes from exceeding water quality standards. The water quality standards at issue were adopted by the Environmental Quality Commission, pursuant to the Clean Water Act.

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

Performance based. The federal requirements are based on achieving water quality standards and protecting beneficial uses.

3. Do the applicable federal requirements specifically address the issues that are of concern in Oregon? Was data or information that would reasonably reflect Oregon's concern and situation considered in the federal process that established the federal requirements?

Not known.

4. Will the proposed requirement improve the ability of the regulated community to comply in a more cost effective way by clarifying confusing or potentially conflicting requirements (within or cross-media), increasing certainty, or preventing or reducing the need for costly retrofit to meet more stringent requirements later?

Yes. The proposed rule will allow the Department to conduct studies, which will help determine whether further controls are necessary.

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

There are no time frames included within the general federal requirements. However, the longer that studies are delayed, the more likely that Collard and Clear Lakes will exceed water quality standards before an effective management plan can be put in place.

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

Yes.

7. Does the proposed requirement establish or maintain reasonable equity in the requirements for various sources? (level the playing field)

Yes and no. By lifting the on-site moratorium, all property owners can build on their sites if the site meets zoning and physical requirements for an on-site system. Monitoring wells will only be put on the properties of person applying for on-site construction permits, and property owners who volunteer to allow the Department access to their property for the purpose of monitoring.

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

Probably yes. The Department expects the water quality in Collard and Clear Lakes to degrade with the increased number of on-site systems, which will likely result in increased costs for treatment of drinking water taken from Clear Lake. The additional cost would be borne by the customers of Heceta Water District, which includes the City of Florence.

9. Does the proposed requirement include procedural requirements, reporting or monitoring requirements that are different from applicable federal requirements? If so, Why? What is the "compelling reason" for different procedural, reporting or monitoring requirements?

Federal rules do not specify how management plans are to be developed, nor does it require that individual property owners install groundwater monitoring wells. The Department has reviewed groundwater studies done in the area, which show a connection

between groundwater and the two lakes. Based on this connection, the Department believes that further studies of groundwater and surface water are needed prior to developing a management plan to protect water quality in the lakes.

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

Yes.

11. Will the proposed requirement contribute to the prevention of pollution or address a potential problem and represent a more cost effective environmental gain?

Yes and no. By lifting the moratorium and allowing the construction of additional on-site systems, the Department expects water quality in the lakes to degrade. By putting into place a rule that allows the Department to conduct an effective study of the area, the amount of impact can be minimized and an effective management plan put in place.

ATTACHMENT D

PROPOSED RULE LANGUAGE

Special Policies and Guidelines

340-41-270 In order to preserve the existing high quality water in Clear Lake north of Florence for use as a public water supply source requiring only minimal filtration, it is the policy of the Environmental Quality Commission to protect the Clear Lake watershed including both surface and groundwaters, from existing and potential contamination sources with the following requirements:

(1) The total phosphorus maximum annual loading discharged into Clear Lake shall not exceed 241 pounds per year from all sources.

(2) The total phosphorus maximum annual loading for the Clear Lake watershed shall be deemed exceeded if the median concentration of total phosphorus from samples collected in the epilimnion between May 1 and September 30 exceed nine micrograms per liter during two consecutive years.

(3) Of the total phosphorus loading of 241 pounds per year specified in section (1) of this rule, 192 pounds per year shall be considered current background and Department reserve and shall not be available to other sources.

(4) The total phosphorus maximum annual loading discharged into Collard Lake shall not exceed 123 pounds per year.

(5) Permittees holding on-site sewage disposal system construction permits issued after the effective date of this rule in the Clear Lake watershed shall install monitoring wells unless otherwise waived by the Department, and allow the Department and/or its designees access for the purposes of collecting samples, as described more fully in OAR 340-71-400(2).

Stat. Auth.: ORS 183.335, 454.625, 468.020,, 468B.010 and 468B.020.

Stat. Implemented: ORS 454.685

Hist.: DEQ 3-1983, f. & ef. 4-18-83; DEQ 44-1990, f. & cert. ef. 12-19-90

340-71-400

Geographic Area Special Considerations.

(1) River Road — Santa Clara Area, Lane County:

(a) Within the areas set forth in subsection (b) of this section the Agent may issue either construction permits for new subsurface sewage disposal systems or favorable reports of evaluation of site suitability to construct systems under the following circumstances:

(A) The system complies with all rules in effect at the time the permit is issued; and

(B) The system will not in itself contribute, or in combination with other new sources after April 18, 1980, contribute more than sixteen and seven-tenths (16.7) pounds nitrate-nitrogen per acre per year to the local groundwater. The applicant shall assure compliance with this condition by showing his ownership or control of adequate land through easements or equivalent.

(b) Subsection (a) of this section shall apply to all of the following area generally known as River Road — Santa Clara, and defined by the boundary submitted by the Board of County Commissioners for Lane County, which is bounded on the south by the City of Eugene, on the west by the Southern Pacific Railroad, on the north by Beacon Drive, and on the east by the Willamette River, and containing all or portions of T16S, R4W, Sections 33, 34, 35, 36; T17S, R4W, Sections 1, 2, 3, 4, 10, 11, 12, 13, 14, 15, 22, 23, 24, 25; and T17S, R1E, Sections 6, 7, 18, Willamette Meridian;

(c) This rule is subject to modification or repeal by the Commission on an

area-by-area basis upon petition by the appropriate local agency or agencies. Such petition either shall provide reasonable evidence that development using subsurface sewage disposal systems will not cause unacceptable degradation of groundwater quality or surface water quality or shall provide equally adequate evidence that degradation of groundwater or surface water quality will not occur as a result of such modification or repeal;

(d) Subsections (a) and (b) of this section shall not apply to any construction permit application based on a favorable report of evaluation of site suitability issued by the Agent pursuant to ORS 454.755(1)(b), where such report was issued prior to the effective date of this rule.

(2) General North Florence Aquifer, North Florence Dunal Aquifer Area, Lane County:

(a) Within the area set forth in subsection (2)(b) of this rule, the agent may issue construction permits for new on-site sewage disposal systems or favorable reports of evaluation of site suitability to construct individual or community on-site sewage disposal systems under the following circumstances:

(A) The lot and proposed system shall comply with all rules in effect at the time the permit or favorable report of site suitability is issued; or

(B) The lot and proposed system complies with paragraph 2(a)(A) of this rule, except for the projected daily sewage loading rates, and the system in combination with all other previously approved systems owned or legally controlled by the applicant shall be projected by the Department to contribute to the local groundwater not more than fifty-eight (58) pounds nitrate-nitrogen NO_3-N per year per acre owned or controlled by the applicant.

(b) Subsection (2)(a) of this rule shall apply to all of the following area hereby known as the General North Florence Aquifer of the North Florence Dunal Area and is defined by the hydrologic boundaries identified in the June 1982, 208 North Florence Dunal Aquifer Study, which is the area bounded on the west by the Pacific Ocean; on the southwest and south by the Siuslaw River; on the east by the North Fork of the Siuslaw River and the ridge line at the approximate elevation of four hundred (400) feet above mean sea level directly east of Munsel Lake, Clear Lake and Collard Lake; and on the north by Mercer Lake, Mercer Creek, Sutton Lake and Sutton Creek; and containing all or portions of T17S, R12W, Sections 27, 28, 33, 34, 35, 36, and T18S, T12W, sections 1, 2, 3, 4, 9, 10, 11, 12, 13, 14, 15, 16, 22, 23, 24, 25, 26, 27; W.M., Lane County, except that portion defined as the Clear Lake Watershed which is the area beginning at a point known as Tank One, located in Section One, Township 18 South, Range 12 West, of the Willamette Meridian, Lane County, Oregon:

Run thence S. 67° 50' 51.5" E. 97.80 ft. to the True Point of Beginning; Run thence S. 05° 40' 43.0" W. 1960.62 ft. to a point; Run thence S. 04° 58' 45.4" E. 1301.91 ft. to a point; Run thence S. 52° 44' 01.0" W. 231.21 ft. to a point; Run thence S. 15° 20' 45.4" E. 774.62 ft. to a point; Run thence S. 31°44' 14.0" W. 520.89.ft. to a point; Run thence S. 00° 24' 43.9" W. 834.02 ft. to a point; Run thence S. 07° 49' 01.8" W. 1191.07 ft. to a point; Run thence S. 50° 26' 06.3" W. 731.61 ft. to a point; Run thence S. 02° 51' 10.5" W. 301.37 ft. to a point; Run thence 36° 37' 58.2" W. 918.41 ft. to a point; Run thence S. 47° 12' 26.3" W. 1321.86 ft. to a point; Run thence S. 72° 58' 54.2" W.

498.84 ft. to a point; Run thence S. 85° 44' 21.3" W. 955.64 ft. to a point; Which is N. 11° 39' 16.9" W. 5434.90 ft. from a point known as Green Two (located in Section 13 in said Township and Range); Run thence N. 58° 09' 44.1" W. 1630.28 ft. to a point; Run thence N. 25° 23' 10.1" W. 1978.00 ft. to a point; Run thence N. 16° 34' 21.0" W. 1731.95 ft. to a point; Run thence N. 06° 13' 18.0" W. 747.40 ft. to a point; Run thence N. 03° 50' 32.8" E. 671.51 ft. to a point; Run thence N. 59° 33' 18.9" E. 1117.02 ft. to a point; Run thence N. 59° 50' 06.0" E. 1894.56 ft. to a point; Run thence N. 48° 28' 40.0" E. 897.56 ft. to a point; Run thence N. 31° 29' 50.7" E. 920.64 ft. to a point; Run thence N. 19° 46' 39.6" E. 1524.95 to a point; Run thence S. 76° 05' 37.1" E. 748.95 ft. to a point; Run thence S. 57° 33' 30.2" E. 445.53 ft. to a point; Run thence S. 78° 27' 44.9" E. 394.98 ft. to a point; Run thence S. 61° 55' 39.0" E. 323.00 ft. to a point; Run thence N. 89° 04' 46.8" E, 249.03 ft. to a point; Run thence S. 67° 43' 17.4" E. 245.31 ft. to a point; Run thence S. 79° 55' 09.8" E. 45.71 ft. to a point; Run thence S. 83° 59' 27.6" E. 95.52 ft. to a point; Run thence N. 42° 02' 57.2" E. 68.68 ft. to a point; Run thence S. 80° 41' 24.2" E. 61.81 ft. to a point; Run thence S. 10° 47' 03.5" E. 128.27 ft. to the True Point of Beginning; and containing all or portions of T17S, R12W, Sections 35 and 36; and T18S, R12W, Sections 1, 2, 11 and 12; W.M., Lane County.

(c) The Department may conduct further studies in the Clear Lake watershed, including groundwater monitoring. Within 90 days of notification by the Department, unless otherwise agreed to in writing by the Department, holders of on-site sewage disposal system permits issued after the effective date of this rule in the Clear Lake watershed, as defined in this rule, shall install and maintain one or more monitoring wells on the permittee's site. The monitoring wells shall be installed and operated at the expense of the permittee and following the conditions set by the Department, including but not limited to the location, depth of well and the screened interval. The permittee may request in writing a waiver of this requirement or request that the Department install the monitoring well or wells at the Department's expense. The sole criteria for the Department granting a waiver are: the site is not needed to conduct groundwater studies, as determined by the Department; or the Department has determined that further groundwater studies will not be conducted. The Department will install monitoring wells at the request of permittees and at the expense of the Department only if funds specifically designated for that purpose are available to the Department.

(d) Permittees holding on-site sewage disposal system construction permits in the Clear Lake watershed shall allow the Department and/or its designees reasonable access to the permittee's property for the purpose of collecting samples from the septic tank and drainfield, and for the purpose of collecting samples from any monitoring wells. The permittee shall allow the Department and/or designees to dispose on the permittee's property water purged from the sampling well prior to sampling, after consultation with the permittee as to preferred location of disposal. The on-site construction permit shall include conditions allowing the Department and/or its designees access to the permittee's property as described in this rule. All other applicable requirements in Division 71 relating to application for and construction of the on-site sewage disposal system must also be met prior to issuance of the on-site sewage disposal system construction permit.

(3) Lands Overlaying the Alsea Dunal Aquifer:

(a) Within the area set forth in subsection (3)(c) of this rule, the Agent may issue a

construction permit for a new on-site sewage disposal system or a favorable report of evaluation of site suitability to construct a single on-site system on lots that were lots of record prior to January 1, 1981; or on lots in partitions or subdivisions that have received preliminary planning, zoning, and on-site sewage disposal approval prior to January 1, 1981, providing one of the following can be met:

(A) At the time the permit or favorable report of site suitability is issued the lot complies with OAR 340-71-100 through 340-71-360 and OAR 340-71-410 through 340-71-520; or

(B) The lot is found through site evaluation not to comply with OAR 340-71-100 through 340-71-360 and OAR 340-71-410 through 340-71-520, but does meet all of the following conditions when a pressurized seepage bed is utilized:

(i) Groundwater levels shall not be closer than four (4) feet from the ground surface or closer than three (3) feet from the bottom of the seepage bed;

(ii) The seepage bed shall be constructed in accordance with OAR 340-71-275(4) and (5);

(iii) The seepage bed shall be sized on the basis of two hundred (200) square feet of bottom area per one hundred fifty (150) gallons projected daily sewage flow;

(iv) Projected daily sewage flows shall be limited to not more than three hundred seventy-five (375) gallons per lot, except those lots which have a certificate of favorable site evaluation which provides for a larger flow;

(v) All setbacks identified in **Table 1** can be met, except that lots of record prior to May 1, 1973, shall maintain a minimum fifty (50) feet separation to surface public waters;

(vi) Sufficient area exists on the lot to install a seepage bed and a replacement seepage bed. The area reserved for replacement may be waived pursuant to the exception in OAR 340-71-150(4)(a)(B).

(C) The lot is found through site evaluation not to comply with OAR 340-71-100 through 340-71-360 and OAR 340-71-410 through 340-71-520, but does meet all of the following conditions when a conventional sand filter without a bottom is utilized:

(i) Groundwater levels shall not be closer than one (1) foot from the ground surface and not closer than one (1) foot from the bottom of the sand filter;

(ii) Sewage flows shall be limited to not more than three hundred seventy-five (375) gallons per day per lot, except those lots which have a certificate of favorable site evaluation which provides for a larger flow;

(iii) The sand filter shall be sized at one (1) square foot of bottom area for each gallon of projected daily sewage flow;

(iv) The conventional sand filter without a bottom shall be constructed in accordance with OAR 340-71-295(3);

(v) All setbacks identified in **Table 1** can be met, except that lots of record prior to May 1, 1973, shall maintain a minimum fifty (50) feet separation to surface public waters;

(vi) Sufficient area exists on the lot to install a bottomless conventional sand filter and a replacement bottomless conventional sand filter. The area for replacement may be waived pursuant to the exception contained in OAR 340-71-150(4)(a)(B).

(b) Within the area set forth in subsection (3)(c) of this rule, for lots created on or after January 1, 1981, and/or when the on-site system will serve a commercial facility, the Agent may issue a construction permit for a new on-site sewage disposal system or a

favorable report of evaluation of site suitability if it is determined that all rules of the Commission can be met;

(c) The Alsea Dunal Aquifer is defined as all the land bounded on the East by Highway 101, the Pacific Ocean on the West, and from Driftwood Beach Wayside South to the southern tip of the Alsea Bay Spit;

(d) If the results of groundwater monitoring in the Alsea Dunal Aquifer indicate unacceptable levels of degradation or if it appears necessary or desirable to pursue development of the aquifer as a source of drinking water, sewage collection and off-site treatment and disposal facilities shall be installed unless further study demonstrates that such facilities are not necessary or effective to protect the beneficial use.

(4) Christmas Valley Townsite, Lake County:

(a) Within the area set forth in subsection (4)(b) of this rule, the agent may consider the shallow groundwater table, if present, in the same manner as a temporary water table when preparing and/or issuing site evaluation reports and construction-installation permits;

(b) The Christmas Valley Townsite is defined as all land within the Christmas Valley Townsite plat located within Sections 9, 10, 11, 14, 15 and 16 of Township 27 South, Range 17 East, Willamette Meridian, in Lake County.

(5) Clatsop Plains Aquifer, Clatsop County: The Clatsop Plains Groundwater Protection Plan, prepared by R.W. Beck and Associates and adopted by Clatsop County, provides a basis for continued use of on-site sewage disposal systems while protecting the quality of groundwater for future water supplies. For the plan to be successful, the following components must be accomplished:

(a) By not later than January 1, 1983, Clatsop County shall identify and set aside aquifer reserve areas for future water supply development containing a minimum of two and one half (2-1/2) square miles. The reserve areas shall be controlled so that the potential for groundwater contamination from nitrogen and other possible pollutants is kept to a minimum;

(b) The Agent may issue construction installation permits for new on-site sewage disposal systems or favorable reports of site evaluation to construct on-site systems, within the area generally known as the Clatsop Plains, which is bounded by the Columbia River to the North; the Pacific Ocean to the west; the Necanicum River, Neawanna Creek, and County Road 157 on the south; and the Carnahan Ditch-Skipanon River and the foothills of the Coast Range to the east, providing:

(A) The lot or parcel was created in compliance with the appropriate comprehensive plan for Gearhart (adopted by County Ordinance 80-3), Seaside (adopted by County Ordinance 80-10), Warrenton (adopted by County Ordinance 82-15), or the Clatsop County plan adopted through Ordinance No. 79-10; and either

(B) The lot or parcel does not violate any rule of this Division; or

(C) Lot or parcel does not violate the Department's Water Quality Management Plan or any rule of this Division, except the projected maximum sewage loading rate would exceed the ratio of four hundred fifty (450) gallons per one-half (1/2) acre per day. The on-site system shall be either a sand filter system or a pressurized distribution system with a design sewage flow not to exceed four hundred fifty (450) gallons per day; or

(D) The Department may approve the use of standard on-site systems to serve single family dwellings within planned developments or clustered-lot subdivisions providing:

(i) The planned development or clustered-lot subdivision is not located within Gearhart, Seaside, Warrenton, or their urban growth boundaries; and

(ii) The lots do not violate any rule of this Division, except the projected maximum sewage loading rate may exceed the ratio of four hundred fifty (450) gallons per acre per day; and

(iii) The Department is provided satisfactory evidence through a detailed groundwater study that the use of standard systems will not constitute a greater threat to groundwater quality than would occur with the use of sand filter systems or pressurized distribution systems.

(6) Within areas east of the Cascade Range where the annual precipitation does not exceed twenty (20) inches, and after evaluating the site, the Agent may issue a construction-installation permit authorizing installation of a standard system to serve a single family dwelling, provided the requirements in subsections (6)(a) and (b) of this rule are met:

(a) Minimum Site Criteria:

(A) The property is ten (10) acres or larger in size. The minimum parcel size considered under this rule is designated by the County, but in no event shall it be less than ten (10) acres;

(B) The slope gradient does not exceed thirty (30) percent;

(C) The soils are diggable with a backhoe to a depth of at least twenty-four (24) inches;

(D) The site is found to comply with the provisions of OAR 340-71-220(1)(b,e,f,g,h, and i).

(b) Minimum Construction Requirements:

(A) The system shall contain not less than two hundred twenty-five (225) linear feet of disposal trench for projected sewage flows not exceeding four hundred fifty (450) gallons per day. Larger sewage flows shall be sized on the basis of seventy-five (75) linear feet per each one hundred fifty (150) gallons of projected flow;

(B) The system shall be constructed and backfilled in compliance with OAR 340-71-220: sections (3), (4), (5), (7) , (8), (9), (10), and (11) of this rule.

(c) At the discretion and request of the owner or the owner's authorized representative, a single application may be submitted to the Agent for both a site evaluation report and a construction-installation permit. The application would include the sum of the fees for both activities, pursuant to OAR 340-71-140(1)(a)(A) and OAR 340-71-140(1)(b)(A)(i), as well as the following:

(A) Favorable land use compatibility statement from the appropriate land use authority signifying that the proposed land use is compatible with the Land Conservation and Development Commission acknowledged comprehensive plan or complies with the statewide planning goals;

(B) Property development plan acceptable to the Agent showing the location of existing and proposed improvements, including the locations of the dwelling and sewage disposal system;

(C) All other exhibits the Agent finds are necessary to complete the application.

(d) The Agent may waive the pre-cover inspection for a system installed pursuant to this section, provided the system installer submits the following information to the Agent

at the time construction of the system is complete:

(A) A detailed and accurate as-built plan of the constructed system; and

(B) A list of all material used in the construction of the system; and

(C) A written certification (on a form acceptable to the Department) that the construction was in accordance with the permit and rules of the Commission.

(7) Within areas east of the Cascade Range where the annual precipitation does not exceed twenty (20) inches, the Agent may issue a construction-installation permit authorizing installation of a standard system to serve a single family dwelling, provided the requirements in subsections (7)(a) and (b) of this rule are met. The Agent may waive the site evaluation for a single family dwelling provided:

(a) Minimum Site Criteria:

(A) The property is eighty (80) acres or larger in size. The minimum parcel size considered under this rule is designated by the County, but in no event shall it be less than eighty (80) acres;

(B) The separation distance between the proposed on-site system and the nearest dwelling, other than that being served by the proposed system, is at least one-quarter mile;

(C) The nearest property line to the proposed system is at least 100 feet, the nearest domestic water source is at least 200 feet, and the nearest surface public water is at least 200 feet; and

(D) In the opinion of the Agent, sufficient topographical and soils information, including but not limited to slope, terrain, landform, and rock outcrops, is submitted with the application to determine the property can be approved for on-site sewage disposal in conformance with the purpose of these rules as stated in OAR 340-71-110.

(b) Minimum Construction Requirements:

(A) Sizing requirements of **Tables 4 and 5** shall be followed as closely as possible. In any case, the system shall contain not less than two hundred twenty-five (225) linear feet of disposal trench for projected sewage flows not exceeding four hundred fifty (450) gallons per day. Larger sewage flows shall be sized on the basis of seventy-five (75) linear feet per each one hundred fifty (150) gallons of projected flow;

(B) The system shall be constructed and backfilled as closely as possible to the requirements contained in OAR 340-71-220.

(c) At the request of the owner or the owner's authorized representative, a single application may be submitted to the Agent for both a site evaluation report and a construction-installation permit. The application would include the fee for a site evaluation, pursuant to OAR 340-71-140, as well as the following:

(A) Favorable land use compatibility statement from the appropriate land use authority signifying that the proposed land use is compatible with the Land Conservation and Development Commission acknowledged comprehensive plan or complies with the statewide planning goals;

(B) Property development plan acceptable to the Agent showing the location of existing and proposed improvements, including the locations of the dwelling and sewage disposal system;

(C) All other exhibits the Agent finds are necessary to complete the application;

(D) If the decision is made to waive the site evaluation, the fee will be transferred to the permit.

(d) The Agent may waive the pre-cover inspection for a system installed pursuant to this section, provided the system installer submits the following information to the Agent at the time construction of the system is complete:

(A) A detailed and accurate as-built plan of the constructed system; and

(B) A list of all material used in the construction of the system; and

(C) A written certification (on a form acceptable to the Department) that the construction was in accordance with the permit and rules of the Commission.

(e) The conditions for OAR 340-71-400(7) shall be set forth in an addendum to the memorandum of agreement (contract) between the County and the Department.

Stat. Author.: ORS 183.335, 454.625, 468.020, 468B.010 and 468B.020.
Stat. Impl.: ORS 454.610, 454.615

340-71-460
Moratorium Areas

(1) Whenever the Commission finds that construction of subsurface or alternative sewage disposal systems should be limited or prohibited in an area, it shall issue an order limiting or prohibiting such construction.

(2) The order shall be issued only after public hearing for which more than thirty (30) days' notice is given.

(3) The order shall be a rule of this division which contains a general description of the moratorium area. A more detailed description of the area, if needed, shall be an appendix to these rules.

(4) No permit or site evaluation report shall be issued for construction of a new or expanded system which would violate any order of the Commission issued pursuant to ORS 454.685.

(5) Criteria For Establishing Moratoriums: In issuing an order under this section the Commission shall consider the factors contained in ORS 454.685(2).

Stat. Author.: ORS 183.335, 454.625, 468.020, 468B.010 and 468B.020.
Stat. Impl.: ORS 454.685

Howard Shapiro
P.O. Box 2651
Florence, OR 97439

December 24, 1996

Department of Environmental Quality,
Attn.: Barbara Burton
750 Front Street, NE
Salem Or 97310

re: Clearlake Watershed Proposal

Dear hearing officer:

I am currently a customer of the Heceta Water District and enjoy pure water that is minimally treated. This is one of the reasons that I decided to settle in Heceta Beach. I had previously lived in a large city where the drinking water was filtered, chlorinated, fluoridated etc. and it still wasn't fit for human consumption. As you cited in the memorandum dated November 22, 1996, there will most likely be an increase in the phosphorous and algae levels in the watershed because of the additional on-site sewer disposal systems. This will result in the necessity of additional filtration and chemical treatment which will cost approximately $340,000 per year. This projected cost would mean that a family of four would have to pay $238.60 per year to continue consuming water that will probably not be as pure and chemical free as they are now using. This seems neither fair nor equitable. If this were put to a vote of the current users of Heceta water, including the city of Florence, do you think it would pass?

It is unfortunate that the Judge who officiated at the moratorium hearing did not make provisions as to who would pay for the additional cost of the increased level of water treatment when the watershed becomes degraded. It would seem that to be fair and equitable the new users who put their septic systems on the property in question should be responsible for paying for the water degradation that these systems will cause. This could possibly be done by setting up an escrow account in the amount of $5667 for each permittee to be used when necessary to pay for the additional water treatment. This account could be replenished as needed through an assessment through the county or the water district of the applicable new on-site sewer systems on the watershed.

I am definitely not in favor of contributing $59.65 per year per person in order to have the Clearlake Watershed developed and my drinking water polluted.

Sincerely,

Howard H Shapiro

Cc: Assemblyman Mike Lehman

TO: D.E.Q.

ATT BARBARA BURTON
750 FRONT ST N.E.
SALEM, ORe
97310

FAX# 503
373 7944

FRIDAY - 23 - 97

I dont Believe We were Notified, But would like to go on The Record as objecting to PROPOSED "MONITERING WELLS" in The CLEARLAKE WATERSHED. PLEASE ADVIZE of ~~a~~ any FURTHER ACTIONS.

Respectively
ERLING OMLID
LOT 1200

Prepared Statement

Walter H. Drew
06103 View Road, P.O. Box 217, Florence, OR 97439
Public Hearing by the Department of Environmental Quality
Florence, January 21, 1997

Tonight's public hearing designedly comes too late to affect the fate of the Clear Lake Watershed. The Environmental Quality Commission already issued two irreversible instructions to its attorney at its session in Astoria on October 11, 1996. One was an instruction not to appeal Magistrate Judge Coffin's finding that the Clear Lake moratorium is unconstitutional. The second instruction was to sign a settlement agreement with Aaron U. Jones and co-plaintiffs binding the state to lift the Clear Lake moratorium.

The pressures on the DEQ and the EQC to capitulate and sacrifice the Clear Lake Watershed and the interests of the Florence community have been strong, and they probably come from the Office of Governor Kitzhaber himself. The EQC Chairman stated at the Astoria session immediately before the EQC took action on the Clear Lake Watershed moratorium, "Our heads are in a guillotine." The Vice-Chairman added, "We have no choice."

Two opposite examples of what happened to two previous governors suggest why the Kitzhaber administration has actively been seeking a private settlement with Jones instead of defending itself in open court. Governor Goldschmidt benefited from campaign contributions and the use of Jones' private aircraft, and well after leaving office was hired by Jones as a sometime lobbyist in Washington, D.C. Governor Roberts, against whom Jones helped organize and finance a recall campaign, did not try to run for a second term. These political career histories could have provided the incentive for Kitzhaber to appease Jones at the expense of the watershed and the Florence community.

No one in the State government has ever suggested that the rule change which we are invited to comment on tonight might help preserve the quality of our water supply. Rather, the DEQ memorandum before us says, "By lifting the moratorium and allowing the construction of additional on-site systems, the Department expects water quality in the lakes to degrade."

The new policy of the State in regard to the Clear Lake Watershed amounts to a betrayal of the public interest in order to serve the Governor's own short-term political objectives, in my opinion. (The election for Governor is next year). It certainly is a departure from the noble tradition of environmental protection established by Governor Tom McCall and carried forward until now by his successors.

Department of Environmental Quality
750 Front Street, NE
Salem, Oregon 97310

January 23, 1997

Attention: Barbara Burton
FAX (503) 373-7944

Dear Ms. Burton, Dick Nichols, and others:

The testing wells that are suggested in the DEQ's latest material strike me as a vindictive action on the part of the DEQ and an attempt at "saving face" instead of apologizing for the torment and agony property owners have been put through unnecessarily. As I told Ms. Burton, the DEQ is dealing with *real people* - not just names on a piece of paper! And we "people" who own property in the watershed were not all notified along with the "600" and "200" mailings you mentioned in the flyer we received Tuesday night!!! My last four letters to the DEQ (three to Dick Nichols and the last one to Barbara Burton), have never been acknowledged, let alone answered. I would appreciate hearing from you both.

My husband, John M. White, and I have attended the Heceta board and all other special meetings for almost six years now. John is currently a director of the Heceta water board, having been appointed by the Trimble administration before the Trimble board left office. Steve Olienyk who is again chairman opposed John's appointment but he was appointed by a majority vote. Olienyk is again chairman having won the support of H2O POWR, a political action group, which began to support Olienyk before they even began to attend Heceta meetings. (My husband and I are the ONLY citizens who have been in constant attendance for almost six years!) POWR people had their ears bent by Collard Lake resident Bill Finley, who didn't want us to build on our property 1,400 feet above his, and that much further from Clear Lake. Finley has since moved to Colorado. Fortunately, my husband and Bill Hagan, who was appointed as a director of the Heceta board this month, are interested in facts. Elections for 4 of the 5 positions are in March and we hope for a better majority.

In 1995, even though my husband was a duly appointed director on the Heceta board, Steve Olienyk arranged a special meeting of the new board without telling him and without notice to my husband until about 3 or 4 hours before the meeting. Then he tried not to recognize my husband's presence. Jerry Prater, the Heceta director whose seat my husband took, hired an attorney to take Olienyk, Condo, Munyon and Honey to court for breaking public meeting laws in this and other ways. The attorney did not file for a court hearing in time but I expect the case will go forward again soon because Olienyk has

not changed his spots. He even wrote the two newspapers who send reporters to Heceta meetings, telling them the reporters could no longer attend executive sessions. Olienyk did this on his own, or at least without discussing it at a board meeting. He is guilty on two counts: 1) Trying to keep reporters out of executive session for no good reason , and 2) writing the newspapers without approval of the board. He may look like Santa, but he isn't.

My husband and I sued the Heceta district in 1991 because the then Olienyk-chaired board of directors unlawfully refused to give us a water hookup on our County and DEQ approved lot at the very outskirts of the watershed up near the water tank. After carefully reviewing all the circumstances, papers and laws relating to our case, Federal Magistrate Coffin said the board's actions were "unlawful", "arbitrary" and "capricious". Then County attorney, Bill Van Vactor, had warned the Heceta board that they were not in keeping with the law and that they were wasting the public's monies. The county even filed an amicus in our behalf, -but we were never able to get that and some other pertinent facts printed in the local newspaper. We experienced similar refusal by Falcon Cable to air information I paid for regarding the affidavit the Co. Health Engineer had issued saying the EPA mandated filtration plant would insure clean, pure water. Chairman Olienyk and his attorney, Ron Gerber, who along with his wife, Debby Todd, wrote some of the Clear Lake-On Tap! Heceta newsletters then, kept that important information from the public. Indeed, the On Taps! reported very, very inaccurate information to the public including statements saying that there wasn't really a need for a filtration plant because the Clear Lake water was so "pristine". The board was quoting a word Dick Nichols had used so I called Dick. He said he used the word pristine meaning "old and original", not pure and bacteria free as the On Taps! had implied. Ms. Burton was correct when she said a couple years ago at the DEQ-City-Heceta-County meeting that the issue was more for *"esthetics"* than for the protection of Clear Lake. It appears to me that the DEQ has bent to the will of a relatively few citizens with private agendas rather than to study the facts. (Agendas like "I have mine, now let's shut the gate" and the attorney, Gerber, who earned about $80,000. for giving wrongful advice, and a land use planner who was not needed because Heceta isn't authorized to make land use decisions.)

Our building lot is about one mile from Clear Lake and 1,400 feet above Collard Lake. At the same time the "good old boys" refused to give us water, they did nothing to prevent a house being built in 1991 right around Collard Lake and about1800 feet closer to Clear Lake than our property. Olienyk was chairman then also. Collard Lake residents Mike Keating and Bill Finley made life miserable for us and for the Howards and other property owners in the watershed because they didn't want any more houses built. They had theirs

and they wanted to keep others out. They even wanted to prevent Whitey Howard from building on property his family had owned for about 60 years. The Bible calls it covetousness. They coveted that which was not theirs and these same men stole from others also by preventing others from their lawful rights. They robbed us of peace and caused us agony. The first year alone, I worked 5,340 hours and my husband worked about 2,000 hours just to try to protect that which was ours by law. The very people who should have protected us, stole from us and told untruths to the public. Innocent people have been robbed of their Constitutional rights. We have continued to attend Heceta meetings because we KNOW what has been going on. MY HUSBAND AND I ARE THE ONLY CITIZENS WHO HAVE BEEN IN CONSTANT ATTENDANCE FOR ALMOST 6 YEARS. POWR members don't show up -other than the ones on the board. Margaret Trimble does when she is in town. Leo Hutter who was at the Tuesday DEQ meeting, came for the FIRST TIME last board meeting. Now, he thinks he is an expert! He even suggested at the board meeting that they consider "catchments" like the ones in the Virgin Islands. Clear Lake is our catchment!

Scientific facts about the Heceta Clear Lake water supply were shown in the August 21, 1996 CLEAR LAKE COMMUNITY ORGANIZATION INFORMATION SHEET, enclosed. Some of the scientists quoted in that publication have worked for the DEQ. All of the scientists are highly qualified. The Olienyk administration boards with the exception of my husband and Bill Hagan, have not been interested in facts. They have had other agendas, some of which I cannot begin to understand except to say that they seem to want POWER.

The DEQ has added to the misery of those of us property owners who have been mistreated. Ask Barbara Miller or Kay Omlid, Marilyn Adkins, Gordon Howard, Don Frisbee, Bob Merz, the Orys and others how their lives have been impacted. I witnessed that the DEQ wanted the County to make the decision and the County expected the DEQ to decide. Dick Nichols, as a public relations man, did not understand the 7 scientific studies from the EPA's Dr. Carl Enfeld. They were very technical. I poured over them for 3-1/2 hours and then called Dr. Enfeld because I wanted to be sure I understood what I read. Dr. Enfeld called me back from Colorado and took over an hour of his time to explain and confirm to me that phosphorus from our property almost a mile from Clear Lake could never endanger Clear Lake. If you, Ms. Burton, and Dick Nichols and others in the DEQ do not understand the scientific jargon and graphs, call the scientists who wrote them, and have them explain their meaning to you. Check with Andy Schaedel, Dr. Wesley Jarrell, Ralph Christensen, Mr. Charbonneau, Dr. Enfeld.

I'd appreciate a call from Ms. Burton or Dick Nichols soon.

Sincerely, Rosemarie White

Rosemarie White, 87764 Saltaire, Florence OR 97439 PH: 541-997-4289

CLEAR LAKE COMMUNITY ORGANIZATION
INFORMATION SHEET

P.O. Box 177
Florence, OR 97439

August 21, 1996

REPEAL OF ILLEGAL MORATORIUM WILL NOT HARM OUR DRINKING WATER

With the recent court decision striking down the moratorium, some are asking "what will happen to the lake?" As discussed below, the scientific testing conducted on the lakes and soils in the Watershed show that the repeal of the illegal moratorium will not harm either Collard or Clear Lakes.

THERE HAS BEEN NO CHANGE IN THE LAKES AS THE RESULT OF DEVELOPMENT

The Department of Environmental Quality (DEQ) and scientists have indicated that phosphorous is the primary nutrient which could cause a change in the amount of algae in Clear Lake. However, recent tests conducted on behalf of the Heceta Water District indicate that the phosphorous levels are now so low that they are not detectable in either Collard or Clear Lakes. This exceedingly low, nondetectable level is despite all the development that has occurred in the Clear Lake Watershed over the last 30 years.

HAS PHOSPHOROUS EVER BEEN A CAUSE FOR CONCERN?

There has been no material change in over 25 years of testing the phosphorus levels in Clear Lake, despite development occurring during that time and despite the presence of septics for over 30 years. In fact, if anything is occurring, phosphorous levels are actually decreasing. In 1972, median phosphorus in Clear Lake was around .010 - a very low level present only in the clearest of lakes. Ten years later, in 1982, that had not changed. Its median concentration was still at or below .010, even though no moratorium existed and development had been present for many years. Recent tests conducted on behalf of the Heceta Water District indicate that the phosphorous levels are now so low that they are not detectable in either Collard or Clear Lakes.

Andrew Schaedel, DEQ Water Quality Expert, recently answered this question in his deposition as follows:

"Q. Do you recall any significant change that would have caused you to become alarmed between the first time you were involved in testing in 1979 all the way up to today?

"A. No."

SOILS TESTS SHOW THERE WILL BE NO CHANGE IN THE LAKE

Dr. Wesley Jarrell (Ph.D., Soil Science), a scientist the DEQ uses for watersheds, including the Tualatin Basin, tested the soil in the Clear Lake Watershed and found that, despite the lifting of the illegal moratorium, there is no likelihood of any change in Clear Lake's water because phosphorous is retained by the soils in the Watershed.

Dr. Jarrell's tests indicate that the quality of the water and its algal production will <u>not</u> change, despite the illegal moratorium being struck down. It will be hundreds, if not thousands, of years, <u>if ever</u>, that any phosphorous from any new septics or development in the Clear Lake Watershed, including the Collard Lake Subdivision, will reach either lake.

Furthermore, tests show that the soil itself is very low in phosphorous. Phosphorous levels in soil in the Collard Lake Subdivision and around Clear Lake are equal to the low amount of phosphorous sediments already found in the two lakes. Also, Clear Lake Watershed soils do not release phosphorous, even when they are immersed in water so there will be no change in lake phosphorous concentrations, even if the soil does someday reach the lakes.

THE MORATORIUM IS NOT NECESSARY TO PROTECT THE LAKES

When Lane County hired hydrogeologist Ralph Christensen to run a computer model in 1985, he concluded no moratorium was necessary. A February 20, 1985 *Siuslaw News* article stated:

> "Ralph Christensen a hydrogeologist for Lane County, told the West Lane Planning Commission last Wednesday night that a septic tank moratorium imposed by the State Department of Environmental Quality in 1983 is not necessary to protect the watershed, which includes the area around Clear and Collard lakes north of Florence."

Lane County's 1985 phosphorus accumulation study showed that with full buildout with septics on existing lots, the most likely result was that phosphorous would not exceed .010, even after 50 years. In other words, the Lake would remain oligotrophic, i.e., of the purest and highest quality.

This is consistent with an analysis performed by Professor Peter Nelson, an Oregon State University scientist. During the CRMP process in 1988-1991, Professor Nelson was hired by the CRMP participants. Professor Nelson concluded that even with the full buildout, the water quality in Clear Lake would remain "excellent."

REPEAL OF THE ILLEGAL MORATORIUM WILL HAVE NO IMPACT ON THE REQUIREMENT THAT HECETA MUST BUILD A FILTRATION PLANT

The lifting of the illegal moratorium will have no impact on the cost or need for Heceta to build a filtration plant. In the recent litigation, an official from the State Department of Health testified that, regardless of whether the moratorium had remained in place, Heceta would have been required to build a filtration plant. In fact, Heceta has been under orders by the Department of Health to build a filtration plant since 1987.

There also is no basis for the claim that the filtration plant will be more expensive now that the illegal moratorium has been lifted. In the recent litigation, Tom Charbonneau from the Department of Health (the State agency that deals with monitoring filtration), testified that there was no factual basis for the claim that the expense of the filtration facility will be higher now that the illegal moratorium has been lifted.

The reason that Heceta must build a filtration plant is that the Environmental Protection Agency (EPA) has mandated that all "open source" water must be treated by a filtration facility. Open source water, no matter how excellent, is still subject to Giardia and other contaminates from nature as a result of it being "open" to the atmosphere. Fish, ducks and geese swim, defecate and die in Clear Lake just as they do in other lakes. Clear Lake like any other open source water requires much more chlorine than well water to purify it. Chlorine has the ability to combine with organic matter in the lake to form tryhalomethanes which are carcinogens. Heceta is required to monitor and report the amount of tryhalomethanes found in the Lake.

CONCLUSION: REPEAL OF THE ILLEGAL MORATORIUM WILL NOT HARM OUR DRINKING WATER

There will be no impact to drinking water due to the lifting of the illegal moratorium. The Department of Health, through Mr. Charbonneau, which administers drinking water standards as they apply to Heceta and the City of Florence, testified in the recent litigation:

> "Q. So, if that is an accurate projection with or without a moratorium in the Clear Lake watershed the filtration facility being proposed by Heceta Water District would fully and adequately deal with any issues regarding drinking water?
>
> "A. I would anticipate that, yes."

The clear answer to the question, "what impact will the lifting of the illegal moratorium have on Clear Lake?" is clearly "no impact on the lake or filtration," based on objective science performed by qualified individuals and sworn testimony of DEQ staff and the Department of Health.

If you have any questions regarding the effect that lifting the illegal moratorium will have on the Clear Lake Watershed or any other matter, please feel free to contact us by writing to:

Clear Lake Community Organization
P. O. Box 177
Florence, Oregon 97439

If we do not know the answer, we will try to direct you to a person or agency who does.

Department of Environmental Quality
Attention: Barbara Burton
750 Front Street, NE
Salem, Oregon 97310

January 23, 1997

FAX (503) 373-7944

Ladies and Gentlemen:

To begin with, the DEQ created a "temporary" moritorium in the Clear Lake water shed. This "temporary" moritorium then dragged on for almost fourteen (14) years and ended only after a group of land owners finally got into Federal Court. After examining the facts, the judge declared the DEQ's actions unlawful and ordered the end of the moritorium.

I am told it was necessary for the DEQ to hold a public hearing to comply with their rules. This was the opportunity for the DEQ to set the record straight by acknowledging to the public that they had made a mistake. -A mistake which put many, many property owners through pain and agony. Many people were put in a position for all these years where they could pay taxes on the land they owned, but they could not build on it or even sell it for a fair market price. Some of the land owners died before they could build the retirement home they had bought their property for.

As I see it, in order for the DEQ to save face, it put out a twelve page memorandum designed to scare and panic the people within the Heceta water district and the City of Florence. In the memorandum, the DEQ strongly implied that if the landowners freed from the moritorium build houses, Clear Lake will almost immediately deteriorate and at a minimum it will cost $340,000. a year or more to treat the water.

In an effort to scare off the landowners from building, DEQ tells them in their memorandum that they will most likely have to have monitoring wells installed -possibly up to three monitoring wells- at a minimum cost of $3,000. This is nothing but pure intimidation!

In 1992, my wife and I paid over $4,000. to have the dirt on our property up on Ocean View Drive in the outskirts of the watershed tested by a professor at Portland State. His analysis showed that affluent from our property would take hundreds of years to reach Clear Lake -if at all.

Since most of the lots left in the watershed are not on Collard Lake shore lots, but are up off Collard and Clear lakes by hundreds of feet, our water supply -Clear Lake- is safeguarded by the sand and soil that

surrounds the lake as shown in the Professor's analysis. Similar scientific studies like EPA's Dr. Carl Enfeld's seven (7) scientific studies also show how the surrounding sand and soil protects Clear Lake. My wife and I presented Dr. Enfeld's studies to the Heceta board years ago at a hearing but these scientific studies were dismissed by the Heceta water board and inaccurate third party hearsay was accepted by them instead and they refused to give us a water hookup until a federal judge issued an order for it. Heceta's attorney, Ron Gerber, is the one who entered the hearsay, saying he had spoken to the DEQ's Christina Wolankowski who had spoken to Dick Nichols. Sworn affidavits proved in court that the hearsay was "inaccurate". The Heceta water board did not know how to interpret Dr. Enfeld's studies and they did not bother to call him but they did forward the studies to the DEQ. No comment regarding these studies was ever made by the DEQ.

The landowners have been mistreated by keeping them from building all these years. They should not be additionally mistreated by DEQ threats that they may have to have monitoring wells put on their property -and at possible costs to the homeowners. What does the DEQ want, another batch of lawsuits?

In closing, you have your order from the Judge. Admit an error was made and drop it!

Sincerely,

John M. White

John M. White, Director
Heceta Water District Board
87764 Saltaire Street
Florence, OR 97439

Phone: 541-997-4289

looks like revised version of his 1/22 letter

FROM: Wilhelm F. Hagen
88643 Collard Lake Road (outside CLWS)
FLORENCE, OR 97439

Jan. 23, 1997

997-4829

TO: DEQ
Barbara Burton
750 Front Street, NE
SALEM, OR 97310

SUBJECT: Rulemaking for Clear Lake watershed

I am in favor of sensible monitoring and against waste of resources and money. Coming recently to this area, I was appalled that during 14 years of speculative arguments and expensive litigation NO continuous monitoring was implemented. Since the summer of 1996 I got monthly monitoring of Clear and Collard Lake for both phorphorus and nitrate concentrations imposed, which resulted so far in very low nutrient levels close to or below the detection limits of 5 µg P/l and 50 µg N/l.

During yesterday's hearing it became obvious that the DEQ is not aware of this overdue monitoring and the results. I consider it highly irresponsible that the DEQ did not require monitoring in the past at a relative low cost of presently $130 per month, NOR keep up with the data available now.

The rulemaking reflects such detachment from reality with continuous speculative claims such as the additional treatment costs of $340,000 per year for 1 MGD. As a new member of the Heceta Board, I will make sure such waste will not be allowed. I am also amazed about the precision of the increase in value to property owners to $2,012,000 which reflects not only a faulty multiplication, but is an absurd and useless speculation. I do not believe that the taxpayer should be held hostage to pay for such poor performance of our governmental institutions.

While I find plenty of useless information in the November 22, 1996 memo, key questions are not addressed, such as:

1. How will the measured nutrient concentrations in the testwells be correlated to algae growth in Clear Lake ?
2. Which mathematical models will be used to simulate algae growth ?
3. Are there any previous test results at other locations with similar geological conditions to calibrate the model ?
4. Where are the testwells located relative to the drainfields ? Etc.

Only if there are reasonable answers to these questions is it sensible to install monitoring wells. Otherwise we just waste more money on wells and useless studies.

I also highly recommend changes to OAR 340-41-270 to provide better protection of the water quality. The phosphorus loading limits of 241, 192 and 123 pounds per year quoted in 1, 3 and 4 can NOT be measured or determined in any sensible manner to the accuracy implied by the 3 digit expressions. These loadings can only be indirectly inferred from measured concentrations in the lakes and the conversion requires accurate knowledge of the volume of the lakes, the inflow and outflow, the lake retention coefficients, the lake flushing rate, etc., which all depend on the amount of precipitation and hence vary to a large degree from wet to dry years. In addition the conversion calculations which were used ignore adsorption and migration rates of phosphorus in various soils, the distance of the drainfield from the lake, etc. A drainfield over 1,000 feet from the lake simply does NOT contribute the same nutrient loading as a drainfield within 100 feet from the lake.

In short, the conversion from measured concentrations in the lake to loadings expressed in pounds per year is highly inaccurate and hence the quoted numbers of 241, 192 and 123 pounds per year are absolutely useless and unenforceable. They will only lead to absurd arguments and endless litigation at great expense, as demonstrated during the past 14 years.

I recommend to delete 1, 3 and 4 of OAR 340-41-270 and replace it with direct measurable concentrations as expressed in 2. Since the primary concern is algae growth which is limited by either phorphorus or by nitrate during various times of the year, it is sensible to modify 2 by adding a nitrate limit of about 100 µg N/l in the form:

" The total nutrient loading of the Clear Lake watershed measured from samples collected in the epilimnion between May 1 and September 30 shall not exceed the median concentration of nine micrograms phosphorus per liter and 100 micrograms nitrate per liter during two consecutive years. "

An even better limit would be to measure the algae concentration directly, eliminating all other factors involved in algae growth, which is the real culprit, requiring potential filtering in the future.

In addition it seems reasonable to add a requirement to pump septics at a regular interval of about 3 years with part of the cost being born by the Heceta Water District. There are certainly other less costly options than installing expensive treatment and sewer systems and it is high time that the DEQ does NOT ignore or is oblivious to such options.

With kind regards,

W F Hayes

FROM: Wilhelm F. Hagen
88643 Collard Lake Road (outside CLWS)
FLORENCE, OR 97439-4829

Jan. 22, 1997

TO: DEQ
Barbara Burton
750 Front Street, NE
SALEM, OR 97310

SUBJECT: Rulemaking for Clear Lake watershed

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With kind regards,

W F Hagen

DEQ
Salem, OR.

January 16, 1997

Attention: Barbara Burton

We read the article in the Siuslaw News about the public hearing in Florence on Jan. 21, 1997. Anyone knows that more development with in the Colland and Clear Lake watershed will lead to a disasterous condition to create pollution at a highly dangerous level, to everyone, meaning 8,000 people in the Florence area plus tourists traveling through the State who stop at Florence.

Are you aware of all the people who have reported into Peace Harbor Hospital sick from Clear Lake water? The summer of 1994, in one day, we heard that over 80 people reported in sick from drinking water in the Florence area which is served by Heceta Water District. This report came directly from a hospital employee, a receptionist who does admit people to any area of the hospital and why. Since then we have known of people acquiring chlorine poisoning from HWD water where the doctor at Peace Harbor Hospital told the patient that they were dying and they didn't know what the problem was from running tests which didn't prove anything. The patient just started to drink spring water from south of Florence and in 3 weeks they were getting well.

Included in this letter is a copy of a letter which was given to the Siuslaw News Editor but was not printed, as yet. We have researched other areas of Oregon, subject; using surface water for domestic drinking water. No matter if you use it from a river or a lake, in this State, the water district envolved should be manditorily ordered to prefilter water for domestic use, through earth, into a settling pond before being used for a filtration plant. Doing a procedure of pumping water directly out of a lake in winter months turns into a disasterous condition, filling the water mains with dirty water, filling peoples hot water heaters and all plumbing with filth and dirty residue from the lake or river which turn riley and muddy in the winter months. Filtration plant operators have told us that no filtration system used by a city can clean up muddy water. It is dumb to even try it.

Thirty eight years ago we lived in LaPuente, California which was in an area which was later subdivided into the City of Industry. This area was supplied with water from several large wells by the water district. In 1958 and 1959 sewage was leaching into the underground water table from cesspools used in the area. The State made Los Angles County sewer the complete area. After one year the contamination problem deminished after the use of sewers was manditory. This condition is so simular of what is going on in Clear Lake watershed, right now. We feel that it is highly irresponsible for Federal personnel and Oregon State personnel to even think of permitting more drainfields and septic tanks to be used around Clear and Colland Lakes within the watershed when you can get advisement from other States which have tried the same foolish thing and caused people to get sick because of negligence by State Government personnel. Lifting this moritorium should be recognized as criminal negligence intentionally.

Norman Flattum
89310 North Lane
Florence ore. 97439 9613

January 2, 1997

LETTER TO THE EDITOR

Due to the fact that nature has given an example, these past three months, how radical weather conditions can turn into, week after week, the people had better conprehend this message everywhere to do and create development with more common sense.

This, I hope, has wised up the Heceta Water District Directors. The municipal bonds have been sold for a filtration plant on Clear Lake. However, I do hope that they can see and understand that you cannot take water directly out of any surface water source in this area of Oregon during the winter months due to lakes and rivers turning muddy. This past week, anyone who is using Heceta Water wishes to think twice before you wash clothes in it or bathe in it. I do hope that none of the public are foolish enough to use such muck to cook in or drink. It is bad enough with the overloaded chlorine condition poisoning people when the lake water is reasonably clear. I do wish to inform the Directors and the public, once more, that the first thing to be done on Clear Lake to collect surface water, is to create a 125,000,000 gallon pond at least 25 to 30 ft. deep, plastic lined on three sides and bottom. The side next to Clear Lake must manditorily be a man made separation bank of nothing other than washed river rock, pea gravel, and washed sand 150 ft. to 200 feet long and possibly 100 ft. wide at the bottom and 40 to 50 ft. wide at the surface. This enbankment from the lake to the pond has to be designed with piping, a back-flushing system, to wash away the mud from Clear Lake, periodically in the winter months, especially, meaning 4 to 6 months of the year. Constructing a filtration plant any other way is plain ignorance due to the fact that you cannot clean up mud out of the water with a filtration plant only. In the winter months it is manditory that you have a settling pond with a prefiltered water supply for public use and fighting fires, without contaminating the water mains with mud, in the future. There is no use to exercise such ignorant conduct in this day and age to have public water mains full of muddy water such is going on right now by Heceta Water District.

It is now up to you, the public, and the City of Florence to demand that such an instillation for public water be created from your municipal water bonds and nothing less except an up-to-date and a fool-proof water supply source from surface water. Enforce your rights upon the elected officials, right now!

Norman Flattum
89310 North Lane
Florence, OR. 97439

No Phone

Norman Flattum

H_2O Protect Our Water Resource

P.O. Box 2682
Florence, OR 97439

DATE: January 22, 1997

TO: Environmental Quality Commission
Department of Environmental Quality

FROM: William Gates, President

RE: Comments on Proposed Regulation
Permanent Rule Adoption to Lift Clear Lake Watershed Moratorium

Hearing is a Sham

DEQ and the EQC have already promised the plaintiffs in the U.S. District Court case of Merz, et al v. DEQ that they will adopt the regulations presented tonight. Given the fact that the DEQ and/or EQC will find themselves in contempt of court if they do not adopt these regulations, any public input will have no impact on the outcome of this hearing, regardless of the merits of the materials or testimony submitted.

EQC Cannot Conduct Unbiased Hearing
DEQ Cannot Present Unbiased Recommendations

All defendants listed in the Merz lawsuit are under the threat of contempt of court, or at the very least, breach of contract, if they do not enact this regulation. The defendants named in the lawsuit are: Environmental Quality Commission, Fred Hanson, William Young, Langdon Marsh, William P. Hutchinson, Jr., Dr. Emery Castle, William Wessinger, Henry C. Lorenzen, Carol A. Whipple, Tony Van Vliet, and Linda McMahan. Each and every one of these persons has an actual conflict of interest, and should not vote or participate in the adoption of this regulation, as they cannot do so in an unbiased manner. DEQ, as the representative staff of the EQC, cannot provide unbiased recommendations to the EQC.

Merz Lawsuit is Real Basis for Regulation

Citizens were not given the opportunity to be involved in all phases of the planning process. The real basis for this Rule Amendment is a response to an out of court settlement of a civil lawsuit, U.S. District Court case Merz, et al. v. Heceta Water District, et al., Case No. 91-817-TC. The settlement negotiations involved in that case were closed to the public. The details of that settlement were kept secret from the public until all parties had agreed to the settlement. That settlement is the primary basis for this Rule amendment. Citizens were purposefully and specifically excluded from that phase of the planning process.

That lawsuit was a civil proceeding, not a regulatory proceeding. What happened in that lawsuit was that a number of large landowners sued DEQ. Most of those landowners included property which was outside the watershed. Not subject to the existing DEQ regulations. Those parcels could have developed, outside the watershed. Therefore, there could have been no "takings". The plaintiffs then

brought in a few small parcel owners and added them as plaintiffs to the lawsuit. These small parcels were wholly situated inside the watershed and subject to the moratorium. The moratorium on those parcels was probably a "takings". The settlement proposes to treat the large parcels and the small parcels the same, when they are not the same.

Lawsuit Settlement May Not Stand

The lawsuit has not been completely settled, and there have been indications that the settlement may be "unwound". A hearing is currently set for March 24 in U.S. District Court before Magistrate Coffin on the subject. If the settlement is set aside, then the proposed regulation has no basis whatsoever.

Regulation Should Be Modified

The proposed regulation will be lifting the moratorium. The moratorium was instituted on a basis of sound scientific evidence and fact. That evidence and those facts have not changed, and the original reasons for putting the moratorium in place are still valid. The only thing that has changed is the political climate and the settlement of a civil suit.

The problem that DEQ now faces is a conflict between State law and the State and or Federal Constitutions. DLCD regulations clearly prohibit residential development that will contaminate public water ways, particularly public drinking water sources. However, both Constitutions prohibit "takings". It is probable that enforcement of land use regulations against those parcels which are situated completely within the Watershed boundary will constitute a taking. However, there are large parcels of land which are situated partly within and partly outside the watershed boundary. Those parcels cannot claim any takings because they can develop their properties outside the watershed. This regulation should be changed to address these conditions as follows:

1. Any parcel which has at least one-half acre outside the watershed should be required to place any development, home, or septic system outside the watershed.

2. Any parcel which does not have at least one-half acre outside the watershed should be allowed to develop only if they install a monitoring well on their property, at their expense.

3. The regulation should mandate that DEQ fund and initiate a program, within a specific time limit, to monitor water quality in Collard and Clear Lakes.

4. The regulation should mandate that DEQ fund and initiate a program, within a specific time limit, to supervise the monitoring wells which will be installed.

5. DEQ should adopt regulations that require Lane County's proposed Watershed Protection Regulations provide that the expense incurred by DEQ for implementing and continuing these monitoring programs be paid assessed against, and paid for by, the benefiting properties.

Evidence

As background, justification and evidence, we hereby incorporate by reference, adopt and re-state all documentation and testimony provided by, created by, or relied upon by the Department of Environmental Quality and/or Environmental Quality Commission when the on-site sewage disposal system moratorium in the Clear Lake watershed was adopted, including any subsequent revisions or adoptions. We also incorporate by reference, adopt and re-state the Statewide Land Use Planning

Goals and Guidelines and the Lane County Comprehensive Plan.

Alternatives to Complying with Regulations

There should be no alternative to compliance with regulations in effect at the time of the application for a septic system permit (waiver). The proposed alternative dealing with "projected daily sewage loading rate" is, in reality, a wealthy person's alternative to obeying regulations. The "projected daily sewage loading rate" is not defined in the regulations. There are no provisions for who is to determine that a particular development will stay under that projected rate. The end result of this portion of the regulation would be to allow those who can afford professional consultant's reports to build on a parcel, while ensuring that people of more modest means could not.

Monitoring Requirements are Smoke and Mirrors

There is no indication of how DEQ will decide what monitoring site is needed, and which sites are not needed for their study.

There is no commitment, or requirement, that DEQ actually will conduct any groundwater study. In fact, the Impact Statement states that DEQ doesn't even plan to start the study for at least five years, and that no monitoring wells will likely be required until DEQ begins the study. Attachment C to the staff reports states: "... the longer that studies are delayed, the more likely that Collard and Clear Lakes will exceed water quality standards before an effective management plan can be put in place."

Even if some of the more environmentally conscientious property owners request a monitoring well, DEQ won't pay for it unless there are funds set aside for the purpose. And if the study isn't expected to begin for at least five years, there is no reason for lots with potentially failing septic systems to participate before that time.

There is no mechanism to obtain, or even request, funds for the monitoring.

One portion of the proposed regulation would allow DEQ reasonable access to properties to collect samples from septic tanks and drainfields. But that permission applies only to new systems which are constructed after the rule becomes effective. The most pressing problems lie with the old systems (some over thirty years old) not the new ones.

Regulation Does Not Comply with Statewide Land Use Goals and Guidelines, or Lane County Comprehensive Plan

The regulation, which in reality is simply a removal of the moratorium on septic systems with the Clear Lake Watershed, does not comply with Statewide Land Use Goals and Guidelines, nor does it comply with the Lane County Comprehensive Plan, which is based on those goals and guidelines.

Staff Report is Clear

The staff report dated November 22, 1996 is clear about the implications of the proposed regulation:

> The regulations will force the deterioration of water quality in Clear and Collard Lakes.
>
> The regulations will not protect the water in Clear or Collard Lake.
>
> The regulations will increase the cost of our drinking water.

The regulations will increase the usage of chemicals in our drinking water.

The regulations will force sewering in the future.

Response to Attachment C
Questions to be Answered to Reveal Potential Justification for Differing from Federal Requirements

4. Will the proposed requirement improve the ability of the regulated community to comply in a more cost effective way by clarifying confusing or potentially conflicting requirements (within or cross media), increasing certainty, or preventing or reducing the need for costly retrofit to meet more stringent requirements later?

No. The proposed rule will make it more expensive for the community to meet Federal Water Quality Standards.

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

No. There are two sources of drinking water in the Florence area - Clear Lake and unsatisfactory dunal wells. Dunal wells cannot provide sufficient water for the City of Florence now, and Florence is considering obtaining water from Clear Lake. If the water quality of Clear Lake is allowed to degrade, it will effect the future growth of the area. Nationwide, the availability of clean, safe drinking water is listed as one of the major factors considered when locating (or relocating) homes and businesses.

7. Does the proposed requirement establish or maintain reasonable equity in the requirements for various sources? (level the playing field)

No. The regulations provide for a special class of development. If a development cannot meet normal regulations, then, if they can prove they will not violate an unverifiable "projected daily sewage loading rate", they will be allowed to develop. The end result of this provision is to deny those property owners who do not have the financial means to hire expensive consultants the ability to develop their property.

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

Yes. The regulation is expected to result in increased cost of water treatment for Heceta Water District customers and City of Florence Customers. The expected increase would be $340,000 per year for 1 million gallon per day production. Heceta and Florence plan to use 2 million gallon per day production, so the increased cost would be $680,000 per year. There are about 5,000 households in the Heceta/Florence area. That would average out to $136 per year in increased cost to each household. Many of the Florence area residents are retired and on fixed incomes.

The regulation is also expected to result in sewering around Collard Lake, at the least. Again, many of the residents of that area are retired and on fixed incomes. Forced sewering will greatly effect their financial situations.

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

No. Unless doing nothing is considered "demonstrated technology".

11. Will the proposed requirement contribute to the prevention of pollution or address a potential problem and represent a more cost effective environmental gain?

No. The regulation is expected to degrade the quality of Clear and Collard Lakes. The provision for some kind of monitoring at some point in the future (at least five years), will not prevent pollution nor will it address the potential problem, nor does it represent a more cost effective environmental gain. There are many other alternatives which would more adequately protect the water quality of the lakes, in a more cost effective manner - such as:

Maintain moratorium until limited, partial, or fully buyout (at about the same end cost as degradation of the lakes) can be accomplished.

Require properties with more than one-half acre lying outside the watershed boundary to locate septic systems outside the watershed.

Increased setbacks from lake edges.

Additional regulations dealing with nonpoint source pollution and stormwater runoff.

Requirements for immediate monitoring and study.

Violation of Statewide Land Use Goals and Guidelines

This decision is a land use decision, and as such, is subject to the Land Use Goals and Guidelines. The proposed regulation violates the following Statewide Land Use Goals and Guidelines by removing protections provided by the existing moratorium regulation, and in other particulars:

Goal 1: Citizen Involvement, 1. Citizen Involvement - To provide for widespread citizen involvement; 2. Communication - To assure effective two-way communication with citizens; 3. Citizen Influence - To provide the opportunity for citizens to be involved in all phases of the planning process; 4. Technical Information - To assure that technical information is available in an understandable form; 5. Feedback Mechanisms -- To assure that citizens will receive a response from policy makers; 6. Financial Support - To insure funding for the citizen involvement program.

1. Citizens were not allowed to be involved in the formation of this regulation.

2. Citizens were not allowed effective two-way communication with their government.

3. Citizens were not given the opportunity to be involved in all phases of the planning process.

4. Citizens were not given access to any technical information on which this regulation was based.

5. Citizens were not given the opportunity to ask, much less obtain a response from the policy makers before this regulation was formulated.

6. Sufficient funds were either not available or not utilized for a meaningful public participation program during the formulation of this regulation.

The real basis for this Rule Amendment is a response to an out of court settlement of the U.S. District Court case Merz, et al. v. Heceta Water District, et al., Case No. 91-817-TC. The settlement negotiations involved in that case were closed to the public. The details of that settlement were kept secret from the public until all parties had agreed to the settlement. That settlement is the primary basis for this Rule amendment. Citizens were purposefully and specifically excluded from that critical phase of the planning process.

The Goals state that a copy of all technical information shall be available at a local public library or other location open to the public. Such information was not available in the Florence public library, nor was any other public location identified. When citizens requested permission to view the technical information, they were informed that it was not available until after January 13, only five business days before the public hearing in Florence. And even then, the information was only available in Eugene, a three-hour round trip from Florence.

Goal 2: Land Use Planning, Part I - Planning: To establish a land use planning process and policy framework as a basis for all decision and actions related to use of land and to assure an adequate factual base for such decisions and actions; Part II - Exceptions: A local government may adopt an exception to a goal; Part III - Use of Guidelines: Governmental units shall review the guidelines set forth for the goals and either utilize the guidelines or develop alternative means that will achieve the goals.

This regulation is not consistent with the planning process which has been adopted by Lane County in their Comprehensive Plan, nor is it consistent with the Statewide Goals and Guidelines.

As stated above, the true basis for this rulemaking is a secretly decided settlement to a lawsuit. There was no public input allowed. There was no public notification prior to the settlement. A hastily held public meeting in eastern Oregon, and another in Astoria was held on the temporary lifting of the moratorium, but the public was not given an opportunity to participate in any way with the decision making process. The decision to accept the settlement was made in executive session, before any public meeting was held. There is no factual basis for this regulation.

The documentation and justification provided for this regulation gives no justification for any exception to the Goals, as detailed in Part II.

The guidelines have not been used, nor were alternative methods used to achieve the goals.

Goal 5: Open Spaces, Scenic and Historic Areas, and Natural Resources. To conserve open space and protect natural and scenic resources.

This regulation, by the staff's own admission, is expected to cause degradation of Clear Lake. The goal states that "where conflicting uses have been identified the economic, social, environmental and energy consequences of the conflicting uses shall be determined and programs developed to achieve the goal. The conflicting uses are well identified, as are the consequences of enacting this regulation.

The proposed regulation does not provide for any program to achieve the goal of protection of the natural area - the actual quality of Clear Lake, which has retained its natural character, i.e.,

oligotrophic.

Goal 6: Air, Water and Land Resource Quality. To maintain and improve the quality of the air, water and land resources of the state. All waste and process discharges from future development, when combined with such discharges from existing developments shall not threaten to violate, or violate applicable state or federal environmental quality statutes, rules and standards. ... such discharges shall not ... degrade such resources, or threaten the availability of such resources.

This regulation is expected to (and in fact specifically designed to) allow development in locations acknowledged by DEQ to contribute phosphorus and other harmful materials to the groundwater, Collard Lake, Clear Lake and the North Florence Dunal Aquifer. This additional development, when combined with the currently occurring discharges from existing septic systems will:

Cause the phosphorous carrying capacity of Clear Lake Watershed to be exceeded.

Cause the quality of Clear Lake to degrade.

Cause the cost of municipal services (provision of drinking water) to increase.

The regulation does not consider long range needs and threatens the availability of the now-existing clean, safe drinking water.

Goal 7: Areas Subject to Natural Disasters and Hazards. To protect life and property from natural disasters and hazards.

The Clear Lake Watershed is located in an area that has been identified as being subject to earthquakes in the near future. This probability has not been reviewed or considered.

This regulation does not take into account the possible hazard of ground water pollution to the North Florence Dunal Aquifer from increased septic tank installations which will result.

This regulation is not based on any inventory of known areas of natural disaster or hazard.

This regulation does not consider the probability that an even minor earthquake can cause septic tank systems to fail - and the addition to the already existing number of septic systems increases even further the possible pollution threat to Collard Lake, Clear Lake, groundwater and the North Florence Dunal Aquifer.

Goal 9: Economic Development. To provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon's citizens.

The regulation will have an effect on the economic development of the Florence area due to expected increased costs for drinking water and lower quality of drinking water.

Goal 11: Public Facilities and Services. To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development.

The proposed regulation will force Florence area residents to install and pay for additional water treatment facilities which would not otherwise be required. There has been no coordination with either Lane County or City of Florence in the formulation of this regulation.

Goal 13: Energy Conservation. To conserve energy. Land and uses developed on the land shall be managed and controlled so as to maximize the conservation of all forms of energy, based upon sound economic principles.

This regulation is based on a settlement in a lawsuit, not on sound economic principles. The long range effects of this regulation will be to increase energy usage through additional water treatment, not conserve it.

Goal 17: Coastal Shorelands. ... maintain the diverse environmental, economic, and social values of coastal shorelands and water quality coastal waters. Within those limits, they shall also minimize man-induced sedimentation in estuaries, near shore waters, and coastal lakes. ... Promote uses which maintain the integrity of estuaries and coastal waters ...

Clear Lake and Collard Lakes are coastal lakes. They are also connected through an underground aquifer, to the North Florence Dunal Aquifer. The proposed regulation would allow activities directly in conflict with this goal:

1. The regulation will not promote uses which maintain the integrity of Collard Lake, Clear Lake, or the North Florence Dunal Aquifer.

2. The regulation will restrict water-dependent uses, i.e., municipal drinking water, by increasing the cost of providing that water.

3. The regulation provides for development which is not compatible with an existing or committed use, i.e. municipal drinking water source, and the water rights held by Heceta Water District.

4. There has been no public need demonstrated which justifies the long-term change in the quality of Clear Lake or Collard Lake.

Goal 18: Beaches and Dunes. To conserve, protect, where appropriate develop, and where appropriate restore the resources and benefits of coastal beach and dune areas; and To reduce the hazard to human life and property from natural or man-induced actions associated with these areas.

The proposed regulation will allow development on dunal areas which are adjacent to Clear Lake. This development will impact the quality of the lake, cause increased recreational traffic over the dunal area and increase the hazard to life and property by that increased traffic. There have been numerous documented incidence of recreational users of the dunes sliding off the dune and driving right into Clear Lake. Increased traffic in the dune area reduces the property values of lots with existing homes due to the nuisance of noise and trespass.

Development in the dunal area will require the planting of stabilizing vegetation, usually beach grass, which will spread and destroy the dunes as has already happened in many areas of the southern Oregon coast.

Enclosures

Letter dated August 12, 1991 with supporting documents from Lydia Taylor, Administrator, Water Quality Division, Oregon Department of Environmental Quality to U.S. Environmental Protection Agency re: TMDL Sumittal Clear Lake, with attachments:

Total Maximum Daily Load - Water Quality Management Plan Component (5 pages)

Request for EQC Action - December 14, 1990, Agenda Item K re: Adoption of Proposed Rules Modifying OAR 340-41-270 (8 pages), with attachments:

Attachment A - Oregon Administrative Rules 340-41-270 (4 pages)
Attachment B - Hearing Summary (10 pages)
Attachment C - Rationale for Changes to Proposed Rules (8 pages)

Request for EQC Action - December 14, 1990, Agenda Item H re: Authorization for Hearing on Proposed Rules Modifying OAR 340-41-270, (8 pages) with attachments:

Attachment A - Special Policies and Guidelines (7 pages)
Attachment B - Statement of Need for Rulemaking (3 pages)
Attachment C - Fiscal and Economic Impact Statement (4 pages)
Attachment E - Total Maximum Daily Load (7 pages)
Attachment F - Summary of Criteria Required by ORS 454.685 (3 pages)
Attachment G - Background Report - Clear Lake Near Florence (22 pages)

Letter dated March 16, 1992 from Charles E. Findley, Director, Water Division, U.S. Environmental Protection Agency, to Lydia R. Taylor, Administrator, Water Quality Division, Oregon Department of Environmental Quality re: Approval of Total Maximum Daily Loads (TMDL), Clear Lake.

Affidavit of Richard Nichols, DEQ, dated August 10, 1992.

Agreement between Robert L. Merz, et al, v. State of Oregon, et al, U.S. District Court Case No. 91-817-TC, entered into July 12, 1996, with attachment:

July 24, 1996 letter from Denise G. Fjordbeck, Assistant Attorney General to William Van Vactor, Lane County Administrator.

Order, Robert L. Merz, et al, v. State of Oregon, et al, U.S. District Court Case No. 91-817-TC, dated July 16, 1996.

SETTLEMENT AGREEMENT

This AGREEMENT memorializes a settlement of the case of Robert L. Merz, et al. v. State of Oregon, et al., United States District Court Case No. 91-817-TC entered into on the 12th day of July, 1996, in a settlement conference conducted through the good offices of the Honorable Thomas M. Coffin, United States Magistrate Judge. The parties to the Agreement are as follows:

Robert L. Merz and Shirley M. Merz, husband and wife; Gordon Brian Howard and Marcia Lee Smith, individually and as successors in interest to the Estate of Vincent M. Howard, Jr.; Richard G. Sargent; Ruby Broeker; Karen L. Anderson; Aaron U. Jones; Erling G. Omlid; Lloyd P. Omlid; and Ellis M. Rackleff, hereinafter called "the Plaintiffs";

State of Oregon, acting by and through its Environmental Quality Commission and Department of Environmental Quality; Fred Hanson, William Young, and Langdon Marsh in their official capacity as current and former directors of the Department of Environmental Quality; William P. Hutchinson, Jr., Dr. Emery N. Castle, William W. Wessinger, Henry C. Lorenzen, Carol A. Whipple, Tony Van Vliet, and Linda McMahan in their official capacities as commissioners of the Environmental Quality Commission, hereinafter called "the State."

1. RECITALS.

A. Each of the Plaintiffs is the current or former owner of real property located within the area commonly known as the "Clear Lake Watershed" in Lane County, Oregon. In or around April, 1983, the Environmental Quality Commission imposed a moratorium on the issuance of site approvals or permits for septic installations in the Clear Lake Watershed. Because of the moratorium and a subsequent modification of the moratorium adopted on or about December, 1990, the Plaintiffs have been unable to

obtain site evaluations or septic permits for their properties.

B. As a result of the events set forth in Paragraph A., a lawsuit was filed in the United States District Court for the District of Oregon, Southern Division, entitled as follows:

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF OREGON

ROBERT L. MERZ and SHIRLEY M. MERZ, husband and wife; GORDON BRIAN HOWARD and MARCIA LEE SMITH, individually and as successors in interest to the Estate of Vincent M. Howard, Jr.; RICHARD G. SARGENT; RUBY BROEKER; KAREN L. ANDERSON; AARON U. JONES; ERLING G. OMLID; LLOYD P. OMLID, and ELLIS L. RACKLEFF, Plaintiffs, vs. HECETA WATER DISTRICT, an Oregon municipal corporation; STATE OF OREGON, by and through its Environmental Quality Commission; FRED HANSON, WILLIAM YOUNG and LANGDON MARSH in their official capacity as directors of the Department of Environmental Quality; WILLIAM P. HUTCHINSON, JR., DR. EMERY N. CASTLE, WILLIAM W. WESSINGER, HENRY C. LORENZEN, CAROL A. WHIPPLE, TONY VAN VLIET, and LINDA McMAHAN in their official capacities as commissioners of the Environmental Quality Commission; WILLIAM B. FINLEY; LARRY STONELAKE; ART KONING; BOB SLEEPER; STEVE OLIENYK; and MICHAEL KEATING, Defendants.	Case No. 91-817-TC

This suit concerned the matters set forth in A. above.

C. The court, through the Honorable Thomas M. Coffin, entered an Order regarding the moratorium and the modifications of the moratorium that is attached hereto as Exhibit A.

D. The parties met with their respective counsel and principals on July 2, 1996, and again on July 11 and July 12, 1996. A settlement was reached between the Plaintiffs and the State on July 12, 1996, which is memorialized below.

E. The parties to this agreement have expressly agreed to waive their rights to appeal or object to Magistrate Judge Coffin's order and the Plaintiffs and the State defendants, under LR 135-1 and 28 USC 636(c), have consented to Magistrate Judge Coffin conducting any and all proceedings making dispositive decisions and entering Judgment in this case as noted above.

2. **TERMS OF AGREEMENT.**

The Plaintiffs and the State agree to the following:

A. The State's undertakings:

1. Upon receipt of this settlement agreement fully executed by all Plaintiffs and in full settlement of all claims against it, the State will pay without delay the sum of $900,000.00, inclusive of all costs, disbursements, attorney fees, damages and all other sums for which it could have been found liable as a result of the above-captioned litigation. The check shall be made payable to the

trust account of Gleaves Swearingen Larsen Potter Scott & Smith.

2. The State shall take appropriate action to repeal the moratorium on or before October 15, 1996, before it becomes a taking. No new restrictions on Plaintiffs' property shall be imposed as part of this rule making, EXCEPT AS AGREED HEREIN.

3. The State shall not object to or appeal from the entry of judgment on Magistrate Judge Coffin's order in the form attached as Exhibit B.

4. The State may testify in favor of the ordinances proposed to be adopted by Lane County, as set forth in a separate letter to Lane County Administrator William Van Vactor from Denise G. Fjordbeck, dated July 15, 1996 (copy attached hereto as Exhibit C).

5. DEQ and its agents shall honor any prior septic site approvals obtained by Plaintiffs and shall issue septic permits for those parcels, subject to the usual Statutes and Administrative Rules applicable to septic tanks within the State of Oregon.

6. DEQ shall, at its own cost, perform site evaluations on each of the lots owned by each of the Plaintiffs (including, without limitation, the parcel owned by Gordon Brian Howard and Marcia Lee Smith for which a partition has been approved but is being appealed) located in some part within the

date except as specifically stated in the Judgment attached hereto as Exhibit B.

3. The Plaintiffs agree that it is their responsibility to contact Darrell Johnson, or his successor, at the Eugene DEQ office (Ph. (541) 686-7838) and make arrangements for site evaluations for septic permits. DEQ shall immediately perform such site evaluations and immediately issue the septic permits as required by the court's order and the judgment attached as Exhibit B hereto. Solely for the purpose of preparing such site evaluations, Plaintiffs agree to allow DEQ staff to enter their real property. The Plaintiffs agree to abide by the usual applicable Statutes and Administrative Regulations governing septic installations and applicable to septic tanks within the State of Oregon. It is expressly understood and agreed that the Plaintiffs will, if required by DEQ under the currently existing general septic regulations, install low pressure distribution systems as part of any septic installation if soil conditions so warrant. In this regard, Plaintiffs will be treated like any other similarly situated property owners in the State of Oregon.

4. The Plaintiffs with lots located in the Collard Lake subdivision agree to hook up their lots located in the Collard Lake Subdivision to any

community sewer system at the same cost as that charged to other similarly situated lot owners when such a sewer system becomes available without remonstrance.

5. Dale A. Riddle will testify before the Lane County Commission in favor of the adoption of certain Clear Lake Watershed Regulations, as set forth in a separate letter (marked Exhibit C hereto) and dated July 15, 1996 to Lane County Administrator Bill Van Vactor from Assistant Attorney General Denise G. Fjordbeck. The Plaintiffs or other representatives of the Plaintiffs may also testify regarding of these provisions, if they wish to do so, but will not take positions contrary to those taken by Mr. Riddle in the letter attached hereto as Exhibit C.

IN WITNESS OF THE FOREGOING AGREEMENT, the parties have signed this agreement on the dates indicated below:

Robert L. Merz Dated: _____, 1996	Shirley M. Merz Dated: _____, 1996
Gordon Brian Howard Dated: _____, 1996	Marcia Lee Smith Dated: _____, 1996
Richard G. Sargent Dated: _____, 1996	Ruby Broeker Dated: _____, 1996

Karen L. Anderson
Dated: _____, 1996

Aaron U. Jones
Dated: _____, 1996

Erling G. Omlid
Dated: _____, 1996

Lloyd F. Omlid
Dated: _____, 1996

Ellis M. Rackleff
Dated: _____, 1996

APPROVED AS TO FORM:

GLEAVES SWEARINGEN LARSEN POTTER SCOTT & SMITH

By: _____
Frederick A. Batson
Of Attorneys for Plaintiffs

STATE OF OREGON

By: _____
Langdon Marsh, Director,
Department of Environmental Quality,

_____
Denise G. Fjordbeck
Attorney for State Defendants

THEODORE R. KULONGOSKI
ATTORNEY GENERAL

THOMAS A. BALMER
DEPUTY ATTORNEY GENERAL

DEPARTMENT OF JUSTICE
TRIAL DIVISION
1162 Court Street NE
Justice Building
Salem, Oregon 97310
Telephone: (503) 378-6313
FAX: (503) 378-4968
TDD: (503) 378-5938

July 24, 1996

William Van Vactor
County Administrator
Lane County Courthouse
125 East Eighth Street
Eugene, OR 97401

Re: Clear Lake Watershed Protection Zone

Dear Bill:

During the course of settlement negotiations in the Merz v. Heceta Water District litigation, the Department of Environmental Quality has achieved substantial agreement with Dale Riddle, attorney for the plaintiffs, regarding the protective measures needed for the Clear Lake Watershed. We understand that there are many provisions in the regulations which deal with issues which are related only tangentially to environmental protection, such as fire suppression and measures designed to achieve political consensus; however, Mr. Riddle and I felt that it might be helpful to you and your staff to know the position of the parties to the litigation as you prepare to take the watershed regulations before the County Commission.

DEQ and plaintiffs agree that the following concepts are appropriate for the protection of the Watershed. Most of these concepts are contained in the final draft of the Clear Lake Watershed Protection Zone (11-9-94) and the items below generally refer to such provisions:

1. Farming should be restricted to areas more than 300 feet above ordinary high water.

2. Fill or extraction in freshwater lakes and marshes should be prohibited outright.

3. Development should generally be prohibited within 100 feet of ordinary high water.

4. Drainfields should be located a minimum of 100 feet from ordinary high water.

5. Each lot on Collard Lake should be required to hook up to a community sewer system when it becomes available.

6. Provisions regarding the submission of plot plans should be retained, including those provisions regarding submissions by a licensed engineer or architect.

7. The provisions regarding percentage of impervious surfaces and coverage should be replaced with a provision which requires that no run-off from impervious surfaces leave the site. I have drafted proposed language, which is enclosed for your review. This would accomplish the environmental aims of the ordinances and give property owners greater flexibility.

8. Buildings on compressible dunes should be required to have engineered foundations.

9. Site investigation reports should be required as generally set forth in the proposed ordinances.

10. Land division provisions need to be promulgated consistent with the new standards set forth in its 3661, allowing 20 acre parcels are no longer appropriate. It is also appropriate to add a provision that land divisions will not be a basis for siting additional dwellings, or serve as a justification for re-zoning or redesignation of the parcel consistent with SB 683.

11. The Watershed Vegetation Regulations appear to be appropriate and should be adopted as proposed.

12. It appears that the proposed Forestry provisions are preempted by the Forest Practices Act. DEQ will likely request that the Oregon Department of Forestry consider the possible impacts of ash in developing smoke management plans for the area.

13. The provisions on use of herbicides and pesticides appear to be preempted by ORS 634.009, adopted by the 1995 Legislature.

14. Boating regulations should be adopted as proposed, with the exception of the provisions regarding approval of only existing launch locations.

15. Construction and erosion control regulations should be adopted generally as proposed, with the exception of the provision requiring on-site retention ponds or drywells. The provision requiring that no off-site run-off occur addresses this concern.

Mr. Riddle, on behalf of the plaintiffs, and representatives of the Department of Environmental Quality intend to appear before the County Commission to voice their support for these protective regulations. The State regards these protections as essential to the long-term viability of Clear Lake as a source of water for the Florence area. We intend to provide whatever assistance we can to you and your staff in accomplishing our mutual goals of water quality protection.

If you have any questions or concerns, please don't hesitate to call me.

Very truly yours,

for Denise G. Fjordbeck
Assistant Attorney General
Commercial & Environmental
Litigation Unit

JTT21CF0/dgf
Enclosure
cc: Dave Williams, County Counsel
Dale Riddle, Attorney at Law
Barbara Burton, DEQ

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF OREGON

ROBERT L. MERZ and SHIRLEY M. MERZ, husband and wife; VINCENT M. HOWARD, JR.; GORDON BRIAN HOWARD; MARCIA LEE SMITH; RICHARD G. SARGENT; RUBY BROEKER; KAREN L. ANDERSON; AARON U. JONES; ERLING G. OMLID; LLOYD F. OMLID, and ELLIS L. RACKLEFF,

Plaintiffs,

v.

HECETA WATER DISTRICT, an Oregon municipal corporation; STATE OF OREGON, by and through its Environmental Quality Commission; FRED HANSON, WILLIAM YOUNG and LANGDON MARSH in their official capacities as directors of the Department of Environmental Quality; WILLIAM P. HUTCHISON, JR., DR. EMERY N. CASTLE, WILLIAM W. WESSINGER, HENRY C. LORENZEN, CAROL A. WHIPPLE, TONY VAN VLIET, and LINDA McMAHAN in their official capacities as commissioners of the Environmental Quality Commission; RICHARD NICHOLS, BARBARA BURTON, LYDIA TAYLOR, and GARY MESSER in their official capacities at the Department of Environmental Quality; WILLIAM B. FINLEY; LARRY STONELAKE; ART KONING; BOB SLEEPER; STEVE OLIENYK; and MICHAEL KEATING,

Defendants.

Civil No. --

ORDER

COFFIN, Magistrate Judge:

This lawsuit emanates from moratoriums on development in the Clear Lake Watershed. Plaintiffs are lot owners and parcel owners in the Watershed, and seek damages related to the loss of the use of their property during the period that the bans on development have been in effect. Plaintiffs and defendants have each filed motions for summary judgment. The court rules as follows as to the motions presented by plaintiffs and defendant State of Oregon:

1) The Environmental Quality Commission (EQC) is a commission appointed by the Governor of the State of Oregon to establish policies for the Department of Environmental Quality (DEQ). It has the authority to regulate water quality and issues regarding on-site waste disposal within the boundaries of defendant Neceta Water District, and has adopted regulations regulating water-quality and on-site waste disposal regarding the Clear Lake Watershed.

2) On April 7, 1983, EQC established a moratorium [OAR 340-71-460(6)(f), or the "1983 EQC Moratorium"] on the issuance of sewage construction installation permits or approved site evaluation reports for all properties within the Watershed for the purpose of protecting the water quality of Clear Lake. By its terms, the moratorium expired on July 1, 1985.

3) DEQ continued to enforce the 1983 moratorium after its expiration date.

4) On December 14, 1990, EQC adopted another moratorium on on-site sewage systems within the Watershed, which again had the effect of prohibiting development within the Watershed [OAR 340-41-270, or the "1990 EQC Moratorium"] for an indefinite period.

5) The enforcement of the "1983 EQC Moratorium" by DEQ between July 1, 1985 and December 14, 1990 was arbitrary and capricious and, as such, a violation of plaintiffs' due process rights, in that the moratorium had expired on July 1, 1985. Plaintiffs are entitled to prevail on their § 1983 claims pertaining to this issue. As plaintiffs would each have been entitled to septic permits during this time period, DEQ is hereby ordered to issue the plaintiffs in this action septic permits, providing their lots otherwise qualify for such.

6) The "1990 EQC Moratorium" is a valid exercise of authority by EQC, insofar as the regulation represents a temporary moratorium on development while efforts were to be made to implement permanent protection for the quality of water of Clear Lake. At some point, however, a lengthy moratorium or a moratorium that is indefinite in duration operates as a de facto takings of the property affected, and such takings mandate compensation for the owners of the property subject to the moratorium. Because the EQC and DEQ do not have eminent domain powers, it is the ruling of this court that should the "1990 EQC Moratorium" not be repealed as of October 15, 1996, it shall be invalid and of no force and effect. The continued enforcement of the moratorium thereafter will constitute a takings by EQC and DEQ of all properties within the Watershed affected thereby, for which damages will have to be paid.

So ORDERED.

DATED this 16th day of July, 1996.

THOMAS M. COFFIN
United States Magistrate Judge

41

AUG 10 1992

IN THE CIRCUIT COURT OF THE STATE OF OREGON FOR LANE COUNTY

VINCENT M. HOWARD, JR.; GORDON BRIAN HOWARD; MARCIA LEE SMITH; and AARON U. JONES, Plaintiffs, vs. HECETA WATER DISTRICT, an Oregon municipal corporation, Defendant.	Case No. 16-92-02234 AFFIDAVIT OF RICHARD NICHOLS IN SUPPORT OF DEFENDANT'S REPLY MEMORANDUM TO MOTION FOR SUMMARY JUDGMENT

STATE OF OREGON)
) ss.
County of _____)

I, Richard J. Nichols, being first duly sworn say:

I am the manager of the municipal projects section of DEQ. One of my tasks in my last position with DEQ was to prepare a staff report and a draft Oregon Administrative Rule relating to Clear Lake watershed.

As part of that process, I developed a model to estimate phosphorus loadings within the watershed. That model is based upon an assumption that a septic tank 20 years of age will contribute 0.88 pounds of phosphorous loading per year into Clear Lake or Collard Lake. The model further assumes that a 40-year old septic tank will contribute 1.76 pounds of phosphorus per year to Clear Lake or Collard Lake. The model assumes that a 10,000 square foot lot will contribute 0.11 pounds per year per residence in storm water run-off into the waters of Collard Lake or Clear Lake. The model assumes that lots larger than 10,000 square feet will contribute 0.28 pounds of phosphorous per year

D. RONALD GERBER
Post Office Box 0
Florence, Oregon 97439
(503) 997-8286
OSB #751310

in storm water run-off into the waters of Clear Lake and Collard Lake. The model also assumes that phosphorous loads generated in the Collard Lake subdivisions will go into Collard Lake where 0.48 of the load will be assimilated. The remaining 0.52 will move on into Clear Lake.

The model makes no allowance for distance of houses situated from the edge of Clear Lake or Collard Lake.

This model results were used in preparing staff reports submitted to the Department of Environmental Quality relating to the adoption of OAR 340-41-270.

In 1985 a limnology study was conducted of Clear Lake and Collard Lake by Lane County. In 1990, five years later, DEQ collected and analyzed water samples from Collard Lake and Clear Lake. The DEQ tests did not indicate any increase in phosphorus levels in the two lakes between 1985 and 1990.

Richard O. Nichols

SUBSCRIBED AND SWORN TO BEFORE ME this 10th day of August, 1992.

NOTARY PUBLIC FOR OREGON
MY Commission Expires: 3/21/93

D. RONALD GERBER
Post Office Box 0
Florence, Oregon 97439
(503) 997-8265
OSB #751310

Although the Department believes its proposed rules are technically appropriate and have been legally processed, anyone may petition the courts to review whatever action the Commission takes on them.

ISSUE: Rule amendments are only for the purpose of appeasing large property owners around Clear Lake.

Department's Response: The proposed rules as revised should provide direction to Lane County to develop a lake watershed management plan. The Department believes this is a first step toward resolving the development issues in the watershed. Whether or not the large property owners around Clear Lake are or will be appeased will depend upon the plan provided by Lane County.

ISSUE: One person stated that the proposed lake loadings are too low and could be higher and still protect the lake. This person recommended that the Clear Lake loading be set at 330 #/year, with half of the additional allowed load (330-218) be given to new development.

Department's Response: A higher loading for Clear Lake may still maintain the lake in an oligitrophic state (little nourished). Oligitrophic lakes are very clear. The amount of aquatic growth in a lake is proportional to the amount of phosphorus in the lake water. An increase in phosphorus will increase aquatic growth. At this time, the Department has no social or economic justification pursuant to OAR 340-41-026 to justify any increase in pollutant levels in the lake and a corresponding, even if insignificant, reduction in water quality.

ISSUE: Phosphorus cannot travel through the ground for distances greater than 500 feet.

Department's Response: The 500 feet hypothesis has not been verified in any scientific journal provided to the Department. The Department recognizes that soil can effectively attenuate phosphorus levels. However, relatively small amounts of phosphorus will cause significant growth of algae in Clear Lake. Such growths could significantly increase the cost to Heceta Water District for providing water to its customers. Therefore, the Department does not believe it is appropriate to assume that a 500 foot set-back will totally eliminate the discharge of phosphorus into the lake from a drainfield.

United States
Environmental Protection
Agency

Region 10
1200 Sixth Avenue
Seattle WA 98101

Alaska
Idaho
Oregon
Washington

EPA

MAR 16 1992

Reply To
Attn Of: WD-139

Lydia R. Taylor, Administrator
Water Quality Division
Oregon Department of Environmental Quality
811 SW Sixth Avenue
Portland, Oregon 97204-1390

Re: Approval of Total Maximum Daily Loads (TMDL)

Dear Ms. Taylor:

I am pleased to approve the following TMDLs and associated wasteload and load allocations submitted by your Department on August 12, 1991:

- Yamhill River basin - total phosphorus

  Phosphorus levels have been established to limit algal growth, achieve the state action levels for nuisance aquatic growth, and achieve the state standard for pH.

- Bear Creek (RM 0 - 22.4) - biochemical oxygen demand, ammonia nitrogen, and total phosphorus

  Biochemical Oxygen Demand (BOD - 5-day), ammonia nitrogen, and total phosphorus levels have been established to achieve dissolved oxygen, pH, and ammonia toxicity standards.

- Clear Lake near Florence - total phosphorus

  Phosphorus levels have been established to limit algal growth.

We also note that you have submitted a preliminary TMDL for the Pudding River and a draft TMDL for the Columbia Slough. Following public review of these actions, incorporation of these TMDLs into the state's Water Quality Management Plan, and submittal of the completed TMDLs, the Environmental Protection Agency will formally begin the review process.

APR. 06 1992

To streamline the TMDL submittal process, we plan to work with the Department to develop guidance on what should be included in a TMDL submittal package. Because the state's TMDL submittal constitutes the major part of the administrative record for our decision to approve or disapprove the TMDL, it is critical that the package be complete. The Department already provides most of the necessary documentation, and its innovative format for presenting the TMDL information is a model for other states. For Oregon, our main concern is providing uniformity in TMDL submittals. This will help us quickly identify areas where additional information may be necessary, and will speed our review process. We will be in contact with your staff to develop this guidance.

Sincerely,

Charles E. Findley
Director, Water Division

cc: Neil Mullane, ODEQ

Oregc

DEPARTMENT C
ENVIRONMENT
QUALITY

August 12, 1991

Regional Administrator
U.S. Environmental Protection Agency
Region 10
1200 Sixth Avenue
Seattle, WA 98101

Re: TMDL Submittal Clear Lake

In accordance with 40 CFR 130.7(d) and section 303(d) of the Clean Water Act (33 U.S.C. 1251 et. seq.), the Oregon Department of Environmental submits for your review and approval the TMDL and associated WLAs and LAs for Clear Lake as being established at a level necessary to meet the applicable water quality standards for with consideration of seasonal variation and a margin of safety. The TMDLs establish levels for phosphorus to limit algal growth.

This TMDL was given public review (August 1, 1990) and incorporated by the States Environmental Quality Commission into the states Water Quality Management Plan. We are attaching a copy of the staff reports which identify the process for distributing preliminary allocations and implementing the TMDL.

As you are aware the Department has adopted a phased process for implementing the TMDLs and reviewing associated allocations and management strategies. We are glad to see that the EPA guidance for Water Quality Based decisions (April 1991) contains a similar phased approach and feedback loops as used in Oregon. We are currently are undertaking the review process.

Sincerely,

Lydia R. Taylor
Administrator
Water Quality Division

LRT:RB:crw
SA\WC8\WC8818

811 SW Sixth Avenue
Portland, OR 97204-13
(503) 229-5696

TOTAL MAXIMUM DAILY LOAD

WATER QUALITY MANAGEMENT PLAN COMPONENT

Department of Environmental Quality
811 Southwest Sixth Avenue, Portland, OR 97204
Telephone: (503) 229-5696

Developed pursuant to ORS 468.730 and The Federal Clean Water Act

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WATER BODY SEGMENT:

Clear Lake near Florence

RECEIVING SYSTEM INFORMATION:

Basin: Mid Coast
Subbasin:
County: Lane

SPECIAL WATER QUALITY VALUE TO BE PROTECTED:

High clarity

APPLICABLE RULES:

OAR 340-41-270
OAR 340-41-006

TMDL PARAMETER:

Total Phosphate as Phosphorus

SOURCES COVERED BY THIS TMDL:

Source Number	Allocation Type	Source Description
001	LA	Collard Lake
002	LA	Clear Lake
003	WLA	Clear Lake Point Sources
004	LA	Department Reserve Allocation and Background

WATER QUALITY MANAGEMENT ACTIVITIES AND IMPLEMENTATION

Until this TMDL is modified, point source permits will be issued only if they include limits complying with the established waste loads. Nonpoint sources will be addressed through specific plans approved by the Department pursuant to the requirements of OAR 340-41-270. All requirements, limitations, and conditions are set forth in the attached schedules as follows:

SCHEDULE A

Pollutant Discharge limits not to be Exceeded

1. Pollutant Discharge Limitations not to be Exceeded After TMDL Issuance (Limits based on existing conditions prior to implementation of any further controls).

ANNUAL PHOSPHORUS LOADS
(pounds per year)

Source Number	Source Description	Limitations
001	Collard Lake	123
002	Clear Lake	241
003	Clear Lake Point Sources	0.0
004	Department Reserve Allocation/Background (For Clear Lake)	192

a. The load allocation for Collard Lake is based upon a total phosphorus concentration of 14.4 ug/l in the epilimnion and a Gilliom sensitivity factor of 0.37 [2.205 x 14.4/0.37 = 86] and adding to this the anticipated future loading from the existing on-site sewage disposal systems [86 + (0.88 X 42) = 123]. This is based upon 42 existing houses in the Collard Lake subdivisions, 0.88#/yr. of additional phosphorus to be discharged by these systems, and that the Collard Lake subdivisions are the only source of phosphorus into Collard Lake.

b. The load limitation for Clear Lake is based upon a total phosphorus concentration of 7.8 ug/l in the lake's epilimnion and a sensitivity factor of 0.079 [2.205 x 7.8/0.079 = 218] and adding to this the anticipated future loading from the existing on-site sewage disposal systems in the Collard Lake subdivisions and else where in the watershed [218 + (0.52 X 42 X 0.88) + (4 X 0.88) = 241. This is based on the assumptions in a. above and four existing houses elsewhere in the watershed each to add 0.88 #/yr. of phosphorus.

c. Department Reserve and Background total phosphorus is based upon subtracting the calculated loadings on Clear Lake from existing development from 218.3 pounds per year.

The calculated load for Clear Lake is based adding the contribution from the existing Collard Lake development multiplied by 0.52 (Collard to Clear Lake factor) to that contributed by 4 existing houses located in the watershed, but outside the subdivisions. Each of the 4 existing houses is assumed to contribute 0.88 pounds per year of total phosphorus from on-site sewage disposal systems and 0.28 pounds per year from storm runoff. The storm runoff component assumes one acre of developed land associated with each house outside the subdivisions and areal loading rate of 30 kilograms/km^2/year for this residential development.

The calculated load from Collard Lake due to development is based on the assumption of 42 houses each contributing 0.88 pounds per year of total phosphorus into Collard Lake from on-site sewage disposal systems and 0.11 pounds per year being contributed into the lake as a result of storm runoff from residential development in the subdivisions. The runoff loading assumes 1/4 acre development and a 50 kilograms/km^2/year areal loading rate.

SCHEDULE B

Minimum Monitoring and Reporting Requirements
(unless otherwise approved in writing by the Department)

Ambient Monitoring. A lake water quality monitoring program shall be operated to evaluate the effectiveness of the TMDL and to guide development of any additional control strategies. The ambient monitoring program shall consist of two water sample collections on two separate dates at least a month apart. The sample collections shall occur between May 1 and September 30 and include a minimum of 6 water samples collected within the epilimnion of Clear Lake. The samples shall be analyzed for pH, total phosphorus, dissolved ortho phosphorus, chlorophyll a, NO_2 + NO_3-nitrogen, temperature, and turbidity.

SCHEDULE C

Compliance Conditions and Schedules

None

SCHEDULE D

Special Conditions

1. Unless otherwise approved by the Commission, the total phosphorus maximum annual loading for the Clear Lake watershed shall be deemed exceeded if the median concentration of total phosphorus from samples collected in the epilimnion between May 1 and September 30 exceed 9 micrograms per liter during two consecutive years. [(241#/year/2.205#/kg) X 0.079 = 8.6 rounds up to 9]

2. Lane County or any other jurisdiction shall not issue permits allowing connection of new development in the Clear Lake watershed to a sewerage facility and the Department or its contract agent shall not issue on-site sewage system construction installation permits or favorable site evaluation reports for on-site sewage systems within the Clear Lake watershed until a plan is submitted to and approved by the Department showing how total phosphorus loadings limitations required by OAR 340-41-270 will be achieved and maintained. The plan shall include, but not be limited to, the following:

a. Projected phosphorus loadings for existing development and future planned development within the Clear Lake watershed. Technical bases for the projections shall be cited. The plan shall include phosphorus loadings from storm runoff during and after construction, on-site sewage disposal systems and other management activities in the watershed including, but not limited to, forest harvesting.

b. Adopted ordinances as necessary to carry out the provisions of the plan.

c. Agreements, contracts and other information as needed to show how and what entity will effectively implement each provision of the plan.

3. The plan required by condition 2 of this Schedule shall address necessary controls to reduce phosphorus loadings into Collard Lake to levels less than 60# per year. The Department may approve a plan with annual loadings greater than 60 # per year but only if the plan demonstrates that controls necessary to achieve less than 60 # per year are unreasonable and overly burdensome.

4. If the plan required by condition 2 proposes that Clear Lake and/or Collard Lake loading limits be increased from levels established in Schedule A of this document, the plan shall include the social and economic justification for such increases as required by Oregon Administrative Rule (OAR) 340-41-026. The justification shall show the costs of achieving the loading limits established in Schedule A as well as the economic and social benefits of increasing the loads. The Commission shall not approve any plan that will not achieve a lake loading limit for Collard Lake of 140 # or less of phosphorus per year.[1] The Commission shall not approve any plan that will not achieve a lake loading limit for Clear Lake of 251 # or less of phosphorus per year.[2]

5. No construction of a sewerage facility to serve the Clear Lake watershed or a portion thereof shall begin until or unless:

---

1 The 140 # per year phosphorus loading limitation for Collard Lake was chosen on the basis of maintaining Collard Lake in a mesotrophic state. The Department believes that 60 #/yr. are necessary to reach oligotrophy and 149 #/yr. would cause eutrophy. Loading levels between 60#/yr. and 149 #/yr. will keep Collard Lake in a mesotrophic state. To provide a safety factor, the Department believes it prudent to allow only 90% of the difference in annual loading between oligotrophy and eutrophy. [0.9 X (149 - 60) + 60 = 140]

2 According to Gilliom's equations, a lake loading of 251 pounds per year would create a 9 ug/l phosphorus concentration in Clear Lake. The boundary between oligotrophy and mesotrophy would be 10 ug/l. The figure of 9 ug/l was chosen to provide a 10% safety factor to assure that the boundary of oligotrophy is not reached.

(a) The facilities plan report and engineering plans and specifications have been approved in writing by the Department,

(b) It is constructed and operated by a municipality with authority for the operation and maintenance of sewerage facilities.

(c) Before construction starts, the municipality shall demonstrate that it has a reliable source of funding to assure proper construction, operation, maintenance, and replacement of sewerage control facilities.

6. No on-site sewage system construction installation permits, favorable site evaluation reports, or sanitary sewer connection permits shall be issued until the plan required in Schedule B of this document for monitoring the water quality of Clear Lake is submitted to and approved by the Department. The plan shall include contracts or memorandums of agreement that assure that the monitoring will be conducted in perpetuity.

7. Unless it is demonstrated that stormwater runoff treatment and control systems are not necessary to meet the total maximum annual loading limits for phosphorus, any off-site or on-site control facilities for stormwater quality control necessary to comply with this total maximum annual load limits shall be under the control of a municipality.

MW\WC7462

Environmental Quality Commission

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

REQUEST FOR EQC ACTION

Meeting Date: December 14, 1990
Agenda Item: K
Division: Water Quality
Section: Surface Water

SUBJECT:

Clear Lake (near Florence): Adoption of Proposed Rules Modifying OAR 340-41-270 Special Policies and Guidelines for the Mid Coast Basin.

PURPOSE:

The rules, if adopted, would establish new loading limitations and other requirements for protecting water quality in Clear and Collard Lakes near Florence, Oregon.

ACTION REQUESTED:

___ Work Session Discussion
- ___ General Program Background
- ___ Potential Strategy, Policy, or Rules
- ___ Agenda Item ___ for Current Meeting
- ___ Other: (specify)

___ Authorize Rulemaking Hearing
_X_ Adopt Rules

Proposed Rules	Attachment A
Rulemaking Statements	Attachment ___
Fiscal and Economic Impact Statement	Attachment ___
Public Notice	Attachment ___
Other:	Attachment ___

___ Issue a Contested Case Order
___ Approve a Stipulated Order
___ Enter an Order

Proposed Order	Attachment ___

___ Approve Department Recommendation

___ Variance Request	Attachment ___
___ Exception to Rule	Attachment ___
___ Informational Report	Attachment ___
___ Other: (specify)	Attachment ___

DESCRIPTION OF REQUESTED ACTION:

The Commission is requested to adopt new rules for protecting water quality in Clear and Collard Lakes. The proposed new rules would establish a revised annual loading limitation for Clear Lake and establish a limitation for Collard Lake (which flows into Clear Lake). They would also prohibit new on-site sewage disposal systems and connections to other sewerage facilities in the Clear Lake watershed until Lane County develops a lake watershed management plan consistent with the lake loading limitations in the proposed rule.

AUTHORITY/NEED FOR ACTION:

___ Required by Statute: _____ Enactment Date: _____	Attachment ___
X Statutory Authority: ORS 468.020,468.710,715 _____	Attachment ___
___ Pursuant to Rule: _____	Attachment ___
___ Pursuant to Federal Law/Rule: _____	Attachment ___
___ Other:	Attachment ___

___ Time Constraints: Owners of undeveloped property owners within the watershed are anxious to have the rules modified because the current on-site sewage disposal system moratorium is limiting their ability to utilize their property.

DEVELOPMENTAL BACKGROUND:

___ Advisory Committee Report/Recommendation	Attachment ___
X Hearing Officer's Report/Recommendations (Attached only to each Commission member's copy of this report are a transcript of the verbal testimony and copies of written testimony received by the Department.)	Attachment B
___ Response to Testimony/Comments	Attachment ___
___ Prior EQC Agenda Items: (list)	Attachment ___
X Other Related Reports/Rules/Statutes: (Rationale for Recommended Changes in Proposed Rules)	Attachment C

___ Supplemental Background Information — Attachment ___
_X_ Map of Affected Area — Attachment _D_

REGULATED/AFFECTED COMMUNITY CONSTRAINTS/CONSIDERATIONS:

Rules were adopted by the Commission in 1983 for the purpose of protecting Clear Lake as an unfiltered drinking water supply. At the time it was adopted, there was a concern about the impact on lake water quality caused by additional development within the existing subdivisions around Collard Lake and the potential for more subdivisions being created elsewhere in the Clear Lake watershed.

Although federal requirements will probably require water supply filtration regardless of water quality, the Department believes it is prudent to prevent the discharges of nutrient into the lake in order to control algal growths that would cause turbidity and taste and odor problems. Even a small increase in lake algae levels will require the water district to provide and operate more expensive filtration facilities.

When the existing rule for Clear Lake was adopted, it was anticipated that the local planning jurisdiction (Lane County) would develop a management plan for the lake's watershed, consistent with the adopted lake loading limits in the rule. A subsequent limnological study was done on the lake by the county which showed that the lake loading limits should have been based on phosphorus instead of nitrate nitrogen. In addition, a planning study was done to determine the cost of installing conventional sewers for the Collard Lake subdivisions. The construction cost was estimated to be about $970,000 which was believed to be too expensive, and further efforts to sewer the subdivision were dropped. Because of these reasons and because Lane County may not have had the necessary expertise, the lake loading limit has never been translated into a lake watershed management plan.

The existing rules have prevented people from developing their properties within the watershed. Although some of the development problems could have been relieved by the construction of a sewerage facility, one has not been built. At least some of the existing homeowners in the watershed are content with no sewers and are not very interested in helping to pay for a sewer that will only increase development within the watershed. People who own larger properties in the watershed would probably have difficulty accessing a sewer if one were constructed, however.

PROGRAM CONSIDERATIONS:

Oregon Revised Statute (ORS 468.715) declares it to be the public policy of the state to protect, maintain and improve the quality of the waters of the state for public water supplies. This statute also declares it to be public policy to provide for the prevention, abatement and control of new or existing water pollution. Oregon Administrative Rule (OAR) 340-41-026 states that 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 to lower water quality for necessary and justifiable economic or social development.

(Note: Oligotrophic lakes have low algal productivity and are highly suitable for all uses. Mesotrophic lakes have moderate algal growth, but are generally compatible with recreational uses. Eutrophic lakes have high algal production and the suitability for most recreation uses is impaired).

Clear Lake currently is considered in an oligotrophic lake which means that its waters are very clear and contain very little nutrients to support biological growth. As their septic tank systems age, existing houses in the watershed will probably cause some increased phosphorus loadings into Clear Lake. The Department predicts that Clear Lake will remain oligotrophic, however. Increased development would increase phosphorus loads into Clear Lake and, without controls, could cause Clear Lake to become mesotrophic or even eutrophic depending on the quantity of phosphorus that results.

Collard Lake contains higher concentrations of phosphorus and is mesotrophic. The Department believes Collard Lake is mesotrophic because of the phophorus loadings from the on-site sewage systems in the subdivisions surrounding Collard Lake. If the existing houses in these subdivisions were to remain on on-site systems, the Department believes phosphorus levels in Collard Lake will increase. The Department believes that the effectiveness of on-site sewage disposal systems serving present development will decrease as they age. The increased phosphorus levels should not cause Collard Lake to move from mesotrophy to eutrophy, however. Increased development around Collard Lake, without controls, could cause the lake to become eutrophic.

ALTERNATIVES CONSIDERED BY THE DEPARTMENT:

1. Do not adopt modify existing rules which now prohibit new on-site sewage disposal systems and that specify an annual nitrate-nitrogen lake loading limitation.

2. Modify the existing rules to specify an annual lake loading limitations for Clear and Collard Lakes based on phosphorus. The limitations would be set at levels projected to eventually occur as a result of existing development only.

3. Modify the existing rules to allow a very limited increase in phosphorus levels in Clear Lake and a limited number of new on-site sewage disposal systems. This alternative would allow some limited, new development.

4. Modify the existing rules to require that sewage from the Collard Lake subdivisions within the Clear Lake be collected, treated and disposed of outside the watershed. Phosphorus reductions would be placed in the Department's reserve and not allocated to new development.

5. Modify the rules so that they:

   a. Have a loading limitation for total phosphorus for Clear Lake based on phosphorus levels projected to occur as a result of existing development;
   b. Include a phosphorus loading limitation for Collard Lake based on phosphorus levels projected to occur as a result of existing development;
   c. Require a plan for managing the lake watershed before any connections are made to sewers and before any new on-site sewage disposal systems are installed. The plan would assure that allowed land uses in the watershed are consistent with proposed lake loading limitations. The plan also must address lake loading limitations that would be necessary to improve Collard Lake to an oligotrophic state. The Department could not approve a plan with lake loading limits less than that necessary to bring Collard Lake to oligotrophic state unless it found the plan to be unreasonable and overly burdensome.
   d. No increases in phosphorus loadings would be allowed unless approved by the Commission pursuant to OAR 340-41-026 which requires social and economic justification. The proposed rule also establishes upper limits for phosphorus loadings for Clear and Collard Lakes above which the Commission could not allow.

DEPARTMENT RECOMMENDATION FOR ACTION, WITH RATIONALE:

The Department recommends alternative five for the following reasons:

1. Clear Lake has been determined to be phosphorus limited not nitrogen limited. The Department believes phosphorus is a much better parameter for controlling algal growth because limiting nitrogen, in itself, may not limit algal growth. Most nitrogen contamination caused by human development, however, also has associated total phosphorus. Consequently, the restrictions on development that is caused by the nitrate-nitrogen limitation would probably also effectively limit phosphorus contamination. The current nitrate-nitrogen limitation is very much more restrictive than the proposed phosphorus limit at least as it relates to the use of on-site sewage disposal systems.

2. A phosphorus loading limit should be established so that Collard Lake is assured of remaining in a mesotrophic state.

3. The Department recognizes that the proposed lake loading limitations for Clear and Collard Lake and the on-site sewage disposal moratorium will continue to severely restrict the ability of property owners to develop their properties. In order to protect the high quality water in these lakes, however, the limitations should not be increased and the moratorium should not be lifted until a watershed management plan has been developed and approved that adequately controls phosphorus loadings into the lakes. The Department also believes that the plan should, at least, consider what controls would be necessary to bring Collard Lake back to an oligotrophic state. If such controls are found unreasonable, however, the Department would be able to approve a watershed plan with higher loadings that still maintains Collard Lake in a mesotrophic state.

4. The Department does believe that some very limited increases in phosphorus levels in Clear Lake could be acceptable and still maintain the lake's high quality water. The Commission's rule (OAR 340-41-026), however, require that lowering of existing high quality water shall only be allowed if economically and socially justified. At this point, the Department has no

information from the local land use agency (Lane County) that would provide such justification. The Department believes it is appropriate to establish maximum lake loading limits above which the Commission would not consider. The proposed lake loading limits proposed as upper limits would provide a 10% safety factor and would assure that Clear Lake remains oligotrophic and Collard Lake remains mesotrophic.

CONSISTENCY WITH STRATEGIC PLAN, AGENCY POLICY, LEGISLATIVE POLICY:

The proposed rule is consistent with the agency and legislative policy of preventing pollution. The proposed rule establishes lake loading limits for the protection of water quality, but the burden of developing the lake management plan (i.e. land use) to be consistent with the loading limitations, remains with local government.

ISSUES FOR COMMISSION TO RESOLVE:

1. Should the proposed rule establish loading limitations for Clear and Collard Lake based upon projected future loadings from existing development?

2. Should the on-site sewage disposal system construction moratorium be maintained until a watershed management plan is developed and approved by the Commission?

3. Should the watershed plan need to consider alternatives to reduce loadings to Collard Lake that could allow the lake to return to an oligotrophic state?

4. Should the proposed rule establish upper loading limitations using a 10% safety factor that assure Clear Lake of remaining oligotrophic and Collard Lake of remaining mesotrophic?

INTENDED FOLLOWUP ACTIONS:

The Department plans to provide technical assistance as resources allow to help Lane county prepare and submit an approvable watershed management plan. If the watershed management plan submitted by the County requests a lake loading increase, the Department will return to the Commission with a request to modify the rules. If the Department does not believe a load increase is justified, it will recommend that the Commission not authorize rule-making to allow such an increase.

Approved:

Section: _____

Division: _____

Director: _____

Report Prepared By: Dick Nichols

Phone: 229-5323

Date Prepared: November 28, 1990

(Nichols:crw)
(MW\WC7463)
(11/26/90)

OREGON ADMINISTRATIVE RULES
340-41-270

NOTE:

The underlined portions of text represent proposed additions made to the rules.

The [bracketed] portions of text represent proposed deletions made to the rules.

The portions of the text which are underlined and [bracketed] in **bold italics** are additions and deletions to the draft rules made in response to public comment.

SPECIAL POLICIES AND GUIDELINES

340-41-270

In order to preserve the existing high quality water in Clear Lake north of Florence for use as a[n unfiltered] public water supply source requiring only minimal filtration, it is the policy of the Environmental Quality Commission to protect the Clear Lake watershed including both surface and groundwaters, from existing and potential contamination sources [by] with the following requirements:

~~[(1) Prohibiting new waste discharges into the lakes, streams, or groundwater within the watershed.~~

~~(2) Establishing a management goal of limiting the cumulative total quantity of NO_3-N discharged to the watershed of a maximum of 170 pounds NO_3-N per year from man-controlled sources, including but not limited to On-Site Sewage Disposal systems, managed forest areas, residential areas and public facilities.~~

~~(3) Requiring that land and animal management activities be conducted utilizing state of the art best management practices to minimize nutrient, suspended solids or other pollutants from contaminating the ground and surface waters.]~~

(1) The total phosphorus maximum annual loading discharged into Clear Lake shall not exceed *[265] 241* pounds per year from all sources.

(2) The total phosphorus maximum annual loading for the Clear Lake watershed shall be deemed exceeded if:

(a) The median concentration of total phosphorus from samples collected in the epilimnion between May 1 and September 30 exceed *[9.5] 9* micrograms per liter during two consecutive years, and

[(b) The median concentration of chlorophyll a from samples collected in the epilimnion between May 1 and September 30 exceed 2.75 micrograms per liter during two consecutive years. Chlorophyll a shall be determined by the Fluorometric method as specified on pages 10-34 of the 17th Edition of Standard Methods for the Examination of Water and Wastewater, 1989. Collection of samples for chlorophyll a shall be according to the methods described in A Manual of Sea Water Analyses, Bulletin 125, 2nd Edition, Fisher's Research Board of Canada, pp. 187-203.]

(3) Of the total phosphorus loading of [265] 241 pounds per year specified in section (1) of this rule, [if sewers are installed in the Collard Lake subdivisions, 234] 192 pounds per year shall be considered current background and Department reserve and shall not be available to other sources. [If sewers are not installed, the Department's reserve shall be 224 pounds per year.]

(4) [After implementation of the plans and requirements of sections (5), (6), and (7) or (8) of this rule,] [t] The total phosphorus maximum annual loading discharged into Collard Lake shall not exceed [67] 123 pounds per year.

(5) [Lane County or any other jurisdiction shall not issue permits allowing connection of new development in the Clear Lake watershed to a sewerage facility until a plan is submitted to and approved by the Department showing how total phosphorus loadings limitations required by this rule will be achieved and maintained. The plan shall address total phosphorus associated with erosion due to construction as well as that due to existing and new development. The plan shall include ordinances as necessary to effectively implement the plan.] Lane County or any other jurisdiction shall not issue permits allowing connection of development in the Clear Lake watershed to a sewerage facility and the Department or its contract agent shall not issue on-site sewage system construction-installation permits or favorable site evaluation reports for on-site sewage systems within the Clear Lake watershed until a plan is submitted to and approved by the Department showing how total phosphorus loadings limitations required by OAR 340-41-270 will be achieved and maintained. The plan shall include, but not be limited to, the following:

(a) Projected phophorus loadings for existing development and future planned development within the Clear Lake watershed. Technical bases for the projections shall be cited. The plan shall include phosphorus loadings from storm runoff during and after construction, on-site sewage disposal systems and other management activities in the watershed including, but not limited to, forest harvesting.

(b) Adopted ordinances as necessary to carry out the provisions of the plan.

(c) Agreements, contracts and other information as needed to show how and what entity will effectively implement each provision of the plan.

(6) [The Department or its contract agent shall not issue on-site sewage system construction installation permits or favorable site evaluation reports for on-site sewage systems to serve property within the Clear Lake watershed until a plan is submitted to and approved by the Department showing how total phosphorus loadings limitations required by this rule will be achieved and maintained. The plan shall address total phosphorus associated with erosion due to construction as well as that due to existing and new development. It shall also address forest harvesting activities. The plan shall include ordinances, easements, and/or contracts as appropriate and necessary to effectively implement the plan.] The plan required by section 5 of this rule shall address necessary controls to reduce phosphorus loadings into Collard Lake to levels less than 60 pounds per year. The Department may approve a plan with annual loadings greater than 60 pounds per year, but only if the plan demonstrates that controls necessary to achieve less than 60 pounds per year are unreasonable and overly burdensome.

(7) If the plan required by section 5 of this rule proposes that Clear Lake and/or Collard Lake loading limits be increased from levels established in section 1 and/or section 4 of this rule, the plan shall include the social and economic justification for such increases as required by Oregon Administrative Rule (OAR) 340-41-026. The justification shall show the costs of achieving the loading limits established in this rule as well as the economic and social benefits of increasing the loads. The Commission shall not approve any plan that will not achieve a lake loading limit for Collard Lake of 140 pounds or less of phosphorus per year. The Commission shall not approve any plan that will not achieve a lake loading limit for Clear Lake of 251 pounds or less of phosphorus per year.

[(7)] (8) [By October 1, 1993, all sewage generated within the Collard Lake subdivisions shall be collected, treated and disposed according to a sewerage facilities plan report submitted to the Department by October 1, 1991.] No construction of [the] a sewerage facility to serve the Clear Lake watershed or a portion thereof shall begin until or unless:

(a) The facilities plan report and engineering plans and specifications have been approved in writing by the Department.

(b) It is constructed and operated by a municipality with authority for the operation and maintenance of sewerage facilities.

(c) Before construction starts, the responsible municipality shall demonstrate that it has a reliable source of funding to assure proper construction, operation, maintenance, and replacement of the required sewerage facilities.

[(8) The Department may grant exception to section (7) of this rule, if, by October 1, 1991, an alternative plan is submitted to and approved by the Department which, when implemented, will achieve the annual phosphorus loading limit for Collard Lake required by section (4) of this rule.]

(9) No on-site sewage system construction-installation permits, favorable site evaluation reports, or sanitary sewer connection permits shall be issued until a plan for monitoring the water quality of Clear Lake is submitted to and approved by the Department. The plan shall include contracts or memorandums of agreement that assure that the monitoring will be conducted.

(10) Unless it is demonstrated that stormwater runoff treatment and control systems are not necessary to meet the total maximum annual loading for total phosphorus, any off-site or on-site control facilities for stormwater quality control necessary to comply with this rule shall be under the control of a municipality.

[(11) Unless otherwise approved in writing by the Department, a municipality shall be responsible for all sewerage facilities including on-site sewage disposal systems constructed in the Clear Lake watershed after December 1, 1989.]

Stat. Auth.: ORS Ch. 454 & 468
Hist.: DEQ 3-1983, f. & ef. 4-18-83

HEARING SUMMARY

Clear Lake (near Florence): Proposed Rules Modifying OAR 340-41-270 Special Policies and Guidelines for the Mid Coast Basin and OAR 340-71-460(7) Moratorium Areas for On-Site Sewage Disposal Systems.

On August 22, 1990, the Department held a hearing concerning rules for protection of Clear Lake. The hearing was held in Florence, Oregon at the Siuslaw High School Auditorium, Lecture Room A. Approximately, 50 people attended the hearing; 15 people provided oral testimony; the Department received over 50 separate written comments.

Due to the controversial nature of the Clear Lake issue, the Department has transcribed the oral testimony received at the August 22, 1990 hearing. It will be provided to the Environmental Quality Commission as part of the Department's report. In addition, the Commission will also be provided copies of all written testimony that has been received. Individuals who wish to obtain copies of either the transcription of the oral testimony or the written testimony may contact Mr. Dick Nichols in the Department's Portland office. Due to the volume of paper contained in the oral and written record, the Department recommends that you only request copies of the record if you seriously need them.

The Clear Lake issue is a mixture of water quality protection and land use. The statutory authority of the Environmental Quality Commission and the Department is limited to water quality protection. Land use requirements are under the authority of local government. Land use, of course, can affect water quality and it is, therefore, difficult to completely separate the two issues when considering the protection of Clear Lake water quality.

Ideally, the Commission, through its administrative rules, will establish water quality requirements. Land use will then be managed through the comprehensive land use plans to assure that water quality requirements of the Commission are met.

In April, 1983, a construction moratorium for on-site sewage disposal systems was established within the Clear Lake watershed. In addition, a nitrate nitrogen loading limit was established for the watershed. Contrary to the Department's expectations, a local watershed or land use plan was never developed to conform to the moratorium or lake loading limit. Not surprisingly, owners of undeveloped property within the watershed have been frustrated because of the lack of land use plan that would allow them to use their property as they originally anticipated.

In April 1989, the Siuslaw Soil and Water Conservation District, at the request of Lane County, established a Coordinated Resource Management Process (CRMP) in order to develop an acceptable watershed management plan. The group of affected parties that were enlisted to serve in the process not only have advised the Department in the development of its proposed rules, but is also serving to advise local government on possible changes to local land use requirements relative to the lake. As a result, the Department's proposed rules for hearing, in part, contained requirements that anticipated the CRMP's direction relative to land use. Since then, the CRMP has fallen behind the Department's process and may not follow through with its recommendation on land use as originally anticipated.

A considerable amount of the testimony received concerning the proposed rules on Clear Lake centered upon allowable land use. In summarizing the hearing, the Department has not incorporated comments relative to land use that are not relevant to the water quality issues within the proposed rules. The Department believes this is proper and appropriate, but has provided the Commission with the actual testimony for its information if the Commission members desire to review it.

The following is the Department's summary and response to the hearing testimony. Each issue is stated briefly followed by the Department's response to the issue.

ISSUE: The on-site sewage disposal system moratorium was originally supported because it was thought to be a short term problem that would be fixed. It has dragged on way longer than it was represented in 1983, when it was adopted. This delay has placed a great financial burden upon many people who have not been able to develop their property or sell it.

> Department's Response: The Department originally expected that the development issues would be resolved through a watershed management plan developed and implemented by Lane County, the jurisdiction that is responsible for land use matters in the watershed. For various reasons, this has not occurred. The delay is regrettable, but had no moratorium been put in place, it is likely that further, extensive development would have occurred in the watershed. Such development would probably have significantly and irreversibly degraded Clear Lake water quality.
>
> There is nothing that can be done about past delays. The Department believes that these proposed rules will provide direction for Lane County to more quickly resolve the land use issues in the watershed.

ISSUE: The Department should postpone EQC action until CRMP committee completes its work.

Department Response: The Department believes that there is only one advantage to postponing action. Postponement would allow the Commission to consider a proposed increase in lake loadings over current levels should Lane County conclude that one is needed. At this point, it is not obvious that an increase is needed. If an increase in loading is ultimately requested, the Commission would have to revisit the matter, through the hearing process, at a later date. This would potentially cause further delay for people owning undeveloped property. By proceeding to rule adoption at this time, however, the Environmental Quality Commission can provide direction about how the watershed management plan should be developed and implemented. The Department believes that Commission action at this time will provide useful direction and, therefore, recommends that the proposed rules, as amended pursuant to the hearing, be adopted.

ISSUE: Lane County was concerned about being required by the proposed rules to do various things in Clear Lake watershed when it does not have authority or money to do them.

Department's Response: The Department believes that most of the issues within the rule that impact Lane County are within its authority and should be within its financial capabilities. The Department agrees that the county probably does not have the authority to mandate or the resources to construct a sewer system in any part of the Clear Lake watershed nor does the county have the authority to unilaterally form a sanitary district to build and operate a sewerage facility. This may preclude the county from considering sanitary sewers as a component of its Clear Lake watershed plan unless or until it can obtain statutory authority through legislative action.

Lake water quality monitoring is another issue which may not be within Lane County's resources. The Department is hopeful that Heceta Water District or a sanitary district, if formed, can finance and implement lake water quality monitoring. The Department believes monitoring is vital to properly managing water quality in the watershed.

ISSUE: Development should be precluded from the Clear Lake watershed. Property should be bought out to eliminate further water quality degradation. DEQ should support a buyout.

Department's Response: The Department agrees that a buyout of all property within the watershed would provide the ultimate protection of Clear Lake water quality. The rule as proposed would allow a buyout to occur. The extent and type of development in the watershed is a local land use

matter provided that controls are implemented to limit phosphorus discharges into Clear and Collard Lakes to those prescribed by the rules of the Environmental Quality Commission.

ISSUE: Sewers are only being proposed for Collard Lake subdivision in order to allow some new septic tanks around Clear Lake. This won't protect the lake. No increased density of development should be allowed.

Department's Response: The proposed rules have been changed and do not require a sewer for the Collard Lake subdivisions. This was done because the Department believes that the decision for sewers is a land use decision and should only be required if proposed new development would require such. The Department believes that, if the existing septic tanks remain, Collard Lake will eventually degrade further, but will not impair existing beneficial uses of the lake or violate water quality standards.

The Department does not condone further degradation of Collard or Clear Lake and will recommend that the existing on-site sewage disposal moratorium be maintained until an acceptable lake watershed management plan has been developed and approved. In addition, the Department is recommending that the proposed rules also require the plan to address reducing phosphorus levels in Collard Lake so that it improves to an oligotrophic state.

The Department recognizes that sewers, in themselves, will not provide sufficient water quality protection if development densities are high. With high density development, the watershed management plan proposed by these rules would have to address nonpoint source loadings into the lakes.

ISSUE: Some people suggested that they would like an alternative to the requirement in the rules that requires sewers to Collard Lake subdivision. Some people were concerned that sewers do not address nonpoint source pollution; and that there is the potential for upsets with a sewer system causing spills into the lakes.

Department's Response: As stated above, the proposed rules have been changed and do not require sewers for the Collard Lake subdivisions. In addition, also as stated above, the Department recognizes that sewers do not address nonpoint source pollution. The Department recognizes that a sewer system would increase the risk of breakdowns and spills.

The Department believes that a sewer system, if part of the watershed plan proposed by Lane County, can be designed, constructed, and operated with sufficient redundant features (pumps and auxiliary power, for example) and alarms to reduce this risk to an acceptable level.

ISSUE: No increase in pollutants into Clear Lake should be allowed. The Environmental Quality Commission cannot allow further degradation of Clear Lake because of ORS 468.715 which requires the Department to prevent new pollution. OAR 340-41-026 is inconsistent with statute because it allows the Commission to lower water quality.

Department's Response: The Department believes that one definition of pollution of water is that designated beneficial uses of the water are being impaired. The Department does not believe that ORS 468.715 precludes the Commission from allowing limited water quality degradation provided that highest and best control technology is used and the degradation that is allowed will not impair recognized beneficial uses. OAR 340-41-026 is consistent with this view because it specifically states that the Environmental Quality Commission may lower water quality provided beneficial uses are not impaired.

OAR 340-41-026 does require that the Commission not lower existing high quality water unless it shows social and economic benefit. At this time, the Department has not been provided with information that would provide social and economic justification for allowing water quality to be lowered. Consequently, the proposed rules have been changed from those that went to hearing. The rules as currently proposed would not allow increased phosphorus loadings over that projected to exist with current development.

ISSUE: Sewers are necessary for Collard Lake subdivisions to reduce existing discharges via septic tanks into the lakes.

Department's Response: The Department believes that eventually the existing septic tank systems around Collard Lake will measurably degrade the water quality in Collard Lake. The phosphorus levels in Clear Lake would also increase slightly. Sewers are one means for controlling phosphorus from these on-site sewage disposal systems; there are other alternatives that may also be viable.

ISSUE: One person supported the DEQ approach because it eliminates pollutants from Collard Lake subdivisions and allows use of undevelopable property which cannot now occur.

Department's Response: Because the Department is proposing to not allow any increased phosphorus loadings in Clear Lake, the ability for people to further develop their property will be much more restricted than under the rules that went to hearing. The extent and nature of future development will depend upon the watershed management plan proposed by Lane County.

ISSUES: One person stated that they supported changing lake limits to phosphorus from nitrate.

Department's Response: The Department believes that controlling phosphorus is the best mechanism to control nuisance growths in Clear and Collard Lake. The Department wishes to point out that limiting phosphorus to existing loadings may not preclude some increases in other pollutant parameters that may be included with sewage and stormwater. The Department believes, however, that these other pollutants will be adequately controlled so as to not significantly affect water quality.

ISSUE: Phosphorus loadings reduced by sewering or otherwise should be placed in a reserve and not given to others to allow development.

Department's Response: The proposed rules have been revised such that sewers are not required. Consequently, the issue of placing phosphorus loadings reductions in the reserve does not need to be addressed in the rule. The proposed watershed management plan prepared by Lane County may call for phosphorus reductions that are based upon calculated, theoretical projections that will take a period of time to be realized. The Department believes that until such time as the reductions can be measured and verified through lake monitoring, they should be placed in the Department's reserve. This decision will be considered by the Department as part of the review and approval of the watershed management plan.

ISSUE: Many people who have undeveloped property in the watershed would like either to be able to develop their property or be bought out.

Department's Response: This is really a land use issue, but the Department wishes to point out that the proposed rules will allow either of these options to occur. Which option will depend upon the action of the local land use jurisdiction which is Lane County.

ISSUE: Some people felt that existing development in the watershed is not the problem, and they shouldn't have to pay to solve it.

Department's Response: The Department believes that existing development contributes pollutants into Collard and Clear Lake. At this time, the contribution has not significantly degraded either lake, but, over time, degradation will increase. The Department believes that it is the policy of the State of Oregon that the people who contribute pollutants to public waters are those that are responsible for paying to control it within the requirements of the rules of the Commission. These proposed rules do not delineate who should pay for whatever control measures are undertaken within the watershed. Such delineation is outside the scope of the proposed rules.

ISSUE: One person is concerned that Mr. Dick Nichols should not have served as the hearings officer because he has also served as the Department's representative on the CRMP committee. As a result, he has a bias.

Department's Response: The Commission has been given a direct transcript of the tape recording of the hearing and has been given copies of the written testimony received by the Department. This should allow the Commission to review testimony without bias. In addition, the EQC report and associated addenda, although drafted by Mr. Nichols, have been reviewed by several staff members within the Department to eliminate the basis of this concern.

ISSUE: One person felt that developed lot owners and undeveloped lot owners should be treated equally.

Department's Response: Equity will be dependent upon the perspective of the affected party. Consequently, the Commission cannot expect everyone involved with Clear Lake to be satisfied that they have been treated equitably in the proposed rules. The Department has tried to address the issues as equitably as possible, but believes that some affected people will not see it as such.

ISSUE: Some people felt that there should be no new septic tanks in the watershed. One testifier indicated a willingness to use legal means to overturn a EQC decision to allow septic tanks.

Department's Response: The Department has recommended that the construction moratorium on on-site sewage disposal systems be left in place until a watershed management plan has been developed and approved. If the plan shows that additional on-site systems can be accommodated with the lake loading limits, the moratorium can be revised.

Although the Department believes its proposed rules are technically appropriate and have been legally processed, anyone may petition the courts to review whatever action the Commission takes on them.

ISSUE: Rule amendments are only for the purpose of appeasing large property owners around Clear Lake.

Department's Response: The proposed rules as revised should provide direction to Lane County to develop a lake watershed management plan. The Department believes this is a first step toward resolving the development issues in the watershed. Whether or not the large property owners around Clear Lake are or will be appeased will depend upon the plan provided by Lane County.

ISSUE: One person stated that the proposed lake loadings are too low and could be higher and still protect the lake. This person recommended that the Clear Lake loading be set at 330 #/year, with half of the additional allowed load (330-218) be given to new development.

Department's Response: A higher loading for Clear Lake may still maintain the lake in an oligitrophic state (little nourished). Oligitrophic lakes are very clear. The amount of aquatic growth in a lake is proportional to the amount of phosphorus in the lake water. An increase in phosphorus will increase aquatic growth. At this time, the Department has no social or economic justification pursuant to OAR 340-41-026 to justify any increase in pollutant levels in the lake and a corresponding, even if insignificant, reduction in water quality.

ISSUE: Phosphorus cannot travel through the ground for distances greater than 500 feet.

Department's Response: The 500 feet hypothesis has not been verified in any scientific journal provided to the Department. The Department recognizes that soil can effectively attenuate phosphorus levels. However, relatively small amounts of phosphorus will cause significant growth of algae in Clear Lake. Such growths could significantly increase the cost to Heceta Water District for providing water to its customers. Therefore, the Department does not believe it is appropriate to assume that a 500 foot set-back will totally eliminate the discharge of phosphorus into the lake from a drainfield.

As part of the watershed management plan required by the proposed rule, Lane County could include scientific information about phosphorus attenuation in the soil. This information would be used to support the controls proposed to limiting phosphorus loading into the lakes.

ISSUE: One person suggested that a definition for the Collard Lake subdivisions should be included in the proposed rules.

Department's Response: The proposed rules, as derived, make no reference to the Collard Lake subdivisions and, as a result, no specific definition is needed.

ISSUE: Storm water controls should only be a consideration for Collard Lake lots.

Department's Response: The Department believes that stormwater quality controls will probably be necessary for any new development in the watershed if existing loading limits for Clear Lake are to be maintained. The need, however, will be addressed and defined, if necessary in the watershed management plan.

ISSUE: The proposed rules should allow septic tanks where it is infeasible to locate them outside the watershed.

Department's Response: The need for additional septic tank systems should be demonstrated in the watershed management plan. The watershed plan provides the only means for considering the additional phosphorus discharges caused by the additional septic tank systems in relation to overall lake loadings.

ISSUE: Some people had concerns about alum septic tank systems working effectively.

Department's Response: As background, the Department has found a technical paper that describes a system for adding alum to septic tank systems. The alum combines with the phosphorus and produces a sludge which settles to the bottom of the septic tank. In an experimental septic tank system, phosphorus concentrations were found to be reduced by over 95% through the septic tank. The Department was unable to verify whether any of these systems were ever put into regular use.

The Department shares the concern of this comment, but believes that it is an option that should not be discarded. The Department believes such a system could be pilot tested in the Clear Lake Watershed under the control of a sanitary district or other municipality. A district (or municipality) is needed to assure that the systems are operated and maintained. If the pilot studies are shown not to work effectively, a sewer or other alternative would have to be implemented to reduce phosphorus loads from the Collard Lake subdivisions.

ISSUE: Undeveloped lot owners either want a sewer or to be bought out.

Department's Response: This comment comes from people who own undeveloped property in the Collard Lake subdivisions and who are frustrated by the inability to use their property. The Department recognizes this frustration and has been sensitive to this concern when drafting these proposed rules for protecting lake water quality which is the Department's primary responsibility.

ISSUE: Legislation may be needed to give necessary authority to achieve what is needed at Clear Lake.

Department's Response: Statutory changes could assist Lane County and other entities in implementing a watershed management plan. One example is a change that would allow Heceta Water District to have authority over facilities other than those that just provide domestic water supply. In the case of Clear Lake, it might be desirable to have any sewer or storm water system also under the authority of the water district. This would provide more efficient service and would also provide greater assurance that water pollution control facilities were properly operated and maintained.

It may also be desirable for Lane County (or any other planning jurisdiction) to have authority to unilaterally establish a sanitary district or other special district if necessary to manage public facilities designated in a land use plan.

ISSUE: One testifier stated that the requirements of a watershed management plan were unclear as to what would be required for the Collard Lake subdivisions and what would be required of others.

Department's Response: The Department has modified this language to clarify this confusion.

RATIONALE FOR CHANGES TO PROPOSED RULES

The following text displays the recommended changes to the proposed rules.

In the proposed rules that went to hearing, the Department proposed to modify OAR 340-71-460 which establishes an on-site sewage disposal system construction moratorium in the Clear Lake watershed. Since the hearing, the Department has determined that changes to the moratorium rule should not be made until a lake watershed management plan is developed to justify its relaxation or lifting.

For OAR 340-41-470, the Department has recommended several changes to the proposal that was presented for hearing. To describe the changes, each section of the proposed rules is stated followed by a short discussion of the rationale for the recommended change.

OAR 340-41-470 SPECIAL POLICIES AND GUIDELINES

In order to preserve the existing high quality water in Clear Lake north of Florence for use as a [n unfiltered] public water supply source requiring only minimal filtration, it is the policy of the Environmental Quality Commission to protect the Clear Lake watershed including both surface and groundwaters, from existing and potential contamination sources [by] with the following requirements:

[(1) Prohibiting new waste discharges into the lakes, streams, or groundwater within the watershed.

(2) Establishing a management goal of limiting the cumulative total quantity of NO_3-N discharged to the watershed of a maximum of 170 pounds NO_3-N per year from man-controlled sources, including but not limited to On-Site Sewage Disposal systems, managed forest areas, residential areas and public facilities.

(3) Requiring that land and animal management activities be conducted utilizing state of the art best management practices to minimize nutrient, suspended solids or other pollutants from contaminating the ground and surface waters.]

(1) The total phosphorus maximum annual loading discharged into Clear Lake shall not exceed *[265] 241* pounds per year from all sources.

RATIONALE: Currently, the Department believes that about 218 pounds per year of phosphorus is entering Clear Lake. The lake loading limitation for Clear Lake of 265 pounds per year was originally proposed because the Department anticipated that the watershed management plan being developed by Lane County would request an increase to 265. During the hearing process, however, the Department determined that an increase could only be allowed by the Environmental Quality Commission pursuant to OAR 340-41-026 which requires social and economic justification. At this time, the Department has no information to provide the economic and social justification. Therefore, a loading limitation of 265 pounds per year is inappropriate at this time.

The loading limitation of 241 pounds per year is the loading that the Department believes will ultimately be discharged into Clear Lake as the existing on-site sewage disposal systems in the watershed age causing reduced effectiveness.

(2) The total phosphorus maximum annual loading for the Clear Lake watershed shall be deemed exceeded if:

(a) The median concentration of total phosphorus from samples collected in the epilimnion between May 1 and September 30 exceed *[9.5] 9* micrograms per liter during two consecutive years, and

RATIONALE: The figure of 9.5 ug/l was a concentration derived from a loading limitation of 265 pounds per year on Clear Lake. A lake loading limit of 241 pounds per year should result in a concentration of 8.6 ug/l. Because the precision of the phosphorus test is limited at these very low levels, the Department believes it appropriate to round 8.6 to the closest single digit or 9 ug/l.

[(b) The median concentration of chlorophyll a from samples collected in the epilimnion between May 1 and September 30 exceed 2.75 micrograms per liter during two consecutive years. Chlorophyll a shall be determined by the Fluorometric method as specified on pages 10-34 of the 17th Edition of Standard Methods for the Examination of Water and Wastewater, 1989. Collection of samples for chlorophyll a shall be according to the methods described in A Manual of Sea Water Analyses, Bulletin 125, 2nd Edition, Fisher's Research Board of Canada, pp. 187-203.]

RATIONALE: The figure of 2.75 ug/l for chlorophyll a was taken from the literature as the upper limit for an oligotrophic lake. Since the proposed rule would limit phosphorus loadings to levels significantly less than the upper boundary of oligotrophy, the Department believes that 2.75 is not an appropriate figure. Unfortunately, the Department was unable to determine a reliable mathematical relationship between chlorophyll a levels and phosphorus concentrations. The Department, therefore, recommends that chlorophyl a should not be used as an indicator that lake loading limits are being exceeded and phosphorus concentrations should be the sole criteria.

(3) Of the total phosphorus loading of *[265] 241* pounds per year specified in section (1) of this rule, ~~[if sewers are installed in the Collard Lake subdivisions, 234]~~ *192* pounds per year shall be considered current background and Department reserve and shall not be available to other sources. *[If sewers are not installed, the Department's reserve shall be 224 pounds per year.]*

RATIONALE: The Department recommends that the proposed rules should not anticipate the results of the watershed management plan. The numbers in the proposed rule that went to hearing anticipated that existing on-site sewage disposal systems in the Collard Lake subdivisions would be eliminated by sewers or otherwise modified to reduce their phosphorus loads. Further, the reductions anticipated by these controls were proposed to be added to the Department's reserve. Since the hearing, the proposed rules have been modified so that no specific controls are required for the existing on-site sewage disposal systems. The Department's reserve for Clear Lake, therefore, should be set at the existing phosphorus load minus the calculated loads from existing development in the watershed.

(4) *[After implementation of the plans and requirements of sections (5), (6), and (7) or (8) of this rule,]* *[t]* The total phosphorus maximum annual loading discharged into Collard Lake shall not exceed *[67] 123* pounds per year.

RATIONALE: The Department believes that the phosphorus loading into Collard Lake will increase over time because the effectiveness of the on-site sewage disposal systems serving existing development will be reduced with the age of the systems. The Department believes this will ultimately exert a load of 123 pounds per year of phosphorus into Collard Lake. Water quality in Collard Lake will be reduced, but the lake should remain mesotrophic. This reduction of water quality is not desirable and should be addressed by a watershed management plan required by the proposed rules. Until the plan is submitted, the reduction of water quality is minimized by the continuation of the on-site sewage disposal system construction moratorium.

(5) *[Lane County or any other jurisdiction shall not issue permits allowing connection of new development in the Clear Lake watershed to a sewerage facility until a plan is submitted to and approved by the Department showing how total phosphorus loadings limitations required by this rule will be achieved and maintained. The plan shall address total phosphorus associated with erosion due to construction as well as that due to existing and new development. The plan shall include ordinances as necessary to effectively implement the plan.]* *Lane County or any other jurisdiction shall not issue permits allowing connection of development in the Clear Lake watershed to a sewerage facility and the Department or its contract agent shall not issue on-site sewage system construction-installation permits or favorable site evaluation reports for on-site sewage systems within the Clear Lake watershed until a plan is submitted to and approved by the Department showing how total phosphorus loadings limitations required by OAR 340-41-270 will be achieved and maintained. The plan shall include, but not be limited to, the following:*

(a) Projected phosphorus loadings for existing development and future planned development within the Clear Lake watershed. Technical bases for the projections shall be cited. The plan shall include phosphorus loadings from storm runoff during and after construction, on-site sewage disposal systems and other management activities in the watershed including, but not limited to, forest harvesting.

(b) Adopted ordinances as necessary to carry out the provisions of the plan.

(c) Agreements, contracts and other information as needed to show how and what entity will effectively implement each provision of the plan.

RATIONALE: Essentially section 5 and 6 of the original proposed rule have been merged into a new section 5. The new section 5 has been expanded to include further definition of the information necessary in the proposed watershed management plan.

(6) [The Department or its contract agent shall not issue on-site sewage system construction-installation permits or favorable site evaluation reports for on-site sewage systems to serve property within the Clear Lake watershed until a plan is submitted to and approved by the Department showing how total phosphorus loadings limitations required by this rule will be achieved and maintained. The plan shall address total phosphorus associated with erosion due to construction as well as that due to existing and new development. It shall also address forest harvesting activities. The plan shall include ordinances, easements, and/or contracts as appropriate and necessary to effectively implement the plan.] The plan required by section 5 of this rule shall address necessary controls to reduce phosphorus loadings into Collard Lake to levels less than 60 pounds per year. The Department may approve a plan with annual loadings greater than 60 pounds per year, but only if the plan demonstrates that controls necessary to achieve less than 60 pounds per year are unreasonable and overly burdensome.

RATIONALE: This new section would require that the proposed watershed management plan address necessary controls to reduce loadings on Collard Lake to levels that would allow it to become oligotrophic. The Department calculates that Collard Lake could be oligotrophic at phosphorus loading levels of 60 pounds per year. The Department believes that Collard Lake was probably oligotrophic before existing development and believes it is appropriate to determine what controls would be necessary to return it to its original state. If such controls are unreasonable and overly burdensome the Department could approve a watershed management plan with proposed lake loadings up to those specified in section 4 of the proposed rules.

(7) If the plan required by section 5 of this rule proposes that Clear Lake and/or Collard Lake loading limits be increased from levels established in section 1 and/or section 4 of this rule, the plan shall include the social and economic justification for such increases as required by Oregon Administrative Rule (OAR) 340-41-026. The justification shall show the costs of achieving the loading limits established in this rule as well as the economic and social benefits of increasing the loads. The Commission shall not approve any plan that will not achieve a lake loading limit for Collard Lake of 140 pounds or less of phosphorus per year. The Commission shall not approve any plan that will not achieve a lake loading limit for Clear Lake of 251 pounds or less of phosphorus per year.

RATIONALE: It is possible that Lane County could develop a watershed management plan that proposes increased loadings of phosphorus to Clear Lake and/or Collard Lake. OAR 340-41-026 requires the Commission to find social and economic justificiation before existing high quality water could be degraded by a load increase. The Department believes that increased loadings to Clear Lake should not cause it to no longer

be oligotrophic. By definition, it could become mesotrophic if phosphorus concentrations routinely exceed 10 ug/l. The Department believes a safety factor should be provided to assure that this concentration will not be exceeded and has recommended that loadings never exceed 251 pounds per year. A loading of 251 pounds per year would translate to a phosphorus concentration of 9 ug/l which essentially provides a 10% safety factor.

Similarly, the Department believes that Collard Lake should not be allowed to become eutrophic. By applying a similar 10 % safety factory, the maximum loading for Collard Lake should not exceed 140 pounds per year.

~~[(7)]~~ (8) ~~[By October 1, 1993, all sewage generated within the Collard Lake subdivisions shall be collected, treated and disposed according to a sewerage facilities plan report submitted to the Department by October 1, 1991.]~~ No construction of *~~[the]~~ a* sewerage facility *to serve the Clear Lake watershed or a portion thereof* shall begin until or unless:

(a) The facilities plan report and engineering plans and specifications have been approved in writing by the Department.

(b) It is constructed and operated by a municipality with authority for the operation and maintenance of sewerage facilities.

(c) Before construction starts, the responsible municipality shall demonstrate that it has a reliable source of funding to assure proper construction, operation, maintenance, and replacement of the required sewerage facilities.

RATIONALE: This was in the original proposed rule and, the Department believes, is still necessary and appropriate. Storm water control systems may be an important element of managing phosphorus loads in the watershed. Such systems are usually passive and can be made to blend into the landscaping. In addition, they may be on private property. Without the systems being under the control of a municipality, the Department believes they could be inadvertently modified by property owners without recognition of their purpose.

[(11) Unless otherwise approved in writing by the Department, a municipality shall be responsible for all sewerage facilities including on-site sewage disposal systems constructed in the Clear Lake watershed after December 1, 1989.]

RATIONALE: The Department chose to delete this condition at this time because the watershed management plan should define the need for public ownership of individual on-site sewage disposal systems. As opposed to storm water systems, it is unlikely that property owners will inadvertently modify a septic tank and drainfield system without knowing or at least without quickly recognizing their error. In some cases, particularly to assure long-term operation and maintenance of on-site systems, public ownership might be desirable to provide periodic inspection and repair if necessary. A very few failing on-site systems could exert a substantial phosphorus load on the lake not to mention the creation of other water quality problems.

NEIL GOLDSCHMIDT
GOVERNOR

Environmental Quality Commission

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

JAN 31 1991

REQUEST FOR EQC ACTION

Meeting Date: June 29, 1990
Agenda Item: H
Division: Water Quality
Section: Standards and Assessments

SUBJECT:

Clear Lake (near Florence): Authorization for Hearing on Proposed Rules Modifying OAR 340-41-270 Special Policies and Guidelines for the Mid Coast Basin and OAR 340-71-460(7) Moratorium Areas for On-Site Sewage Disposal Systems.

PURPOSE:

The rules, if adopted, would revise the requirements for protecting the very high quality water in Clear Lake near Florence, Oregon.

ACTION REQUESTED:

___ Work Session Discussion
___ General Program Background
___ Potential Strategy, Policy, or Rules
___ Agenda Item ___ for Current Meeting
___ Other: (specify)

_X_ Authorize Rulemaking Hearing
___ Adopt Rules

Proposed Rules	Attachment A
Rulemaking Statements	Attachment B
Fiscal and Economic Impact Statement	Attachment C
Public Notice	Attachment D
Other: TMDL Document	Attachment E

___ Issue a Contested Case Order
___ Approve a Stipulated Order
___ Enter an Order
Proposed Order — Attachment ___

___ Approve Department Recommendation
___ Variance Request — Attachment ___
___ Exception to Rule — Attachment ___
___ Informational Report — Attachment ___
___ Other: (specify) — Attachment ___

DESCRIPTION OF REQUESTED ACTION:

Existing Commission rules prohibit the construction of new on-site sewage disposal systems in the Clear Lake watershed. The watershed includes Collard Lake which outlets to Clear Lake. The rules establish an annual loading limitation for nitrate nitrogen for Clear Lake. The loading limitation is intended to prevent the growth of algae in the lake which is the water source for the Heceta Water District. Algae will cause turbidity, taste and odor problems in drinking water.

The proposed rules would:

a. Change the loading limitations from nitrogen to total phosphorus;
b. Allow some very slight additional phosphorus levels in the lake over existing levels;
c. Require a sewerage facility to be installed to serve an existing subdivision in the watershed by October 1, 1993, unless it can be shown not necessary to meet the lake loading limitations;
d. Require a lake management plan that is consistent with lake loading limitations before allowing any new on-site sewage disposal systems or any connections to sewer.
e. Require routine monitoring of Clear Lake water quality.

AUTHORITY/NEED FOR ACTION:

___ Required by Statute: _____ Attachment ___
Enactment Date: _____
_X_ Statutory Authority: ORS 468.020,468.710,715 Attachment ___
454.685

determine the cost of installing conventional sewers for the Collard Lake subdivisions. The construction cost was estimated to be about $970,000 which was believed to be too expensive, and further efforts to sewer the subdivision were dropped. Because of these reasons and because Lane County may not have had the necessary expertise, the lake loading limit has never been translated into a lake watershed management plan.

The existing rules have prevented people from developing their properties within the watershed. Although some of the development problems could have been relieved by the construction of a sewerage system, one has not been built. Existing homeowners in the watershed are content with no sewers and are not very interested in helping to pay for a sewer that will only increase development within the watershed. People who own larger properties in the watershed would probably have difficulty accessing a sewer if one were constructed, however.

PROGRAM CONSIDERATIONS:

Oregon Revised Statute (ORS 468.715) declares it to be the public policy of the state to protect, maintain and improve the quality of the waters of the state for public water supplies. This statute also declares it to be public policy to provide for the prevention, abatement and control of new or existing water pollution. Oregon Administrative Rule (OAR) 340-41-026 states that 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 and justifiable economic or social development.

This action is for the purpose of protecting the high quality water of Clear Lake. It is not to eliminate a health hazard caused by inadequate on-site sewage disposal systems. As such, Lane County has no specific authority to require that sewers be installed. There is no local municipality in the watershed that has authority to operate a sewerage facility. If the local property owners do not voluntarily install and operate a sewer system as required by the proposed rule, the Department may have to enforce the rule by taking individual action against each property owner.

The state statute that gives the Commission the authority to prohibit or limit construction of on-site sewage disposal systems requires the Commission to consider a number of factors. These factors were addressed in detail in the previous work done when the moratorium was established in 1984. A summary of the factors are summarized in Attachment F.

The Siuslaw Soil and Water Conservation District, at the request of Lane County, has convened a group of interested citizens and local and state agencies to assist the Department in revising the rules and in developing a management plan for the lake that would be compatible with the proposed rules.

ALTERNATIVES CONSIDERED BY THE DEPARTMENT:

1. Do not modify the existing rules that prohibit new on-site sewage disposal systems and that specify an annual nitrate-nitrogen lake loading limitation.

2. Modify the existing rules that specify an annual nitrate-nitrogen lake loading limitation, but do not lift the on-site sewage disposal moratorium.

3. Do not modify the content of the existing rules, but require that a sewer be provided to the existing subdivisions within the watershed.

4. Modify the rules so that they:

   a. Have a loading limitation for Clear Lake based on total phosphorus instead of nitrate nitrogen;
   b. Include a phosphorus loading limitation for Collard Lake;
   c. Require sewers to the existing subdivisions within the watershed, unless an equivalent alternative is demonstrated;
   d. Provide for some limited construction of new on-site sewage disposal systems;
   e. Require a plan for managing the lake watershed before any connections are made to sewers and before any new on-site sewage disposal systems are installed.

DEPARTMENT RECOMMENDATION FOR ACTION, WITH RATIONALE:

The Department recommends alternative four for the following reasons:

1. Clear Lake has been determined to be phosphorus limited not nitrogen limited. The Department believes phosphorus is a much better parameter for controlling algal growth because limiting nitrogen, in itself, may not limit algal growth. Most nitrogen contamination caused by human development, however, also has associated total phosphorus. Consequently, the restrictions on development that is caused by the nitrate-nitrogen limitation would probably also effectively limit phosphorus contamination. The current nitrate-nitrogen limitation is very much more restrictive than the proposed phosphorus limit at least as it relates to the use of on-site sewage disposal systems.

2. The Department does believe that some very limited increases in phosphorus levels in Clear Lake can be acceptable and still maintain the lake's high quality water. Depending on the management desires of the local planning jurisdiction, this could include the addition of a very few new on-site sewage disposal systems. In developing the proposed lake phosphorus loading limits, the Department has taken a conservative path at virtually every point. In addition, where the Department anticipates phosphorus reductions by either sewering or improving septic tank efficiencies, the resulting reductions would be banked in the Department's reserve. (When establishing a Total Maximum Daily Load, or annual lake loading as in the case of Clear Lake, portions of the loading are assigned to point and nonpoint sources and a portion is kept for the Department. The Department's portion includes natural background and reserve capacity that could be assigned in the future, if desired, to other point or nonpoint sources.)

3. With the existing subdivisions continuing to use on-site sewage disposal systems, even without further development, the phosphorus levels could increase in Clear Lake over time. This argues that a sewer should be required. It also argues for a limitation to be established for Collard Lake. There may be other

alternatives (such as a buyout of the houses by Heceta Water District or other entity) which should remain an option, however. The Department proposes an annual limitation of 67 pounds of phosphorus for Collard Lake which should allow flexibility to consider other alternatives for addressing the phosphorus load from the Collard Lake subdivisions. All sources of phosphorus within the watershed should be addressed, not just that from human sewage.

CONSISTENCY WITH STRATEGIC PLAN, AGENCY POLICY, LEGISLATIVE POLICY:

The proposed rule is consistent with the agency and legislative policy of preventing pollution. The proposed rule establishes lake loading limits for the protection of water quality, but the burden of developing the lake management plan (i.e. land use) to be consistent with the loading limitations, remains with local government.

ISSUES FOR COMMISSION TO RESOLVE:

1. Should the proposed rule allow any increases in phosphorus levels over existing conditions?

2. Should the on-site sewage disposal moratorium be left as is?

3. Should sewers be required in the rule or should this issue be left to local government?

4. Should the loading limit for Collard Lake allow for limited flexibility that would allow other mechanisms to control the phosphorus loading from sewage?

5. Should the rule require local government to routinely monitor the lake's water to verify its quality?

6. Should reductions in phosphorus loadings created by sewering or modification of septic tanks be saved within the Department's reserve or made available for development?

INTENDED FOLLOWUP ACTIONS:

Subject to Commission authorization, the Department proposes to hold a hearing on the proposed rules in August in Florence and return with a final rule proposal to the Commission at their September meeting. In addition, the Department will continue to provide technical assistance to local government during the development of their watershed management plan.

Approved:

Section: _____

Division: _____

Director: _____

Report Prepared By: Dick Nichols

Phone: 229-5323

Date Prepared: June 8, 1990

R.J.Nichols:crw
MW\WC6675
June 8, 1990

SPECIAL POLICIES AND GUIDELINES

340-41-270

In order to preserve the existing high quality water in Clear Lake north of Florence for use as a[n unfiltered] public water supply source requiring only minimal filtration, it is the policy of the Environmental Quality Commission to protect the Clear Lake watershed including both surface and ground waters, from existing and potential contamination sources [by] with the following requirements:

[(1) Prohibiting new waste discharges into the lakes, streams, or groundwater within the watershed.

(2) Establishing a management goal of limiting the cumulative total quantity of NO_3-N discharged to the watershed of a maximum of 170 pounds NO_3-N per year from man-controlled sources, including but not limited to On-Site Sewage Disposal systems, managed forest areas, residential areas and public facilities.

(3) Requiring that land and animal management activities be conducted utilizing state of the art best management practices to minimize nutrient, suspended solids or other pollutants from contaminating the ground and surface waters.]

(1) The total phosphorus maximum annual loading discharged into Clear Lake shall not exceed 265 pounds per year from all sources.

(2) The total phosphorus maximum annual loading for the Clear Lake watershed shall be deemed exceeded if:

(a) The median concentration of total phosphorus from samples collected in the epilimnion between May 1 and September 30 exceed 9.5 micrograms per liter during two consecutive years, and

(b) The median concentration of chlorophyll a from samples collected in the epilimnion between May 1 and September 30 exceed 2.75 micrograms per liter during two consecutive years. Chlorophyll a shall be determined by the Fluorometric method as specified on page 10-34 of the 17th Edition of Standard Methods for the Examination of Water and Wastewater, 1989. Collection of samples for chlorophyll a shall be according to the methods described in A Manual of Sea Water Analyses, Bulletin 125, 2nd Edition, Fisher's Research Board of Canada, p 187-203.

(3) Of the total phosphorus loading of 265 pounds per year specified in section (1) of this rule, if sewers are installed in the Collard Lake subdivisions, 234 pounds per year shall be considered current background and Department reserve and shall not be available to other sources. If sewers are not installed, the Department's reserve shall be 224 pounds per year.

(4) After implementation of the plans and requirements of sections (5), (6), and (7) or (8) of this rule, the total phosphorus maximum annual loading discharged into Collard Lake shall not exceed 67 pounds per year.

(5) Lane County or any other jurisdiction shall not issue permits allowing connection of new development in the Clear Lake watershed to a sewerage facility until a plan is submitted to and approved by the Department showing how total phosphorus loadings limitations required by this rule will be achieved and maintained. The plan shall address total phosphorus associated with erosion due to construction as well as that due to existing and new development. The plan shall include ordinances as necessary to effectively implement the plan.

(6) The Department or its contract agent shall not issue on-site sewage system construction installation permits or favorable site evaluation reports for on-site sewage systems to serve property within the Clear Lake watershed until a plan is submitted to and approved by the Department showing how total phosphorus loadings limitations required by this rule will be achieved and maintained. The plan shall address total phosphorus associated with erosion due to construction as well as that due to existing and new development. It shall also address forest harvesting activities. The plan shall include ordinances, easements, and/or contracts as appropriate and necessary to effectively implement the plan.

(7) By October 1, 1993, all sewage generated within the Collard Lake subdivisions shall be collected, treated and disposed according to a sewerage facilities plan report submitted to the Department by October 1, 1991. No construction of the sewerage facility shall begin until or unless:

(a) The facilities plan report and engineering plans and specifications have been approved in writing by the Department,

(b) It is constructed and operated by a municipality with authority for the operation and maintenance of sewerage facilities.

(c) Before construction starts, the responsible municipality shall demonstrate that it has a reliable source of funding to assure proper construction, operation, maintenance, and replacement of the required sewerage facilities.

(8) The Department may grant exception to section (7) of this rule, if, by October 1, 1991, an alternative plan is submitted to and approved by the Department which, when implemented, will achieve the annual phosphorus loading limit for Collard Lake required by section (4) of this rule.

(9) No on-site sewage system construction installation permits, favorable site evaluation reports, or sanitary sewer connection permits shall be issued until a plan for monitoring the water quality of Clear Lake is submitted to and approved by the Department. The plan shall include contracts or memorandums of agreement that assure that the monitoring will be conducted.

(10) Unless it is demonstrated that stormwater runoff treatment and control systems are not necessary to meet the total maximum annual loading for total phosphorus, any off-site or on-site control facilities for stormwater quality control necessary to comply with this rule shall be under the control of a municipality.

(11) Unless otherwise approved in writing by the Department, a municipality shall be responsible for all sewerage facilities including on-site sewage disposal systems constructed in the Clear Lake watershed after December 1, 1989.

Stat. Auth.: ORS Ch. 454 & 468 Hist.: DEQ 3-1983, f. & ef. 4-18-83

340-71-460 MORATORIUM AREAS.

(1) Whenever the Commission finds that construction of subsurface or alternative sewage disposal systems should be limited or prohibited in an area, it shall issue an order limiting or prohibiting such construction.

(2) The order shall be issued only after public hearing for which more than thirty (30) days notice is given.

(3) The order shall be a rule of this division which contains a general description of the moratorium area. A more detailed description of the area, if needed, shall be an appendix to these rules.

(4) No permit or site evaluation report shall be issued for construction of a new or expanded system which would violate any order of the Commission issued pursuant to ORS 454.685.

(5) Criteria For Establishing Moratoriums. In issuing an order under this section the Commission shall consider the factors contained in ORS 454.685(2).

(6) Specific Moratorium Areas. Pursuant to ORS 454.685, the Agent shall not issue sewage system construction installation permits or approved site evaluation reports within the boundaries of the following areas of the state:

(a) Benton County -- Kingston Heights Subdivision;

(b) Benton County -- Kingston Heights Subdivision, First Addition;

(c) Benton County -- Princeton Heights Subdivision;

(d) Benton County -- Princeton Heights Subdivision, First Addition;

(e) Lane County -- Community of Dexter, as follows:

The area generally know as Dexter, and defined by the Boundary submitted by the Board of County Commissioners for Lane, which is bounded on the Northeast by Willamette Highway No. 58, and contains those properties Southwesterly of Highway No. 58 in the following tax assessment maps of

Lane County: T 19 S, R 1 W, Section 16.2, T 19 S, R 1 W, Section 16.32, T 19 S, R 1 W, Section 16.31, T 19 S, R 1 W, Section 16.42, and T 19 S, R 1 W, Section 16 and index located totally within Lane County.

(7) Clear Lake Moratorium Area. For the purpose of protecting the high water quality of Clear Lake by limiting the discharge of nutrients into the lake from on-site sewage disposal systems pursuant to ORS 454.685, except as allowed by subparagraph (7)(b), the Agent shall not issue on-site sewage system construction-installation permits or favorable site evaluation reports within the boundaries of the following area:

[(f)](a) Lane County - Clear Lake Watershed of the North Florence Dunal Aquifer Area, as follows: The area hereby known as the Clear Lake Watershed of the North Florence Dunal Aquifer Area defined by the hydrologic boundaries identified in the June 1982, 208 North Florence Dunal Aquifer Study which is the area beginning at a point known as Tank One, located in Section One, Township 18 South, Range 12 West, of the Willamette Meridian, Lane County, Oregon:

Run thence S. 67° 50' 51.5" E. 97.80 ft. to the True Point of Beginning;
Run thence S. 05° 40' 43.0" W. 1960.62 ft. to a point,
Run thence S. 04° 58' 45.4" W. 1301.91 ft. to a point,
Run thence S. 52° 44' 01.0" W. 231.21 ft. to a point,
Run thence S. 15° 20' 45.4" W. 774.62 ft. to a point,
Run thence S. 31° 44' 14.0" W. 520.89 ft. to a point,
Run thence S. 00° 24' 43.9" W. 834.02 ft. to a point,
Run thence S. 07° 49' 01.8" W. 1191.07 ft. to a point,
Run thence S. 50° 26' 06.3" W. 731.61 ft. to a point,
Run thence S. 02° 51' 10.5" W. 301.37 ft. to a point,
Run thence S. 36° 37' 58.2" W. 918.41 ft. to a point,
Run thence S. 47° 12' 26.3" W. 1321.86 ft. to a point,
Run thence S. 72° 58' 54.2" W. 498.84 ft. to a point,

Run thence S. 85° 44' 21.3" W. 955.64 ft. to a point,
Which is N. 11° 39' 16.9" W. 5434.90 ft. from a point known as Green Two (located in Section 13 in said Township and Range);
Run thence N. 58° 09' 44.1" W. 1630.28 ft. to a point,
Run thence N. 25° 23' 10.1" W. 1978.00 ft. to a point,
Run thence N. 16° 34' 21.0" W. 1731.95 ft. to a point,
Run thence N. 06° 13' 18.0" W. 747.40 ft. to a point,
Run thence N. 03° 50' 32.8" E. 671.51 ft. to a point,
Run thence N. 59° 33' 18.9" E. 1117.02 ft. to a point,
Run thence N. 59° 50' 06.0" E. 2894.56 ft. to a point,
Run thence N. 48° 28' 40.0" E. 897.56 ft. to a point,
Run thence N. 31° 29' 50.7" E. 920.64 ft. to a point,
Run thence N. 19° 46' 39.6" E. 1524.95 ft. to a point,
Run thence S. 76° 05' 37.1" E. 748.95 ft. to a point,
Run thence S. 57° 33' 30.2" E. 445.53 ft. to a point,
Run thence S. 78° 27' 44.9" E. 394.98 ft. to a point,
Run thence S. 61° 55' 39.0" E. 323.00 ft. to a point,
Run thence N. 89° 04' 46.8" E. 249.03 ft. to a point,
Run thence S. 67° 43' 17.4" E. 245.31 ft. to a point,
Run thence S. 79° 55' 09.8" E. 45.71 ft. to a point,
Run thence S. 83° 59' 27.6" E. 95.52 ft. to a point,
Run thence N. 42° 02' 57.2" E. 68.68 ft. to a point,
Run thence S. 80° 41' 24.2" E. 61.81 ft. to a point,
Run thence S. 10°47' 03.5" E. 128.27 ft. to the True Point of Beginning; and containing all or portions of T17S, R12W, Section 35 and 36, and T18S, R12W, Sections 1, 2, 11 and 12; W.M., Lane County.

(b) On-site sewage system construction installation permits and approved site evaluation reports may be issued by the Agent for lots listed in paragraph (D) of this subsection, provided:

(A) The loadings specified in OAR 340-41-270 are not exceeded; and

(B) The plan required by OAR 340-41-270(6) and (9) has been approved by the Department and the requirements of OAR 340-41-270(11) are met; and

(C) An easement, on a form acceptable to the Department, to allow inspection, operation and maintenance of the on-site sewage treatment and disposal system shall be granted to the municipality required by OAR 340-41-270(11). Prior to issuance of the construction-installation permit, this document shall be recorded with the County deed records.

(D) In T18S, R12E, W.M. and as of January 1, 1990,

(i) In Section 1, Lots 801 and 900,

(ii) In Section 2, Lots 400, 401, 403, and 601,

(iii) In Section 11, Lot 2200,

(iv) In Section 12, Lot 400.

Agenda Item _, June 29, 1990, 1990 EQC Meeting

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 a rule.

1. Legal Authority

Oregon Revised Statute (ORS) 468.020 grants the Environmental Quality Commission the authority to "adopt such rules and standards as it considers necessary and proper in performing the functions vested by law in the Commission." ORS 468.710 states that it is the public policy of the state to conserve the water of the state and to provide for the prevention, abatement and control of new or existing water pollution. Further, ORS 468.705 provides the Environmental Quality Commission authority over water pollution. ORS 454.685 grants the Commission authority to prohibit or limit construction of on-site sewage disposal systems.

2. Need for the Rule

In April, 1983, the Environmental Quality Commission adopted special policies and guidelines for protecting Clear Lake as an unfiltered drinking water supply. The special policy and guidelines established a total annual loading in the Clear Lake watershed of 170 pounds per year of nitrate-nitrogen. In addition, the Commission established a moratorium on the construction of new on-site sewage disposal systems in the Clear Lake watershed. These actions recognized the value of the lake's high quality water as a drinking water source and the need to protect water quality for this purpose. Since this rule was adopted, additional studies have been conducted which conclude that the limitations for the lake should be based on phosphorus instead of nitrate-nitrogen. By converting to phosphorus loading limitations, the rule could also be revised such that some additional development could occur within the lake watershed and still protect the high quality water of the lake.

3. Principal Documents Relied Upon in this Rulemaking

a. ORS 468 and ORS 454

b. Oregon Administrative Rules, Chapter 340, Divisions 41 and 71.

c. Raymond, Richard B., Stephen A. Wille, and James W. Sweet, Final Report - Limnology and Nutrient Dynamics of Clear Lake, Lane County, Oregon, Cooper Consultants, Inc., Portland, Oregon, February, 1985.

d. Christensen, Ralph and Gerritt Rosenthal, North florence Dunal Aquifer Study, Final Report, June, 1982.

e. Johnson, Daniel M., Richard R. Petersen, D. Richard Lycan, James W. Sweet, Mark E. Neuhaus, Andrew L. Schaedel, Atlas of Oregon Lakes, Oregon State University Press, Corvallis, Oregon.

f. Gilliom, Robert J., Estimation of Nonpoint Source Loadings of Phosphorus for Lakes in the Puget Sound Region, Washington," U.S. Geological Survey Water-Supply Paper 2240, U.S. Government Printing Office: 1983.

g. Chapra, Steven C., and Stephen J. Tarapchak, "Chlorophyl a Model and Its Relationship to Phosphorus Loading Plot for Lakes, Water Resource Research, Vol. 12, No. 6, December, 1976.

h. Quality Criteria for Water, 1986, United States Environmental Protection Agency, May 1, 1986.

i. Clear Lake Watershed Study, April, 1985, Century West Engineering Corporation, Summary and Recommendations.

j. Dillon,P.J., F.H. Rigler, A Simple Method for Predicting the Capacity of a Lake for Development Based on Lake Trophic Status, Journal of the Fisheries Research Board of Canada, Volume 32, No. 9, September, 1975.

k. Letter from V.W. Kaczynski, Ph.D. to Richard Nichols concerning Clear Lake, dated April 5, 1990.

l. Schueler, T.,Controlling Urban Runoff: A Practical Handbook for Planning and Designing Urban BMPs, Metropolitan Washington Council of Governments, Washington, D.C.,1987.

m. Environmental Quality Commission staff report, Agenda Item No. G, April 7, 1983.

LAND USE COMPATIBILITY STATEMENT

Land Use Consistency

The Department has concluded that the proposal conforms with the Statewide Planning Goals and Guidelines.

Goal 6 (Air, Water and Land Resources Quality): The Department believes that the proposed rules will protect water quality resources of Clear Lake and Collard Lake. The proposed rules will establish lake loading limits upon which land use decisions can be based.

Goal 11 (Public Facilities and Services): The proposed rules may require that a sewage collection system be provided to the already existing Collard Lake subdivisions which are not inside an urban growth boundary. Sewers may be necessary, however, to protect the high quality water of Clear Lake which is the drinking water source for the Heceta Water District and which also augments the water supply for the City of Florence.

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.

FISCAL AND ECONOMIC IMPACT STATEMENT

Currently, the rules of the Environmental Quality Commission prohibit the construction of new on-site sewage disposal systems within the Clear Lake watershed. There is no sewer system available to properties within the watershed and, consequently, owners of undeveloped property are unable to build houses because there is no available means for sewage disposal. The existing rule, therefore, has already imposed a significant economic impact on the owners of undeveloped property.

Within the watershed, there are several contiguous subdivisions located around the northeast corner of Collard Lake. These subdivisions, collectively referred to as the "Collard Lake properties", contain about 112 lots and were platted in the late 1960s and early 1970s. The lots range in size of about 0.17 acre up to 0.4 acre. Forty two of the lots have houses on them each served by an on-site sewage disposal system installed before the current moratorium was put in place.

Also within the watershed are about 24 other lots varying in size from 1 acre to 160 acres (part of this lot is outside the watershed). Three of these lots are publicly owned. Three have houses on them (one lot has two houses). Five privately-owned, undeveloped lots are entirely within the watershed. Thirteen privately-owned, undeveloped lots are only partially in the watershed.

The proposed rules would modify the existing policies and guidelines for protecting Clear Lake as an unfiltered drinking water supply. This would be done by revising water quality loading limitations for Collard and Clear Lakes. The proposed rules would also provide for the addition of a very limited number of new on-site sewage disposal systems that are currently prohibited. It will be up to Lane County to determine how it will revise limitations and restrictions on land uses as needed to meet the loading limitations when and if they are revised by the Environmental Quality Commission.

The proposed rule would provide some relief to some property owners who currently do not have an approved means for sewage disposal for their property. The rule, however, potentially may require a sewer system to be installed to serve the Collard Lake properties although Lane County may choose, instead, to reduce the development density within the Collard Lake subdivisions. Density could be reduced by requiring a minimum lot size in which case

property owners would have to consolidate lots by purchasing adjacent lots. Another option being considered is a buyout of at least some of the undeveloped Collard Lake lots by Heceta Water District. There are probably several other options that could be developed and implemented by Lane County to meet the proposed loading limitations of the lakes within the watershed.

If the county chooses to sewer the Collard Lake properties and allow development of all of the lots, storm water quality controls would probably also be necessary in order to comply with lake loading limitations. These controls could be individual systems located on each lot or could be area-wide systems serving many lots. In addition to stormwater quality control facilities, the proposed rules will also require that erosion control practices be applied to construction within the watershed.

Because of the potential impact of a failing on-site sewage disposal system on the lakes, the proposed rule would require that all new on-site sewage disposal systems be under the control of a municipal entity. This could be a city or a sanitary district. The municipality would periodically inspect the systems, pump the septic tanks, and replace systems if and when necessary.

Finally, the proposed rule requires a routine lake water quality monitoring program to be in place to assure that the status of lake water quality is known. This would be the responsibility of local government to perform.

The greatest economic impact on property owners for sewer installation would be if a sewer is installed only to serve existing houses within the Collard Lake subdivisions (undeveloped lots are bought out or otherwise remain undeveloped). If the sewage is collected in a septic tank effluent pumping (STEP) system and pumped to the Florence sewerage facility, the total cost for constructing the system is estimated to be $284,000. For 42 lots making annual payments over 20 years at 7% interest, the annual cost for constructing the system (this includes $2000 per lot for a new septic tank and pump) is $827 or about $69 per month. If the sewer is installed to serve all 112 lots, the annual cost would be $428 or about $36 per month. In addition to the construction costs, it is estimated that the maintenance and operation costs for the collection system would be about $17 per month. There would also be a monthly charge by the City of Florence to treat the sewage in addition to the monthly operation and maintenance cost for the collection system.[1]

Another mechanism for financing the sewer system that has been suggested is by the water users of Heceta Water District. This approach has been justified by the fact that the sewer system will protect the drinking water source of the district and, consequently, benefits all of the customers within the district.

Monitoring costs will result from collecting six samples from Clear Lake twice each year. Some of the required tests may be able to be performed by Heceta Water District. Others will probably have to be done by a commercial laboratory. We estimate this cost to be about $1600 per year.[3]

There will be some costs associated with periodically inspecting on-site sewage disposal systems and pumping septic tanks. The Department would expect the tanks to be pumped no more frequently than once every three years. Pumping should cost less than $100 per occurrence. Inspections should occur no more than four times per year. Assuming that each inspection takes no more than one half hour per inspection and the cost is $15 per hour for the person doing the inspections, the annual cost per system would be $30 dollars per year.

None of the land within the watershed is currently zoned for commercial or industrial use. Consequently, there should be no direct increased costs for small business as a result of the proposed rules if they are adopted. If Heceta Water District opts to pay for either a buyout or to help construct the sewer system, small businesses that use Heceta Water District Water will have increased water bills. Finally, logging practices within the watershed may come under more stringent requirements in order to assure that erosion due to logging is minimized to the greatest extent possible.

1. Information relative to the cost of installing sewers in the Collard Lake subdivisions was from information provided to the Clear Lake Coordinated Resource Management Process (CRMP) group by the City of Florence.

2. Cost information for a wet pond storm water quality control facility was obtained from Schueler, T., Controlling Urban Runoff: A Practical Handbook for Planning and Designing Urban BMPs, Metropolitan Washington Council of Governments, Washington, D.C., 1987.

3. Cost information for monitoring were developed from information supplied by Century Testing Laboratories, Bend for analytical charges for running total phosphorus, dissolved o-phosphorus, nitrate-nitrogen, and chlorophyll a. It is assumed that one person can collect the samples and measure turbidity, temperature, and pH in a half a day at $15 dollars per hour. Shipping costs of $20 per shipment were assumed.

TOTAL MAXIMUM DAILY LOAD
WATER QUALITY MANAGEMENT PLAN COMPONENT

Department of Environmental Quality
811 Southwest Sixth Avenue, Portland, OR 97204
Telephone: (503) 229-5696

Developed pursuant to ORS 468.730 and The Federal Clean Water Act

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WATER BODY SEGMENT:

Clear Lake near Florence

RECEIVING SYSTEM INFORMATION:

Basin: Mid Coast
Subbasin:
County: Lane

SPECIAL WATER QUALITY VALUE TO BE PROTECTED:

High clarity

APPLICABLE RULES:

OAR 340-41-270
OAR 340-41-006

TMDL PARAMETER:

Total Phosphate as Phosphorus

SOURCES COVERED BY THIS TMDL:

Source Number	Allocation Type	Source Description
001	LA	Collard Lake
002	LA	Clear Lake
003	WLA	Clear Lake Point Sources
004	LA	Department Reserve Allocation and Background

WATER QUALITY MANAGEMENT ACTIVITIES AND IMPLEMENTATION

Until this TMDL is modified, point source permits will be issued only if they include limits complying with the established waste loads. Nonpoint sources will be addressed through specific plans approved by the Department pursuant to the requirements of OAR 340-41-270.. All requirements, limitations, and conditions are set forth in the attached schedules as follows:

SCHEDULE A

Pollutant Discharge limits not to be Exceeded

1. Pollutant Discharge Limitations not to be Exceeded After TMDL Issuance (Interim Limits based on existing conditions prior to implementation of controls).

ANNUAL PHOSPHORUS LOADS
(pounds per year)

Source Number	Source Description	Limitations
001	Collard Lake	86
002	Clear Lake	218
003	Clear Lake Point Sources	0.0
004	Department Reserve Allocation/Background (For Clear Lake)	192

a. The load allocation for Collard Lake is based upon a total phosphorus concentration of 14.4 ug/l in the epilimnion and a sensitivity factor of 0.37. [2.205 x 14.4/0.37 = 86]

b. The load limitation for Clear Lake is based upon a total phosphorus concentration of 7.8 ug/l in the lake's epilimnion and a sensitivity factor of 0.079. [2.205 x 7.8/0.079 = 218]

c. Department Reserve and Background total phosphorus is based upon subtracting the calculated loadings on Clear Lake from existing development from 218.3 pounds per year.

The calculated load for Clear Lake is based adding the contribution from the existing Collard Lake development multiplied by 0.52 (Collard to Clear Lake factor) to that contributed by 4 existing houses located in the watershed, but outside the subdivisions. Each of the 4 existing houses is assumed to contribute 0.88 pounds per year of total phosphorus from on-site sewage disposal systems and 0.28 pounds per year from storm runoff. The storm runoff component assumes one acre of developed land associated with each house outside the subdivisions and areal loading rate of 30 kilograms/km^2/year for this residential development.

The calculated load from Collard Lake due to development is based on the assumption of 42 houses each contributing 0.88 pounds per year of total phosphorus into Collard Lake from on-site sewage disposal systems and 0.11 pounds per year being contributed into the lake as a result of storm runoff from residential development in the subdivisions. The runoff loading assumes 1/4 acre development and a 50 kilograms/km^2/year areal loading rate.

SCHEDULE A (continued)

2. Pollutant Discharge Limitations not to be Exceeded After Achieving Compliance with Requirements of Schedule C of this Document.

ANNUAL TOTAL PHOSPHORUS LOADS
pounds per year

Source Number	Source Description	Limitations
001	Collard Lake	67
002	Clear Lake	265
003	Clear Lake Point Sources	0.0
004	Department Reserve Allocation/Background (For Clear Lake)	
	If Collard Lake subdivisions not sewered	224
	If Collard Lake subdivisions are sewered	234

a. Load for Collard Lake is determined by subtracting 18.5 pounds per year from the current loading of 85.8 pounds per year. [85.8 - 18.5 = 67.3 pounds per year] Note: This assumes the addition of alum to septic tanks which should result in at least a 95% reduction of phosphorus coming from the house. These calculations also assume that the current houses are contributing about 37 pounds per year of phosphorus which is about a 90% reduction from that assumed to be coming from the houses.

b. Load into Clear Lake from Collard Lake is determined by multiplying Collard Lake loading by 0.52.

c. Clear Lake loading is derived from an allowable phosphorus loading of 264.6 pounds per year. Using a sensitivity factor of 0.079, this should be equivalent to a 9.5 ug/l total phosphorus concentration in Clear Lake.

d. DEQ reserve and background is calculated by adding a recycle factor of 22.5 pounds per year plus the load reduced by either sewering or modifying septic tank systems to the Department reserve specified in condition 1 of Schedule A. The recycle factor assumes a Clear Lake concentration of 9.5 ug/l and a recycle rate of 0.5. Recycle factor = 22.5 = [(1.4-1.0)/1.4] x 9.5 x 0.5 x 2.205#/kg x 7.53]. The septic tank loading on Clear Lake from modifying the septic tanks in the Collard Lake subdivisions is calculated on the basis of 0.44# of total P per house and 42 houses, and a Collard to Clear Lake factor of 0.52. This assumes existing tanks are modified to inject alum and results in a 95% reduction in phosphorus. [0.44 x 42 x 0.52 = 9.6]

DEQ Reserve = 192 + 22.5 + 9.6 = 224 [No sewer installed]

If a sewer is installed the resulting reduction of phosphorus loading on Clear Lake is based on 0.88# of total P per house and 42 houses, and a Collard to Clear Lake factor of 0.52. [0.88 x 42 x 0.52 = 19.2]

DEQ Reserve = 192 + 22.5 + 19.2 = 234 [Sewer installed]

SCHEDULE B

Minimum Monitoring and Reporting Requirements
(unless otherwise approved in writing by the Department)

1. Ambient Monitoring. A lake water quality monitoring program shall be operated to evaluate the effectiveness of the TMDL and to guide development of any additional control strategies. The ambient monitoring program shall consist of two water sample collection on two separate dates at least a month apart. The sample collections shall occur between May 1 and September 30 and include a minimum of 6 water samples collected within the epilimnion of Clear Lake. The samples shall be analyzed for pH, total phosphorus, dissolved ortho phosphorus, chlorophyll a, NO_2 + NO_3-nitrogen, temperature, and turbidity.

SCHEDULE C

Compliance Conditions and Schedules

1. By October 1, 1993, all sewage generated within the Collard Lake subdivisions shall be collected, treated and disposed according to a sewerage facilities plan report submitted to the Department by October 1, 1991. No construction of the sewerage facility shall begin until the facilities plan and engineering plans and specifications have been approved in writing by the Department. The Department may grant an exception to sewer the Collard Lake subdivisions if, by October 1, 1991, an alternative plan is submitted to and approved by the Department. The alternative plan must provide equivalent controls on phosphorus so that the loading limit for Collard Lake is met.

SCHEDULE D

Special Conditions

1. The total phosphorus maximum annual loading for the Clear Lake watershed shall be deemed exceeded if:

   (a) The median concentration of total phosphorus from samples collected in the epilimnion between May 1 and September 30 exceed 9.5 micrograms per liter during two consecutive years, and

   (b) The median concentration of chlorophyll a from samples collected in the epilimnion between May 1 and September 30 exceed 2.75 micrograms per liter during two consecutive years.

2. Lane County or any other jurisdiction shall not issue permits allowing connection of new development in the Clear Lake watershed to a sewerage facility until a plan is submitted to and approved by the Department showing how total phosphorus loadings limitations required by OAR 340-41-270 will be achieved and maintained. The plan shall address total phosphorus associated with erosion due to construction as well as that due to existing and new development. The plan shall include ordinances as necessary to effectively implement the plan.

3. Department or its contract agent shall not issue on-site sewage system construction installation permits or favorable site evaluation reports for sewage systems to serve property within the Clear Lake watershed until a plan is submitted to and approved by the Department showing how total phosphorus loadings limitations required by this rule will be achieved and maintained. The plan shall address total phosphorus associated with erosion due to construction as well as that due to existing and new development. It shall also address forest harvesting activities. The plan shall include ordinances, easements, and/or contracts as appropriate and necessary to effectively implement the plan.

4. No construction of the sewerage facility to serve the Collard Lake subdivisions shall begin until or unless:

   (a) The facilities plan report and engineering plans and specifications have been approved in writing by the Department,

   (b) It is constructed and operated by a municipality with authority for the operation and maintenance of sewerage facilities.

   (c) Before construction starts, the municipality shall demonstrate that it has a reliable source of funding to assure proper construction, operation, maintenance, and replacement of sewerage control facilities.

5. No on-site sewage system construction installation permits, favorable site evaluation reports, or sanitary sewer connection permits shall be issued until a plan for monitoring the water quality of Clear Lake is submitted to and approved by the Department. The plan shall include contracts or memorandums of agreement that assure that the monitoring will be conducted.

6. Unless it is demonstrated that stormwater runoff treatment and control systems are not necessary to meet the total maximum annual loading for total phosphorus, any off-site or on-site control facilities for stormwater quality control necessary to comply with this total maximum annual load shall be under the control of a municipality.

7. A municipality shall be responsible for all sewerage facilities including on-site sewage disposal systems constructed in the Clear Lake watershed after December 1, 1989.

SUMMARY OF CRITERIA REQUIRED BY ORS 454.685

ORS 454.685 establishes the authority for the Environmental Quality Commission to limit or prohibit construction of on-site sewage disposal systems. The Commission is required to consider certain factors when prohibiting or limiting the types of systems. The factors are as follows:

a. Present and projected density of population.
b. Size of building lots.
c. Topography.
d. Porosity and absorbency of soil.
e. Any geological formations which may adversely affect the disposal of sewage effluent by subsurface means.
f. Ground and surface water conditions and variations therein from time to time.
g. Climatic conditions.
h. Present and projected availability of water from unpolluted sources.
i. Type of and proximity to existing domestic water supply sources.
j. Type of and proximity to existing surface waters.
k. Capacity of existing subsurface sewage disposal systems.

These factors are addressed, in order, as follows:

Factors (a) and (b):

The Clear Lake watershed area contains 850 acres of public and private land. There are approximately 138 existing lots contained in part or in total within the watershed. Lot sizes range from one quarter acre to 120 acres. There are about 46 houses in the watershed. Some of these houses are occupied only be seasonal residents.

The maximum build-out population projection for the year 2000 based on current zoning, multiplied by 2.6 persons per residence, is 358 people.

Factors (c), (d), (e), (f), and (g):

The Clear Lake Watershed is a relatively flat dunal sheet of wind blown sand over an ancient wave cut terrace. The sand is of medium grain size with high porosity and absorbency, as illustrated by the lack of surface drainage features. The homogeneous dunal aquifer is highly permeable with a permeability constant ranging from 250 to 700 gallons per day.

Annual aquifer recharge is 4.36 feet per year. Clear Lake is the aquifer discharge zone. The rapidly draining nature of the dunal aquifer make it likely that any discharges on or in the aquifer will eventually percolate down to the water table and be discharged to Clear Lake.

The watershed is located in a temperate marine climate zone and receives an average annual precipitation of 69 inches with ranges in average monthly temperature from 61°F. to 44.5°F.

Factors (h), (i), and (j):

The moratorium area contains two surface water bodies, Collard Lake and Clear Lake, with 190 acres of lake surface. Residents of the watershed currently under moratorium are provided domestic water from Clear Lake by the Heceta Water District. The District provides water to improved properties within its boundaries and also supplies a portion of the water needs of the City of Florence.

The Clear Lake Watershed is within the North Florence Dunal Aquifer which has been declared a "sole source" aquifer by the U.S. Environmental Protection Agency. Such a declaration means that the Administrator of EPA has determined that the North Florence Dunal Aquifer "is the sole or principal drinking water source for the area and which, if contaminated, would create a significant hazard to public health."

Existing treatment facilities for the domestic water provided by the Heceta Water District do not presently include filtration due to the existence of a unique source of high quality raw water source currently available from Clear Lake.

Without controls to limit the discharge of nutrients in to the lake via surface and groundwaters, existing and potential future development in the Clear Lake watershed will lead to increased algal growth in the lake. Algal growth will impair the ability to use lake water as domestic water without potentially expensive treatment of the water prior to distribution.

The Department believes that the very high water quality of Clear Lake can be preserved by limiting phosphorus discharges into the lake.

Factor (k):

Scientific literature indicates that each dwelling using on-site sewage disposal systems will potentially contribute about 1.8 pounds per year of total phosphorus to the surface waters in the watershed. The Department believes that unrestricted construction of additional on-site sewage disposal systems will increase levels of phosphorus in the lake that will then begin to impair its water quality and its use as a drinking water source. Some additional on-site sewage disposal systems may be allowable, but only if part of a management plan for the lake that limits overall phosphorus discharges into the lake. The management plan must consider sources of phosphorus from forest activities and residential runoff as well as from on-site sewage disposal.

BACKGROUND REPORT

CLEAR LAKE NEAR FLORENCE

Background and History

Clear Lake is located a few miles north of Florence, Oregon. It is the water supply for the Heceta Water District which provides domestic water for about 1350 users. In addition, the District supplies about a half of million gallons of water per month to the City of Florence to augment the City's well water supplies during the summer months. Clear Lake has the potential to supply upwards of two million gallons per day of water. Currently, only chlorination is provided after withdrawal from the Lake. The District is operating a pilot study to determine the feasibility of using a slow sand filter system to meet federal requirements of the Safe Drinking Water Act.

Clear Lake is a sand-dune lake, with a surface area of 153 acres and a maximum depth of 86 feet. The western shoreline is bordered by sand dunes; the eastern shoreline is covered by second growth forest. The primary surface inlet to Clear Lake is Collard Creek, draining from Collard Lake.[1]

Both Clear Lake and Collard Lake are part of the North Florence Dunal Aquifer. Although the land immediately adjacent to Clear Lake is virtually undeveloped, there is already some residential development around Collard Lake.[2]

Clear Lake is one of only a few coastal lakes that are oligotrophic (others are Woahink and the Clear Lake south of Reedsport). Oligotrophic lakes have a limited supply of nutrients, are biologically unproductive, often deep, with very transparent waters which are usually fully saturated with dissolved oxygen.[3]

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[1] Raymond, Richard B., Stephen A. Wille, and James W. Sweet, Final Report - Limnology and Nutrient Dynamics of Clear Lake, Lane County, Oregon, Cooper Consultants, Inc., Portland, Oregon, February, 1985, page 1-1.

[2] Raymond, Richard B., Stephen A. Wille, and James W. Sweet, Final Report - Limnology and Nutrient Dynamics of Clear Lake, Lane County, Oregon, Cooper Consultants, Inc., Portland, Oregon, February, 1985, page 1-1.

[3] Raymond, Richard B., Stephen A. Wille, and James W. Sweet, Final Report - Limnology and Nutrient Dynamics of Clear Lake, Lane County, Oregon, Cooper Consultants, Inc., Portland, Oregon, February, 1985, page 1-1.

A study of the North Florence Dunal Aquifer, including Clear Lake, was initiated in 1979 to formulate alternatives for the protection of the aquifer from contamination by on-site sewage disposal. In the study, nitrate-nitrogen was the contaminant/nutrient of primary concern.[4] The final report strongly recommended "a commitment be made to retain Clear Lake as a pristine domestic water supply and to protect and improve its water quality or a commitment be made to develop alternate water supplies and/or additional treatment facilities and Clear Lake be allowed to degrade in quality."[5] More specifically, the report recommended that no new developments be allowed in the Clear Lake watershed using on-site systems. All permits approved must include plans for the transportation and treatment of wastes outside the watershed boundaries, or for the use of dry-waste and grey water systems in instances where such systems do not increase the calculated overall loading beyond 170 pounds per year of nitrate-nitrogen and only as replacements for on-site systems.[6]

In October, 1982, the Lane County Commission petitioned the Environmental Quality Commission to modify the Department's rules for on-site sewage disposal to prohibit the construction of new on-site systems in the Clear Lake watershed. The County also adopted an order which established a moratorium on new development within the watershed. (It should be noted that the County has since repealed this order and, consequently, there is no longer a building moratorium in the watershed).

In April, 1983, the Environmental Quality Commission adopted special policies and guidelines (Attachment I of this background report) for protecting Clear Lake as an unfiltered drinking water supply. The special policy and guidelines established a total annual loading in the Clear Lake watershed of 170 pounds per year of nitrate-nitrogen. In addition, the Commission established a moratorium on the construction of new on-site sewage disposal systems in the Clear Lake watershed. These actions recognized the value of the lake's high quality water as a drinking water source and the need to protect water quality for this purpose.

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[4] Christensen, Ralph and Gerritt Rosenthal, North florence Dunal Aquifer Study, Final Report, June, 1982, page iv.

[5] Christensen, Ralph and Gerritt Rosenthal, North florence Dunal Aquifer Study, Final Report, June, 1982, page 2.

[6] Christensen, Ralph and Gerritt Rosenthal, North florence Dunal Aquifer Study, Final Report, June, 1982, page 2.

In 1984, Lane County hired Cooper Consultants, Inc., to study Clear Lake. The study had two objectives: "first to characterize the seasonal variation in biota and nutrients in the lake, and, second, to determine what might be the effect of adding nitrogen, in the form of nitrate, to Clear Lake."[7] The Cooper study was completed in 1985. In addition, two other studies relative to Clear Lake were also completed in 1985. One study, conducted by Mr. Ralph Christensen, was the development of a water quality model for Clear Lake . The final study was a technical feasibility analysis and economic evaluation of several Clear Lake watershed protection alternatives. This was done by Century West Engineering Corporation of Bend, Oregon. This feasibility analysis concluded that "the alternative to sewer the existing high density Collard Lake Subdivision was best suited to protect the Clear Lake Watershed based upon the present conditions and study criteria."[8]

There are a number of property owners within the Clear Lake watershed who have been adversely affected by the Commission's current rules. Of the 112 total lots in the platted subdivisions around Collard Lake, about 68 are undeveloped. (For convenience, these 112 lots will be referred to as the "Collard Lake properties" in this report). These lots are relatively small (one quarter acre to one acre in size). Because a sanitary sewer is unavailable to the subdivisions and because septic tanks and drainfields are not allowed, houses cannot be built on the undeveloped lots.

Within the watershed, but outside the platted subdivisions are 26 properties, varying in size from one acre to 145 acres. (Again for convenience, these 26 properties will be referred to as the "big Clear Lake properties" in this report). Only five properties, however, are totally within the watershed. Three of the properties are owned by public bodies, Heceta Water District and Lane County. Five properties have existing dwellings on them. These existing dwellings are assumed to use septic tanks and drainfields. Since no sewer system is available to the big Clear Lake properties, further development is also precluded by the moratorium on construction of on-site sewage disposal systems.

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[7] Cooper Consultants, Inc., Final Report, Limnology and Nutrient Dynamics of Clear Lake, Oregon, Lane County, February, 1985, page 1-2.

[8] Clear Lake Watershed Study, April, 1985, Century West Engineering Corporation, Summary and Recommendations.

The Clear Lake watershed is outside the City of Florence urban growth boundary. Therefore, zoning and building requirements are through Lane County. The big Clear Lake properties are zoned either F-2 (forest lands) or ML (marginal lands). Lane County's property is zoned NR (natural resource). The Collard Lake properties are zoned R-4 which would allow construction of a single family dwelling if an acceptable means for sewage disposal was available.

In October, 1987, in response to a petition from a citizen of Florence, the U.S. Environmental Protection Agency designated the North Florence Dunal Aquifer, including the Clear Lake watershed as a Sole Source Aquifer pursuant to the federal Safe Drinking Water Act. Any project located within the boundaries of the sole source aquifer that receives financial assistance from the federal government must be reviewed by U.S.E.P.A. to assure that it does not pose a threat to the drinking water contained in the aquifer. If there is no federal financial assistance, U.S.E.P.A plays no role in the review of the project.

The inability to develop their properties has caused the property owners to put increasing pressure both on Lane County and the Department of Environmental Quality. In 1987, several of the owners of big Clear Lake properties sued Heceta Water District, Lane County, and the Environmental Quality Commission claiming that the Commission's rules prohibiting new on-site sewage disposal systems and Lane County's development moratorium constituted inverse condemnation of their properties. The suit was dismissed because the plaintiffs had not attempted to use other remedies available to them such as petitioning the Commission to modify the rules.

In 1989, Lane County asked the Siuslaw Soil and Water District to convene a Coordinated Resource Management Process (CRMP) to develop and recommend a watershed management plan for the Clear Lake watershed. The CRMP was intended to bring together people and agencies that have interests within the watershed to resolve the resource management conflict. Representatives from Lane County, City of Florence, Heceta Water District, the Collard Lake properties, the big Clear Lake properties, and the Departments of Environmental Quality, Forestry, Fish and Wildlife were invited to participate in the process. The group began meeting in April, 1989 and has meet many times since. At the time this document was being drafted, the CRMP group was in final preparation of a document containing various management alternatives. It is the intention of the group to present this document to the public and hold hearings on it in June, 1990.

The CRMP group has agreed that Clear Lake's high quality water should be maintained. The group's goal has been to determine how best the lake can be protected while still meeting the needs of the property owners and the affected entities including the state agencies as well as Lane County, Heceta Water District, and the City of Florence.

The management plan proposed by the CRMP group will probably consist of two basic issues. The first issue concerns the recommendations for water quality loading limitations for Collard and Clear Lakes. The Environmental Quality Commission will be the responsible body in Oregon for considering the CRMP group's recommendations and determining whether to revise existing limits.

The second issue concerns recommendations for limitations and restrictions on land uses as needed to meet the loading limitations established in rule by the Environmental Quality Commission. Because local governments have been designated the primary responsible governmental agencies for land use planning, the second issue will be ultimately determined and implemented, in the case of Clear Lake, by Lane County through ordinances adopted by the county board of commissioners.

Technical Issues

When the Environmental Quality Commission adopted its rules for Clear Lake, the main concern relative to water quality was the addition of nutrients (nitrogen and phosphorus) caused by increasing urban development, particularly on-site sewage disposal systems, within the watershed. As nutrient levels increase, algal activity will also increase, causing high turbidities and odor and taste problems. At that time and as is still the case, Heceta Water District provides water to its customers from Clear Lake with only chlorination, but no filtration. It must be stated that the federal Safe Drinking Water Act will most likely require that Heceta Water District provide filtration regardless of the water quality of the lake. If the lake remains clear and free of algal growths, however, the costs of providing filtration can be significantly reduced.

At this time, the Environmental Quality Commission has several issues to consider relative to Clear Lake and the determination of whether or not to revise the policy and guidelines that have been adopted to protect Clear Lake water quality. These are:

1. Should the loading limits for Clear Lake be based on phosphorus instead of nitrate-nitrogen as is currently stated in the rule?

2. If the loading limits are changed to phosphorus limits, what should the new limits be? Should the limits allow any additional loadings on the lake? If so, how much?

3. What watershed management alternatives are available if the allowable Clear Lake loading is reestablished to 265 pounds per year of total phosphorus?

4. Should the existing policies and guidelines be expanded to better assure that Lane County can develop a watershed management plan consistent with allowable lake loadings?

5. What criteria should be used to verify that the lake's water quality is remaining at an acceptable level?

6. Is the approach being proposed with Clear Lake compatible with the protection of other lakes with very high quality water?

A response to the above issues follows:

ISSUE: Should the loading limits for Clear Lake be based on phosphorus instead of nitrate-nitrogen as is currently stated in the rule?

At the time that the special policies were adopted, water quality data suggested that nitrogen was the limiting nutrient and control of this parameter would prevent excessive algal growths in the lake. Subsequent water quality data collected in 1984 by Cooper Consultants, Inc., showed that the lake was instead phosphorus limited although both nitrogen and phosphorus were present in the lake at very low levels.

The water quality data collected by Cooper Consultants, Inc., was part of an extensive study of the limnology and nutrient dynamics of Clear Lake. The results of this study are contained in FINAL REPORT - LIMNOLOGY AND NUTRIENT DYNAMICS OF CLEAR LAKE, OREGON, Cooper Consultants, Inc., February, 1985. This report concludes that "Clear Lake is similar to other oligotrophic lakes. The water is very clear, there are relatively few algal cells in the water, and nutrient concentration is low."[9] The report also states that "phosphorus is the major limiting nutrient. Nitrogen can become limiting for short periods, but any added nitrate is

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[9] Raymond, Richard B., Stephen A. Wille, and James W. Sweet, Final Report - Limnology and Nutrient Dynamics of Clear Lake, Lane County, Oregon, Cooper Consultants, Inc., Portland, Oregon, February, 1985, p 1-3

quickly consumed and phosphorus is again limiting after a short growth spurt. There is no continued increase with increased nitrogen. An increase in phosphorus concentration in the lake will result in increased algal growth in the lake."[10] The average phosphorus concentration in Clear Lake during the summer months (May through September), according to the Cooper report was 7.8 micrograms per liter.[11]

The Department agrees with the conclusions of the Cooper report. In addition, it should be pointed out that phosphorus has been the target nutrient of most control efforts to limit algal growth in fresh water systems.

If the current nitrate-nitrogen limitation were retained, however, Clear Lake would probably still be very effectively protected. This is because the current limits would limit the number of houses using on-site sewage disposal systems within the watershed to about eight according to the documentation in the original April, 1983 EQC staff report that proposed adoption of the Clear Lake nitrate-nitrogen limitation. Further, with eight on-site systems, probably very little other development could occur including forest harvesting. Consequently, in order to meet the current nitrate-nitrogen loading limit on Clear Lake, most of the existing development would have to be removed. The phosphorus load associated with the nitrate-nitrogen loading limit would be substantially below what would be needed to maintain lake water quality. (Projected lake phosphorus loadings would be 206 pounds per year instead of a current estimate of 218 pounds per year under current conditions.) The Department believes the nitrogen based limits may be more stringent than necessary to adequately protect the lake's water quality. Phosphorus-based loading limits, on the other hand, could be set at levels that would maintain very good lake water quality and still allow some development.

CONCLUSION AND RECOMMENDATION:

The Department concurs that the lake is phosphorus-limited and the lake loading limits should be based upon phosphorus instead of nitrate-nitrogen.

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[10] Raymond, Richard B., Stephen A. Wille, and James W. Sweet, Final Report - Limnology and Nutrient Dynamics of Clear Lake, Lane County, Oregon, Cooper Consultants, Inc., Portland, Oregon, February, 1985, p 1-8.

[11] Raymond, Richard B., Stephen A. Wille, and James W. Sweet, Final Report - Limnology and Nutrient Dynamics of Clear Lake, Lane County, Oregon, Cooper Consultants, Inc., Portland, Oregon, February, 1985, p 3-4.

ISSUE: If the loading limits are changed to phosphorus limits, what should the new limits be? Should the limits allow any additional loadings on the lake? If so, how much?

Before proceeding on this issue, there should be some discussion of the trophic classification system for lakes. It is the system most widely applied to lakes and reservoirs. In it, "surface waters are ranked according to their biological productivity: unproductive lakes are termed oligotrophic ('little-nourished') and productive lakes are termed eutrophic ('well-nourished'). The productivity of a lake is determined by a number of chemical and physical characteristics of which the most important are the availability of essential plant nutrients, primarily nitrogen and phosphorus, and the intensity of light throughout the surface water. Although the terms oligotrophic and eutrophic provide a scale against which lakes may be ranked, an additional term has been added to allow for a wider range of categories. This includes 'mesotrophic' for lakes that are intermediate between oligotrophic and eutrophic."[12]

(Attachment 1 to this background report is a table reproduced from a paper written by Robert J. Gilliom[13] that describes the biological changes to lakes in the Puget Sound area as phosphorus concentration increase. It should be noted that the biological changes are not abrupt from one trophic phase to another. Any increase in phosphorus concentrations, even if only slight, will produce proportionately more algae.)

There is no complete, universal agreement on the point at which a lake is no longer oligotrophic and enters mesotrophy. A review of the literature, however, seems to indicate general agreement that a mean concentration of 10 micrograms per liter of phosphorus is the upper level for oligotrophy. Some authors have also used chlorophyll a concentrations to define trophic phases. Chapra and Tarapchak[14] in their December 1976 paper reviewed various criteria for trophic states relative to chlorophyll a and

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[12] Johnson, Daniel M., Richard R. Petersen, D. Richard Lycan, James W. Sweet, Mark E. Neuhaus, Andrew L. Schaedel, Atlas of Oregon Lakes, Oregon State University Press, Corvallis, Oregon, p 29.

[13] Gilliom, Robert J., Estimation of Nonpoint Source Loadings of Phosphorus for Lakes in the Puget Sound Region, Washington," U.S. Geological Survey Water-Supply Paper 2240, U.S. Government Printing Office: 1983, p4.

[14] Chapra, Steven C., and Stephen J. Tarapchak, "Chlorophyll a Model and Its Relationship to Phosphorus Loading Plot for Lakes, Water Resource Research, Vol. 12, No. 6, December, 1976, p 1261.

concluded that 2.75 micrograms per liter of chlorophyll a was an appropriate upper boundary for oligotrophy for lakes in a northern temperate zone. Finally, Vollenweider has developed a curve using total phosphorus loadings in grams per square meter of surface area per year to define a permissible level for oligotrophic conditions within the receiving waterway for a particular water volume where the mean depth of the lake in meters is divided by the hydraulic detention time in years.[15]

By using the above criteria for the upper boundary of oligotrophy and applying it to lake modeling equations developed by various authors, one can determine associated, maximum limits for phosphorus loadings for an oligotrophic state for Clear Lake for each of the criteria. The following table displays the loadings for various criteria and equations.

MAXIMUM PHOSPHORUS LOADING FOR AN OLIGOTROPHIC STATE
FOR CLEAR LAKE
Pounds per year

Source of Criteria/Equation	Total Phosphorus Loading Pounds per year
Gilliom*	280
Chapra and Tarapchak*	317
Dillon and Rigler*/Gilliom*	346
Vollenweider/Kaczynski	441

[15] Quality Criteria for Water, 1986, United States Environmental Protection Agency, May 1, 1986.

*Gilliom[16], Chapra and Tarapchak[17], Dillon and Rigler[18], Vollenweider[19] and Kaczynski[20]

As the table shows, the application of the various criteria and equations do not provide a consistent loading limit for an oligotrophic state. With this knowledge, the Department recommends, as a beginning point, the lowest loading which is based upon applying 10 ug/l of total phosphorus to Gilliom's equation and would result in 280 pounds per year.

For comparison purposes, the instream criteria for total phosphorus for controlling algal growths in the Tualatin River was selected as 70 ug/l. U.S. E.P.A. recommends, in order to prevent the development of biological nuisances and to control accelerated or cultural eutrophication, that total phosphorus levels in lakes not exceed 25 ug/l within a lake or reservoir.[21] Total phosphorus levels in the epilimnion of Clear Lake in the summer of 1984 (from the Cooper report which is the most recent data) averaged 7.8 ug/l.

Gilliom's equation can also be applied to the mean total phosphorus concentration found by Cooper during the summer of 1984. If this is done, the current annual loading of total phosphorus is determined to be 218 pounds per year. Using the 1984 data presumes that conditions in 1984 are similar to those found today in the Clear Lake watershed. This is not

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[16] Gilliom, Robert J., Estimation of Nonpoint Source Loadings of Phosphorus for Lakes in the Puget Sound Region, Washington," U.S. Geological Survey Water-Supply Paper 2240, U.S. Government Printing Office: 1983, p7.

[17] Chapra, Steven C., and Stephen J. Tarapchak, "Chlorophyll a Model and Its Relationship to Phosphorus Loading Plot for Lakes, Water Resource Research, Vol. 12, No. 6, December, 1976, p 1261.

[18] Dillon,P.J., F.H. Rigler, A Simple Method for PRedicting the Capacity of a Lake for Development Based on Lake Trophic Status, Journal of the Fisheries Research Board of Canada, Volume 32, No. 9, September, 1975, p1525.

[19] Quality Criteria for Water, 1986, United States Environmental Protection Agency, May 1, 1986.

[20] Letter from V.W. Kaczynski,Ph.D. to Richard Nichols concerning Clear Lake dated April 5, 1990.

[21] Quality Criteria for Water, 1986, United States Environmental Protection Agency, May 1, 1986.

unreasonable because the septic tank construction moratorium has essentially prohibited any development within the watershed. There has been no significant water quality sampling done since 1984, however, to verify this assumption. (The Department wishes to point out that the big Clear Lake property owners retained a consultant, Mr. V.W. Kaczynski, who has provided calculations that show the current lake loading to be 128 pounds per year instead of 218 as determined using Gilliom's equation. The Department has chosen to consider the 218 pounds per year as representative of the existing loading because it is more conservative and is more protective of the lake's water quality.)

If 280 pounds of total phosphorus per year is the maximum annual loading to be allowed and 218 pounds per year is the current annual loading, this leaves 62 pounds per year that could, if desired, be allocated to additional development. The Department believes that the entire 62 pounds should not be allocated to new development. Instead, it is recommended that a safety factor should be applied and, consequently, only 75% of the 62 pounds per year or 47 pounds per year of total phosphorus should be considered for allocation to new development.

CONCLUSION AND RECOMMENDATION:

The Department believes that an annual total phosphorus loading of 265 pounds per year should be established for Clear Lake. This would allow an increase of an additional 47 pounds per year for new development.

ISSUE: What watershed management alternatives are available if the allowable Clear Lake loading is reestablished to 265 pounds per year of total phosphorus?

The CRMP group has developed and evaluated a number of different management alternatives. In predicting the expected phosphorus loads on Clear Lake, a number of assumptions have been made. These are as follows:

1. On-site sewage disposal systems serving single family dwellings will ultimately contribute 1.8 pounds of phosphorus per year. This figure is from Gilliom[22] who found that phosphorus loadings data could only be correlated empirically for those on-site sewage disposal systems over forty years in age. The predictions also assume that the

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[22] Gilliom, Robert J., Estimation of Nonpoint Source Loadings of Phosphorus for Lakes in the Puget Sound Region, Washington," U.S. Geological Survey Water-Supply Paper 2240, U.S. Government Printing Office: 1983, p13.

existing on-site sewage disposal systems, most of which are about 20 years old, contribute 0.9 pounds per year. There is no practicable way to confirm this assumption. Some members of the CRMP group believe the assumed loading is excessive particularly for those systems over 500 feet from the shoreline. Further, phosphorus tends to be readily immobilized in all, but the most coarse soils. The data on phosphorus, however, is not conclusive. Even using 1.8 pounds per on-site system assumes that there is 80% removal of phosphorus in the drainfield. Until there is better data, the Department believes it is appropriate to use 1.8 pounds per year per on-site sewage disposal system.

2. All phosphorus loadings contributed by Collard Lake properties will discharge first into Collard Lake. Based upon Gilliom's work and equations, only 52% of the Collard Lake loading will enter Clear Lake. This is because of assimilation of phosphorus that will occur in Collard Lake. All of the phosphorus loads generated by the big Clear Lake properties will discharge directly into Clear Lake. It is likely, however, that some of the big Clear Lake property load will probably go into Collard Lake first, but that this assumption is conservative, at least, in respect to Clear Lake.

3. There will be no agricultural development in the watershed.

4. Forestry loads are very difficult to determine. While there has been substantial research done with regard to phosphorus and forest activities, there are a multitude of variables which makes it virtually impossible to apply phosphorus loading data from one case to another. Erosion appears to be the most significant factor relative to phosphorus loadings. Controlling erosion will depend upon the amount roads, harvesting techniques, slopes, soils, etc. Although it can probably be debated, the Department feels that phosphorus loadings of 0.18 pounds per acre should be conservative provided that erosion controls are maximized.

5. A substantial part of the inflow into Clear Lake is from groundwater. This groundwater contains virtually no dissolved oxygen. Anaerobic conditions could increase the amount of phosphorus recycled back into the lake from sediments. To account for this, the Department has assumed that one half of the phosphorus contained in the lake is recycled back into the lake. This portion will be included as part of the Department's reserve.

Based upon the above assumptions, the Department believes the following lake watershed management scenarios could be implemented within a Clear Lake loading limit of 265 pounds per year. Each case is briefly described along with perceived advantages and disadvantages. The reader will notice that while the Clear Lake loading for most cases does not vary, the loading for Collard Lake does. While the major emphasis of the rule is on Clear Lake, the implications on Collard Lake must also be considered. (Note: The Department does not believe it is the Commission's role to determine which watershed management plan is most appropriate. This is the duty of local government which is the responsible entity for making land use decisions. The Commission, however, must be assured that the land use decisions do not conflict with lake loading limits. These scenarios are provided in this report so the Commission can better understand the ramifications of various lake loading limits.)

CASE I: Collard Lake annual loading set at 56 # total P per year.
Clear Lake annual loading set at 265 # total P per year.
Department reserve set at 234 # total P per year.

This alternative assumes that sewers are either installed for the Collard Lake subdivisions or a significant number of existing homes are removed. In the case of sewers for the Collard Lake subdivisions, it also assumes that all lots in the subdivisions are allowed to develop. The reduction of phosphorus gained by sewers or equivalent controls was given to the DEQ reserve. This was done because of the uncertainty about how much phosphorus is currently being contributed by on-site sewage disposal system. Further, if the Department has correctly estimated the amount of phosphorus coming from existing septic tanks, it will be some length of time before the phosphorus in the ground and groundwater is finally purged and no longer contributes to the lake.

In this case, there is about 31 pound per year to be distributed to other development. The Department believes that 31 pounds would allow houses to be built on most of the large properties around Clear Lake as long as septic tanks effluent is disposed into drainfields outside the watershed on those lots that have some area outside the watershed boundary. Forest harvesting would probably have to be controlled to a degree greater than that provided by the Forest Practices Act.

Advantages: In this case, the loading on Collard Lake will be substantially reduced and its water quality over time should improve substantially.

Disadvantage: If a buyout of Collard Lake properties is the chosen alternative, almost every existing house will have to be removed. A second disadvantage is that, with sewers and full build-out, stormwater quality control facilities will be needed to control stormwater quality from new development.

CASE II: Collard Lake annual loading set at 123# total P per year.
Clear Lake annual loading set at 265 # total P per year.
Department reserve set at 215 # total P per year.

Under this alternative, existing houses in the Collard Lake subdivisions would remain, but undeveloped lots would remain undeveloped. Very little loading would be then available to other development. Houses could be built on the large lots around Clear Lake, but no more than two could have on-site drainfields in the watershed. No forestry harvesting could be allowed if the houses are built on the larger properties. Even if no houses are built on the larger lots, forest harvesting would probably need to be controlled to a greater extent than that required by the Forest Practices Act.

Advantages: Existing property owners in the Collard Lake subdivisions are allowed to keep their houses and not have to connect to sewer.

Disadvantages: Phosphorus concentrations in Collard Lake would probably increase substantially (to 21 ug/l as compared to existing 14). Algal blooms will be substantially more frequent and intense. Development options for the larger properties around Clear Lake are severely limited.

Note: the CRMP group has discarded this option as a viable alternative.

CASE III. Collard Lake annual loading set at 55# total P per year.
Clear Lake annual loading set at 265 # total P per year.
Department reserve set at 234 # total P per year.

In this alternative, the Collard Lake subdivisions would be sewered, but the remaining undeveloped lots would be consolidated, in some fashion, to one acre lots. Larger properties around Clear Lake would have similar development options as allowed in Case I. Additional controls over that required by the Forest Practices Act would be needed for forest harvesting.

Advantages: Stormwater quality control facilities probably would not be needed for Collard Lake subdivisions. Collard Lake water quality over time should improved considerably.

Disadvantages: Sewers for Collard Lake subdivisions still necessary. Some additional restrictions on forest harvesting probably necessary.

CASE IV. Collard Lake annual loading set at 67# total P per year.
Clear Lake annual loading set at 265 # total P per year.
Department reserve set at 234 # total P per year.
Remainder load available to Clear Lake large lots:23#/yr

Under this alternative, existing developed lots in Collard Lake subdivision would modify their septic tank systems to add alum (reduces total P discharge to about 0.45 #/yr/ house). Undeveloped lots would remain undeveloped in Collard Lake subdivisions. Using septic tanks with alum addition, Clear Lake larger lots could each develop with one house with a septic tank/drainfield in the watershed. Added restrictions on forest harvesting would probably be necessary.

Advantages: No sewer. No stormwater quality controls necessary. Collard Lake improves considerably (14.4 ug/l to 11.4 ug/l). All Clear Lake lots get a drainfield system on the property within the watershed.

Disadvantages: Alum addition to septic tanks although pilot tested in Canada is untried technology on a large scale. If this option is chosen, the Commission's rules for on-site sewage disposal would have to be modified. Undeveloped lots in Collard Lake subdivisions must be left undeveloped. Some restrictions on forest harvesting probably required.

CASE V: Collard Lake annual loading set at 49 # total P per year.
Clear Lake annual loading set at 218 # total P per year.
Department reserve set at 192 # total P per year.

Under this option, the loading on Clear Lake is to remain unchanged. The Collard Lake subdivisions must be sewered and the undeveloped lots in the subdivisions would probably have to remain undeveloped. The big Clear Lake properties could have one house on each lot, but only five could have their on-site sewage disposal systems inside the watershed. Forest harvesting would probably have to be severely restricted. Note: in presenting this case, the Department did not reserve for itself the phosphorus loading created by sewering the Collard Lake subdivisions. This presumes that the benefit of removing those systems will be realized immediately, which is unlikely. If the Department reserves this phosphorus loading to itself, no further development could occur in the watershed. Because this case does not project any increased loadings into Clear Lake, these calculations do not include a recycling factor.

Advantages: Clear Lake loadings to no increase which should better assure that lake water quality is maintained. Collard Lake water quality improves substantially (14.4ug/l phosphorus to 8.2ug/l).

Disadvantages: Sewers required for Collard Lake subdivisions. Collard Lake undeveloped lots would remain undeveloped. Forest harvesting probably precluded if new houses put on big Clear Lake properties.

CONCLUSION AND RECOMMENDATION:

At a lake loading limitation of 265 pounds of phosphorus per year, there will be a number of reasonable watershed management alternatives that local government can consider. The Department recommends that the loading limit for Collard Lake be set at 67 pounds of phosphorus per year. This provides for some improvement in its quality and also provides for flexibility to consider other alternatives for controlling phosphorus loadings on both Collard Lake and Clear Lake.

ISSUE: Should the existing policies and guidelines be expanded to better assure that Lane County can develop a watershed management plan consistent with allowable lake loadings?

Although the Environmental Quality Commission established nitrate-nitrogen loading limits for Clear Lake over seven years ago, there has been no movement until recently to develop a land use management plan to assure that development and land use is consistent with the loading limits. There are a number of reasons for this:

a. There was a lack of sufficient technical expertise at the local level to develop and evaluate various watershed management options based upon potential nitrate-nitrogen loadings.

b. There remained the question of whether or not the lake was phosphorus limited instead of nitrogen limited.

c. The expense of installing a conventional sewer system to serve the Collard Lake subdivisions appeared too much to Collard Lake residents who were satisfied with the status quo.

If the Commission determines to modify the policies and guidelines for the Clear Lake watershed, serious consideration should be given to assuring that local government has a clear understanding as to the Commission's expectations of local government in meeting lake loading limits. Otherwise, the watershed management plan necessary for the lake may remain in limbo as it has since the original rule was adopted in 1983. The Department has proposed modified rule language that lays out a process for the development and approval of a watershed management plan. The significant components of the proposed rule are as follows:

a. Lane County or any other jurisdiction shall not issue permits allowing connection of new development in the Clear Lake watershed to a sewage collection system until a plan is submitted to and approved by the Department showing how total phosphorus loadings limitations required by OAR 340-41-270 will be achieved and maintained. The plan shall address total phosphorus associated with erosion due to construction as well as that due to existing and new development. The plan shall include ordinances as necessary to effectively implement the plan.

   Justification: This requirement is to assure that all elements of a lake management plan are in place before any new development is allowed. The pressure for new development is a significant part of the driving force for the creation of a lake watershed management plan. This driving force can be applied to other aspects of the watershed plan, not just those directly related to building a sewer.

b. Department or its contract agent shall not issue sewage system construction installation permits or approved site evaluation reports for sewage systems to serve property within the Clear Lake watershed until a plan is submitted to and approved by the Department showing how total phosphorus loadings limitations required by this rule will be achieved and maintained. The plan shall address total phosphorus associated with erosion due to construction as well as that due to existing and new development. It shall also address forest harvesting activities. The plan shall include ordinances, easements, and/or contracts as appropriate and necessary to effectively implement the plan.

Justification: The reason for this requirement is the same as for requirement (a) above.

c. No construction of the sewerage facility to serve the Collard Lake subdivisions shall begin until or unless:

(1) The facilities plan report and engineering plans and specifications have been approved in writing by the Department,

(2) It is constructed and operated by a municipality with authority for the operation and maintenance of sewerage facilities.

(3) Before construction starts, the municipality shall demonstrate that it has a reliable source of funding to assure proper construction, operation, maintenance, and replacement of sewerage control facilities.

Justification: These requirements are intended to assure that a sewer system, if constructed, is properly designed and that it will be operated by an entity with the legal authority and resources to comply with the Department's requirements.

d. No sewage system construction installation permits, approved site evaluation reports, or sanitary sewer connection permits shall be issued until a plan for monitoring the water quality of Clear Lake is submitted to and approved by the Department. The plan shall include contracts or memorandums of agreement that assure that the monitoring will be conducted.

Justification: The Department believes that Clear Lake needs to be continuously monitored so that any changes in its quality can be readily detected. Prompt detection of water quality changes will allow the Department and others to more quickly determine the extent and cause of the problems and take steps to address the problems. The

Department believes that this monitoring should be the responsibility of local government because the monitoring is necessary to verify compliance with discharge limitations.

e. Unless it is demonstrated that stormwater runoff treatment and control systems are not necessary to meet the total maximum annual loading for total phosphorus, any off-site or on-site control facilities for stormwater quality control necessary to comply with this total maximum annual load shall be under the control of a municipality.

Justification: The Department believes that, if storm water quality controls are needed to meet the lake loading limitations, there must be assurances that these systems are properly operated and maintained. The Department does not believe that individual homeowners can be relied upon for operation and maintenance even if the systems are located on individual lots.

f. A municipality shall be responsible for all sewerage facilities including on-site sewage disposal systems constructed in the Clear Lake watershed after December 1, 1989.

Justification: A single failing on-site sewage disposal system, particularly if located next to the lake, will contribute about five times the amount of phosphorus to the lake as predicted in the analyses. Periodic inspection of the systems by an entity with the powers to correct any failing system is essential for the protection of the lake.

g. By October 1, 1993, all sewage generated within the Collard Lake subdivisions shall be collected, treated and disposed according to a sewerage facilities plan report submitted to the Department by October 1, 1991. No construction of the sewerage facility shall begin until the facilities plan and engineering plans and specifications have been approved in writing by the Department. The Department may grant an exception to sewer the Collard Lake subdivisions if, by October 1, 1991, an alternative plan is submitted to and approved by the Department. The alternative plan must provide equivalent controls on phosphorus so that the loading limit for Collard Lake is met.

Justification: Some people will argue that it is inappropriate at this time to require a sewer system in these rules. Other alternatives are available so that a sewer would not be needed. The Department agrees that there are other alternatives that may not include a sewer for Collard Lake. The Department believes, however, that the threat of sewers more than anything else has caused the current Collard Lake residents to seriously consider and

participate in the development of a lake management plan. The requirement provides an out, if an acceptable alternative is submitted and approved by DEQ.

ISSUE: What criteria should be used to verify that the lake's water quality is remaining at an acceptable level?

The Department has recommended that the lake loadings be established on the basis of 9.5 ug/l of total phosphorus. In addition, the literature indicates that chlorophyll a levels of 2.75 ug/l would be the upper limit of oligitrophic conditions. The Department has chosen these two parameters as the triggering points for when the Department would judged that the lake loading limits were being exceeded. The proposed rule language is:

The total phosphorus maximum annual loading for the Clear Lake watershed shall be deemed exceeded if:

(a) The median concentration of total phosphorus from samples collected in the epilimnion between May 1 and September 30 exceed 9.5 micrograms per liter during two consecutive years, and

(b) The median concentration of chlorophyll a from samples collected in the epilimnion between May 1 and September 30 exceed 2.75 micrograms per liter during two consecutive years.

ISSUE: Is the approach being proposed with Clear Lake compatible with the protection of other lakes with very high quality water?

The Department believes the approach recommended for Clear Lake is a good approach that could and perhaps should be taken with other oligitrophic lakes whose shores and watershed are subject to residential development. The approach with Clear Lake is protective of all uses including drinking water and aesthetics. The Department, however, would not approve of a similar approach for lakes such as Waldo Lake and Crater Lake because of their incredible clarity and public value. Such lakes should be managed with no increases in phosphorus loadings.

Gilliom Lake Water Quality Groupings[23]

Phosphorus Concentration ug/l	Lake Group Characteristics
0 - 10	Low algal productivity; high suitability for all recreational uses. Algal blooms are rare and water is extremely clear, with a Secchi-disk visibility that is usually 5 meters or greater. Summer chlorophyll a concentrations generally average less than 3 ug/l.
10 -20	Moderate algal productivity; generally compatible with all recreational uses. Algal blooms are occasional, but generally of low to moderate intensity. Oxygen depletion is common in bottom waters and cold-water fisheries may be endangered in some shallow lakes. In many lakes, however, fishery may be enhanced by increased productivity. Secchi-disk visibility is usually 3 to 5 meters; chlorophyll a averages 2 to 6 ug/l in most lakes.
20 - 30	Moderately high algal productivity; still compatible with most recreational uses, but algal blooms are more frequent and intense, and oxygen depletion is more serious. This can increase fisheries problems, though productivity may still be enhanced. Water clarity is reduced and Secchi-disk visibility is usually 2 to 4 meters. Chlorophyl a averages 4 to 10 ug/l.

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[23] Reproduced from Gilliom, Robert J., Estimation of Nonpoint Source Loadings of Phosphorus for Lakes in the Puget Sound Region, Washington," U.S. Geological Survey WAter-Supply Paper 2240, U.S. Government Printing Office: 1983, p4.

Greater than 30	High algal productivity; lake suitability for most recreational uses is often impaired by frequent and intense algal blooms which may form floating scums. The water often takes on a "pea soup" color and becomes extremely murky. Fish kills may be common, especially in shallow lakes. Secchi-disk visibility is generally less than 3 meters and chlorophyll a concentration is usually greater than 10ug/l.

Gordon Howard

MEMORANDUM

TO : Oregon Department of Environmental Quality & The Enviromental Quality Control Commission

DATE : January 17, 1997

RE : Comments on the Rulemaking Proposal Relating to On-site Sewage Disposal Systems in the Clear Lake Area in Lane County

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The Plaintiffs[1] from the Merz lawsuit support that part of the proposed rule that permanently lifts the moratorium. The Plaintiffs are the property owners in the Clear Lake Watershed who sued to strike down the 14 year moratorium that was imposed on their property. The court struck down the moratorium, recognizing the land was the Plaintiffs' property, not the State of Oregon's and that the state-imposed moratorium unconstitutionally deprived them of their property. As a result, by repealing the rule, the state is not, as the staff report indicates, adding value to Plaintiffs' property. It is merely stopping its 14 year taking of that value from Plaintiffs as the court indicated it must do.

The Plaintiffs oppose that part of the proposed provisions in OAR 340-41-270(5) and 340-71-400(2)(c)-(d) that require them to give up some of their property for a DEQ monitoring well. They oppose that requirement because it is a breach of the settlement agreement that provides "No new restrictions on Plaintiffs' property shall be imposed as part of this rulemaking...". The physical imposition of wells on Plaintiffs' property and permanent DEQ access to Plaintiffs' property is a new restriction. It is also in and of itself unconstitutional under the recent Oregon Court of Appeals' opinion in GTE Northwest, Inc. v. Public Utility Commission, 321 Or 458 (1995). It is also unconstitutional under Dolan because there is no site specific information supporting the well requirement as an exaction arising from site specific impacts on filtration costs from the building of a residence on Plaintiffs' property. The well provisions should, therefore, be deleted from the final rule.

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[1] Robert L. Merz, Shirley M. Merz, Vincent M. Howard, Jr., Gordon Brian Howard, Marcia Lee Smith, Richard G. Sargent, Ruby Broeker, Karen L. Anderson, Aaron U. Jones, Erling G. Omlid, Lloyd F. Omlid, and Ellis L. Rackleff. These comments are submitted on their behalf. These comments are also submitted on behalf of Marilyn Adkins who owns an undeveloped residential lot that will be subject to the permitting requirements. She was not a party to the lawsuit or settlement agreement.

Last, the restrictive TMDL's for phosphorus are unreasonably tight and impose a standard that cannot even be accurately measured. There is no evidence that such low standard is needed to achieve the rule's stated purpose of avoiding increased filtration costs.

I. THE MONITORING REQUIREMENT BREACHES THE SETTLEMENT AGREEMENT.

Plaintiffs' first objection is that the monitoring requirement is a breach of the settlement agreement. After the court ruled the moratorium was unconstitutional, the EQC and DEQ settled with the Plaintiffs. After an EQC meeting and a temporary rule adoption, the settlement agreement was approved and signed by the state. The agreement gave the EQC time to repeal the moratorium so that it would not be exposed to liability to every other property owner in the watershed. The Plaintiffs, in turn, agreed to back certain land use restrictions by Lane County on their property. The Plaintiffs have performed their side of the agreement and have supported and will continue to support those restrictions at the county level as long as the state does what it promised, i.e. - repeal the moratorium with no new restrictions on Plaintiffs' property. The imposition of monitoring wells is a material breach of the agreement that "No new restrictions on Plaintiffs' property shall be imposed as part of this rulemaking. . .". It imposes a requirement that each property owner give up some of their property and install and maintain a $3,000 monitoring well on even the smallest residential lot. If it is adopted, it jeopardizes the Plaintiffs' continued support of land use restrictions at the county level that would provide some immediate additional protections for Collard and Clear Lakes.

DEQ and EQC extensively negotiated the conditions necessary to protect the lake and upon which septic permits would be granted. Plaintiffs agreed to extensive protective measures, including the possible installation of low pressure distribution systems and other restrictions on their activities as a condition of septic approval. At no time was it ever mentioned, or did Plaintiffs agree to, the installation of a monitoring well by DEQ as a condition of septic approval. To the contrary, the EQC agreed that in the rulemaking lifting the moratorium, no new restrictions would be imposed on Plaintiffs' property. Plaintiffs' request that the EQC do as it agreed - lift the moratorium with no new restrictions on the Plaintiffs' property. That will require deletion of the monitoring well requirement.

The result of adoption of the well requirement will be a breach of the settlement agreement by the state, opposition by the Plaintiffs to the adoption and implementation of land use restrictions at the county level, and more litigation by property owners who have already been subjected to an illegal moratorium for 14 years and who have had their dreams destroyed by the moratorium.[2]

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[2] One Plaintiff, Vincent Howard, died the day after he was finally able to build on property his family had owned for over 60 years. Another, Ruby Broeker, was 58 when she bought her property to escape an abusive relationship and live next to her daughter. By the time the moratorium was lifted, she was 72 years old and living under a hardship exemption in a mobile home in Lane County. Another, Richard Sargent, bought his property with income from a second job. He waited over a decade to try to retire on his lot but

II. MONITORING REQUIREMENT WOULD BE UNCONSTITUTIONAL UNDER GTE AND LORETTO.

Plaintiffs' second objection to the well requirement is based on the fact it is an unconstitutional taking. The monitoring well requirement, the DEQ access and water discharge requirements should be dropped because the requirements amount to a physical taking. Since DEQ has no eminent domain authority, the rule, if adopted, would therefore be facially invalid under GTE Northwest, Inc. v. Public Utility Commission, 321 Or 458 (1995).

In GTE, the Oregon Supreme Court held that the PUC's rule requiring local exchange carriers (LECs) to offer collocation (placement and installation of certain equipment on the plaintiff's property) to enhanced service providers (ESPs) effected a physical taking of the LEC's property because "an LEC is required to accept a 'direct physical attachment' to the property, which "constitutes a physical invasion" under Loretto v. Teleprompter Manhattan CATV Corp., 458 US 419, 102 S Ct 3164 (1982). 321 Or at 472. Because the Court determined that the PUC had no express eminent domain authority, it held that the PUC "exceeded its statutory authority when it promulgated those rules" and therefore declared them invalid. 321 Or at 477.

The proposed EQC rule also effects a physical taking because it requires a permanent, physical attachment of a monitoring well at a location chosen by DEQ on Plaintiffs' property. Moreover, the Plaintiffs' are also required to allow DEQ personal, indefinite access to their property for monitoring purposes and to allow discharge of water onto their property. "If the nature of the governmental intrusion amounts to a 'permanent physical occupation of property,' the inquiry [of whether there is a taking] ends, regardless of 'whether the action achieves an important public benefit or has only minimal economic impact on the owner.'" 321 Or at 469 *quoting* Loretto (emphasis added). EQC and DEQ do not have express eminent domain power and thus under GTE, the rules would be invalid under ORS 183.400(4)(b) because they exceed DEQ's statutory authority.

Therefore, the rules as currently drafted will subject the state to yet another takings lawsuit by Plaintiffs in the court which has already agreed that DEQ took their property for 14 years. The state is risking substantial additional liability and attorneys' fees to Plaintiffs and all other owners of undeveloped residential lots in the Watershed.

III. MONITORING REQUIREMENTS ARE AN UNCONSTITUTIONAL EXACTION UNDER DOLAN.

Plaintiffs' third objection to the monitoring well requirement is that, in addition to amounting to a physical taking of private property, the requirment is also an unconstitutional exaction under Dolan v. City of Tigard, 512 US ___, 129 L Ed2d 304

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was never able to do so. He finally gave up and when the moratorium was lifted, he sold his lot. Another, Erling and Kathryn Omlid were never able to build a house because of the moratorium. By the time it was lifted, Mrs. Omlid was housebound and required the use of oxygen due to severe health problems. They can no longer live out their dreams.

(1994). In this case, the monitoring requirements imposed upon property owners who apply for an on-site septic system permit are a type of exaction - the applicant cannot obtain a permit without being subjected to the $3000 monitoring well requirement and permanent physical access by DEQ personnel and water discharges on its property.

A. DOLAN.

Dolan set forth a two-part legal test for determining whether a permit condition is constitutional. First, it must be determined "whether the 'essential nexus' exists between the 'legitimate state interest' and the permit condition exacted." 129 L Ed2d at 317. Second, if a court determines that a nexus exists, it must then decide that there is a "rough proportionality" between the condition and the site specific impacts of the proposed development. Id at 320; Art Piculell Group v. Clackamas County, 142 Or App 327, 330 (1996). The nexus must be to the stated purpose of the regulation - in this case preserving Clear Lake ". . . for minimal filtration." Nollan v. California Coastal Comm'n, 483 US 825, 97 LED2d 677, 689 (1987).

Dolan "clearly places the 'burden' of demonstrating rough proportionality on the governmental body imposing the condition." 142 Or App at 331. The Oregon Court of Appeals also noted that the "most significant change from prior takings law" is that Dolan requires "considerable particularity in local government findings that are aimed at showing the relationship between a development condition and the impacts of development." Id. Dolan "effectively places the burden on [DEQ] to articulate and substantiate the requisite facts and legal conclusion." 142 Or App at 331.

Although DEQ has a "legitimate state interest" to protect the lakes' water quality, it has not demonstrated that there is an "essential nexus" between the stated purpose of "preserv[ing] the existing high quality water in Clear Lake north of Florence for use as a public water supply source requiring only minimal filtration" (OAR 340-41-270) and requiring new permittees to install a $3000 monitoring well. Moreover, DEQ has not demonstrated that there is a "rough proportionality" between the monitoring well requirement and the impact of the permittee installing an on-site septic system on filtration costs.

B. DEQ'S ASSUMPTIONS.

The DEQ staff report's conclusion that the wells are necessary to achieve the state goals of the regulation (i.e. minimal filtration) is based upon a assumption that buildout under current restrictive land use regulations will:

(1) increase the phosphorus levels in Clear and Collard Lakes;

(2) cause the phosphorus levels to become so high that algae will grow in Collard and Clear Lake; and

(3) cause the algal levels to be so great that additional filtration costs will be incurred.

There is absolutely no site specific evidence or research to support any of those conclusions. In fact, the evidence is to the contrary.

1. The evidence on phosphorus levels.

As to the first assumption on phosphorus levels, the starting point is the existing and historical levels. When DEQ staff was questioned under oath about these issues, it became apparent that there has been no material change in over 25 years of testing the phosphorus levels in Clear Lake (Andrew Schaedel Dep. pg. 51) despite development occurring during those 25 years and despite the presence of septics for over 30 years (both with and without moratoriums).

Mr. Schaedel, a water quality expert with DEQ, testified:

> "Q. Do you recall any significant change that would have caused you to become alarmed between the first time you were involved in testing in 1979 all the way up to today?
>
> A. No."

That there has been no historical change in phosphorus is also evident in the Cooper Consultants, Inc. ("Cooper") report that DEQ relied on in the Federal Court litigation. It has a summary of historical test results. In 1972 phosphorus was around .010. See chart from Douglas W. Larson attached as **Exhibit 3**. In 1982 that had not changed. Its median concentration was still at or below .010 even though no moratorium existed. See **Exhibit 4**. In 1984 it was still at or below an undetectable level to .01. The attached table from the Cooper report summarizes the past lab test results showing no change in 25 years. See **Exhibit 5**. The probable phosphorous levels are probably even lower than what Cooper found in its study that was used by DEQ to impose the moratorium. Cooper used Aquatic Analysts for its tests. Claude Shinn, manager of the Quality Assurance Section of DEQ, testified that DEQ's lab has found Aquatic Analysts consistently .010 high in its tests results. Shinn Dep. pgs. 15-16. In fact, blanks (i.e. no phosphorus samples) came back from that lab with double the legal limit set in the Clear Lake Watershed when they should have come back with an undetectable or .000 level. Shinn Dep. pgs. 11-12.

Current tests indicate no change in phosphorus. Mr. Shinn, testified that with more accurate measuring devices, DEQ is finding actual phosphorus levels are almost half what the labs using less accurate techniques were finding. Tests in 1993, using DEQ's testing results, showed only .003 to .008 phosphorus - well within the ultra-conservative .009 standard set in the 1990 rules. Shinn Dep. pg. 21. The 1996 tests show undetectable levels. **See Exhibit 13.**

Thus, there is no evidence to show phosphorus is a problem in the Watershed or that residential development has caused phosphorus levels to increase.

2. The assumption phosphorus levels will increase.

As to whether the increase in building of residences on the remaining undeveloped residential and marginal parcels in the Watershed under current land use regulations would result in any increase in phosphorus levels, the evidence is also to the contrary. Not only has there been no increase despite development for over 30 years, soils tests have proved that phosphorus does not travel in the Clear Lake soils and the installation of residential septics on the remaining lots will not increase the level of phosphorus in the Watershed.

The enclosed analysis by a scientist DEQ itself uses - Dr. Wesley Jarrell - indicates there is virtually no risk of any increase in lake phosphorus levels if full buildout occurs on the lots of record.

The soils tests by Dr. Jarrell prove that phosphorus is retained by the relevant soils in the Clear Lake Watershed such that, even without vegetative effects that would remove even more phosphorus, it will be hundreds if not thousands of years, if ever, that any phosphorus from any new septics in the Collard Lake subdivision or in the Clear Lake Watershed would reach Collard or Clear Lakes. See **Exhibit 1** attached hereto stating:

> "As you requested, we have performed adsorption and desorption tests on the various soil types in the Clear Lake Watershed. We found the Clear Lake soils strongly absorbed (retained) phosphorus. We also found the Clear Lake soils would not release phosphorus even if some of the soil retaining phosphorus reached the lake. The results of our study demonstrates that the native soil and the installation and use of septics around the Watershed will not be a significant source of P to the lake."
>
> "The second table reflects the maximum distance phosphorus could move in the soil assuming no vegetation. Vegetation would remove more phosphorus so the distances phosphorus could travel in the Clear Lake soils would be less than what is reflected in the table. For instance, in Samples 1, 2 and 6, the maximum distance phosphorus would move is less than 60 feet in over 100 years. The other samples indicate a maximum distance of detection of less than 100 feet in 100 years."
>
> "The mineral soil is extremely low in P. It is probably equivalent to that in the sediments currently in the lake, meaning that there would be no change in lake P concentrations even if some soil did reach the lake."

The local data provided by Dr. Jarrell is the only site specific date. It shows that phosphorus does not travel in the soils present in Collard and Clear Lake where development has occurred and can occur. There is no scientific test that indicates the building of residences on the remaining residentially zoned land around Collard Lake and the marginal zones around Clear Lake will result in any increase in phosphorus levels, much less the increase in levels necessary to have any significant increase in algal growth.

3. The assumptions on algal growth.

As to the second assumption by DEQ, there is no evidence there will be an increase in algal growth. As stated by Dr. Victor Kaczynski, a Ph.D. limnologist, Dr. Jarrell's tests mean that the answer to the question of whether Clear Lake water quality and algal production will change if the moratorium is lifted is "no (with a high degree of scientific probability . . .") Kaczynski letter, **Exhibit 10**. That is supported by a study made during the CRMP process in 1988-1991, by a scientist from OSU, Professor Peter O. Nelson. Professor Nelson projected water quality in Clear Lake and phosphorus loading assuming full buildout occurs with septics. His projection indicated:

> "**Clear Lake Analysis**
>
> * * *
>
> Present = excellent water qual. (Group A, Gilliom: low algal productivity)
>
> Future = excellent water qual. (Group A, Gilliom: low algal productivity)."
> See **Exhibit 7**.

Professor Nelson's projection indicates that full buildout with septics on existing lots will still result in excellent water quality and low algal productivity. DEQ normally considers Professor Nelson a reliable source - See Nichols Dep. pgs. 38 and 40 attached hereto. In fact, Professor Nelson was DEQ's scientist's teacher at OSU. Robert Baumgartner Dep. pg. 16. Professor Nelson used studies by Gilliom and Vollenweider - which DEQ views as acceptable studies to use to project phosphorus loading. Nichols Dep. pg. 39 attached hereto. Vollenweider is also the accepted source of information by the Environmental Protection Agency ("EPA").

Thus, there is no basis for DEQ's second assumption of increased algal growth.

4. The assumption of increased filtration costs.

As to DEQ's third assumption, that algal growth will increase to a level that will require additional filtration, that assumption is without support.

The testimony from the state agency that does deal with monitoring filtration - the Department of Health is as follows:

> "Q. So, if that [Professor Nelson's projection] is an accurate projection with or without a moratorium in the Clear Lake Watershed the filtration facility being proposed by Heceta Water District would fully and adequately deal with any issues regarding drinking water?
>
> A. I would anticipate that, yes." Charbonneau Dep. at 26; See also Affidavit of Harold Youngquist attached hereto as **Exhibit 8**.

"Q. Were you aware between 1987 and 1991 of any more expensive filtration systems that would be required to be installed by Heceta Water District with or without the DEQ moratorium in the area?

A. More expensive than -

Q. The one they were proposing to put in?

A. No * * *

Q. So, with or without the moratorium and the EQC regulations in the area Heceta would have to build a filtration facility and you were not aware of any more expensive facility that would be necessary if the moratoriums didn't remain in place?

A. No.

* * *

Q. Did you ever indicate to Dick Nichols at DEQ that if the moratorium in the Clear Lake Watershed was lifted Heceta would have to build a more expensive water treatment facility?

A. No." Charbonneau Dep. pg. 20, lns. 16 to pg. 21, ln. 25.

"Q. Do you recall ever coming to any conclusion that would indicate, absent a DEQ moratorium in the area taste and odor would be a problem for Heceta Water District's water?

A. I guess not * * * I just felt that with the treatment plant they could address <u>any of those problems</u>.

Q. And the full conventional treatment plant would do that?

A. Yes" (emphasis added). Charbonneau Dep. pg. 24, ln. 20 - pg. 25 ln. 8.

In other words, the facts show there was and is no substantial, rough or rational relationship between the building of residences on the remaining lots under current land use regulations and the need to impose additional restrictions to avoid more expensive filtration systems. In fact, all the evidence is to the contrary.

Because there is no evidence supporting DEQ's assumption of a connection between Plaintiffs building a residence on their lots and the cost of filtration, there is no constitutional basis for imposing a monitoring well requirement upon new permittees in order to control the cost of filtration.

5. The DEQ research of filtration costs.

There is little work that has been done by DEQ to support any connection between the regulations in Clear Lake, Plaintiff's building of residences in the watershed, and

filtration costs. The DEQ staff person who wrote the 1990 staff report, testified he was not an expert on filtration and that he did not investigate the cost or capabilities of filtration facilities:

> "Q. Would it be fair to say that as of the December 1990 rule modification you didn't know what the different costs were for the different types of filtration facilities?
>
> A. If I did I don't remember knowing I did." R. Nichols Dep. pg. 65.

The only thing that has changed since 1990 is that DEQ staff called the Oregon Health Division and asked if there was a substantial increase in algae what could the potential additional cost of filtration be. Affidavit of Jacquelyn M. Corday filed herewith. In other words, DEQ asked the Oregon Health Division to assume a substantial increase in algae occurred (when there is no evidence to show it would occur and in fact all the evidence is that it would not). From that, DEQ claims there is a need to do additional regulations in excess of the current land use regulations in the area. However, DEQ has developed no new evidence that would indicate such a substantial increase in algal growth is at all likely if residential development occurs under current land use restrictions. Professor Nelson's projections and Dr. Jarrell's projections all indicate that subtantial algal growth will not occur with residential building on the remaining lots under current land use regulations.

The Oregon Health Division person the DEQ said they talked to this year regarding filtration costs said that he did not make any determination that there was any likely increase in algae in the lakes, or that phosphorus levels would rise to where they would create algal growth that would create any increased costs. Affidavit of Ms. Corday filed herewith. He did not make any conclusion based on any study or evidence that such a high level of growth would occur or was at all likely to occur in Clear Lake soils or under current land use regulations nor did he give an opinion as to what levels of algal growth would generate such a cost. From that it cannot be concluded there is any evidence supporting a connection between development of the remaining residential lots around Collard Lake and a 25% increase in filtration costs.

There is no evidence of a connection between the site specific impact of Plaintiffs building residences and filtration costs. As a result, a monitoring well exaction to control filtration costs would be an invalid exaction that amounts to an unconstitutional taking of the permittee's property under Dolan and should be deleted from the rule.

IV. LACK OF SCIENTIFIC BASIS FOR THE TMDL'S IN THE RULE.

Plaintiffs' also object to the phosphorus loading restrictions in the rule. There is a lack of any scientific basis for the extremely low phosphorus loading requirements. The 1985 Coopers report that is the foundation for the 1990 rules, tested only one level of phosphorus and informed the authorities in a cover letter that "It is always risky to extrapolate beyond the data, but to extrapolate from only one data point would be foolhardy." Baumgartner Dep. pg. 36, ln. 18 - pg. 38, ln. 7; Nichols Dep. pg. 116, lns. 18-21. DEQ's representative looked at the report and reached virtually the same conclusion. Robert Baumgartner Dep. pg. 36, ln. 2 - pg. 38, ln. 7.

Yet in 1990 DEQ relied on that report and a 1985 model that DEQ and Lane County did when they built a computer model to project phosphorus loading in Clear Lake based on the Coopers data. They then used the report and model's "worst case" projections or extrapolations from the single data point from Coopers' data as a reason to continue the moratorium and as a foundation for the 1990 loading rules.[3] Nichols Dep. pg. 120.

They did so despite Coopers' warnings about it being foolhardy to extrapolate from one data point and their own scientist's statement that the report was uncalibrated and unverified.

DEQ then used Coopers' one data point to adopt a very restrictive loading standard. Nichols Dep. pg. 120, lns. 15-18. DEQ used Coopers' one data point to reject an analysis of a professor at Oregon State University that showed the lake water quality with full build out would be excellent and algae blooms low. Nichols Dep. pgs. 111-115, pg. 116, ln. 22 - pg. 117, ln. 7. DEQ normally considers that professor's analysis reliable. Nichols Dep. pg. 40. Instead, a far more restrictive approach was used and applied by a DEQ staff person that had no prior experience with lakes (Nichols Dep. pgs. 37-38). The net result was that by applying multiple safety factors from the Coopers data, DEQ backed into a loading requirement that was below the background level (i.e. no prior human activity) noted in the original dunal aquifer study. Nichols Dep. pgs. 82-85.

The resulting loading standard in the 1990 regulation was .009. OAR 340-41-270(2)(a). That is less than what the lab that did the tests for Coopers or Heceta could accurately measure. As DEQ's own lab found out, blank (i.e. no phosphorus) samples submitted to that lab came back showing double the legal limit of .009. Claude Shinn Dep. pg. 12, lns. 1-5. The same lab concluded that the lab doing the testing was consistently .010 higher than anyone else. Shinn Dep. pg. 16, lns. 4-19. When a violation is .009 and the lab tests are consistently .010 high, that means the adopted loading standard is so vague and unusable that it cannot be rationally related to a goal of setting a usable loading standard.

That problem is not solved by DEQ's using its own lab. DEQ's own lab concluded that its own lab quanitation limits were .015 - i.e. if the test showed .009 it could have no phosphorus or it could have .024 - an amount far in excess of the regulatory limits. Shinn Dep. pg. 25, ln. 8 - pg. 26, ln. 5.

As a result, the loading limits adopted in Clear Lake have no reasonable or substantial basis to the moratoriums' purpose of keeping the lake as a minimally filtered water supply or regulating loading to a standard that can be measured accurately enough to

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[3] The loading standard that was adopted also ignored the fact that the Christensen model's "most likely" scenario in the model which concluded that even with 70 new septics in the Watershed the phosphorus levels would stay at the edge of detection even after 50 years - .010 mg/L. Nichols Dep. pg. 118. That is also a level that meant the lake would stay in its most pristine state. Id.

be useful. The data on which the standard was based was from a lab now known to be inaccurate and on an extrapolation from data when DEQ knew it would be foolhardy to make such an extrapolation. The result was a standard that was so low it bore no relation to the purpose cited for the regulation and that could not be accurately measured to determine if a violation occurred.

Thus, DEQ has not provided a scientific basis for adopting the TMDL's in the rule. They should be repealed.

V. DRAFTING PROBLEMS WITH THE PROPOSED RULES.

Last, Plaintiffs object to the lack of any objective standards for a waiver of the well requirement. DEQ states that the monitoring wells will likely not be required until DEQ initiates another surface and groundwater study, which is not expected to begin "for at least five years." DEQ Memo, Att A, pg 1. Consistent with that statement, the proposed rule OAR 340-71-400(2)(c) indicates that DEQ will notify permittees in writing sometime in the future to install the monitoring wells within 90 days of the notice. It then states that the permittee may ask for a waiver, but the waiver can only be granted if: (1) the site is not needed to conduct groundwater studies, as determined by DEQ or (2) DEQ has determined that further groundwater studies will not be conducted. The second criteria makes no sense and seems superfluous - based upon the statements made on Att A, pg 1 as noted above, DEQ does not intend to send permittees notice to install the wells unless it is going forward with the study. So why would DEQ then turn around and grant a waiver request based upon the second criteria that a study will not be conducted?

Thus, the permittee really only has one possible reason for being granted a waiver—that the site is not needed. However, even that criteria is dubious at best since the rule states that it is up to DEQ to make that determination, but does not provide any criteria or guidelines regarding how that determination will be made. Thus, the permittee will be making a blind waiver request without the usual benefit of guidelines that indicate how the decision will be made by DEQ.

SUMMARY

In summary, the monitoring well requirement is in violation of the Settlement Agreement between EQC and Plaintiffs. It is not supported by the available scientific information, is an unconstitutional physical taking and an unconstitutional exaction, and is inconsistently drafted. Moreover, it unfairly imposes a heavy burden on the undeveloped property owners by requiring them to come up with $3000 in 90 days while the developed property owners, with their old septic systems, are not subjected to such a requirement. DEQ must provide better justification for its actions before imposing what will be a heavy financial burden for some permittees, many of whom will be retirees on fixed incomes who will have difficulty coming up with $3000.

For all of the above reasons, Plaintiffs respectfully request that EQC delete the monitoring well requirements and the TMDLs from the final draft of the proposed rules

and avoid the embarrassment of being brought back into Federal Court for violating the Settlement Agreement and Plaintiffs constitutional rights.

AFFIDAVIT

STATE OF OREGON)
) ss.
County of Lane)

I, Jacquelyn M. Corday, being first duly sworn on oath depose and say:

1. I am an attorney licensed to practice in the State of Oregon, Bar No. 91242. I am an associate in the law firm Gleaves Swearingen Larsen Potter Scott & Smith, counsel for Plaintiffs.

2. Attached hereto as Exhibit "1" is a true copy of selected pages from the Oregon Department of Environmental Quality Memorandum, Rulemaking Proposal and Rulemaking Statements - Rules Relating to On-site Sewage Disposal Systems in the Clear Lake Watershed Area in Lane County, November 22, 1996 (hereinafter DEQ Memo).

3. DEQ states that "it is estimated that treatment costs could be up to 25% higher if a significant algae problem develops in Clear Lake * * * [which] could add up to approximately $340,000 per year in additional costs to water users." DEQ Memo, Att A, pg 2. This statement is repeated under the section subtitled "**Assumptions**," wherein DEQ lists assumptions that were used for the rules: "High levels of algae could increase drinking water treatment costs up to 25%." DEQ Memo, Att A, pg 4.

4. I wanted to know what information DEQ based this assumption upon. The DEQ Memo states that Barbara Burton should be contacted regarding any questions about the proposed rules. On January 14, 1997, I read the above DEQ statements to Ms. Burton and asked her what information DEQ based that assumption upon. She stated that the 25% increase in treatment costs assumption was based upon a conversation she had with David LeLand, Oregon Health Division. I then asked her if there were any new studies performed in the Clear Lake Watershed since the summer of 1996 that Mr. LeLand may have based his estimate upon and she answered no, to the best of her knowledge, there is no new information or studies that have been performed.

5. On January 17, 1997, I asked David LeLand how he arrived at the 25% figure. He stated that when Ms. Burton contacted him, he said that he has no idea whether in fact development will actually increase the nutrient levels or what amount of nutrient increase would cause a significant algae bloom, nor can he really estimate the potential treatment cost increase. If he made the assumption that a significant increase in algae occurred, he stated that it could increase the cost of treating the Clear Lake water. He told Ms. Burton that he is aware that other water suppliers with significant algae growths in source water have reported significant increases in treatment costs. He recalled some as high as 25 percent. Although he thinks increased development around the lakes could potentially increase nutrient levels, which could then result in an algae increase, he stated that there are no studies that he is aware of that actually prove increased development will result in an increase in the phosphorus levels in the lakes. He stated that only an expert limnologist could make any accurate estimates on the impacts development could have on phosphorus levels and potential water treatment cost

increases after an extensive study and that he himself was not an expert limnologist.

Jacquelyn M. Corday

Signed and sworn to before me on January 20, 1997 by Jacquelyn M. Corday.

Notary Public for Oregon
My Commission Expires: 11/1/97

OFFICIAL SEAL
MERRILY A COLDREN
NOTARY PUBLIC - OREGON
COMMISSION NO. 028701
MY COMMISSION EXPIRES NOV. 1, 1997

IN THE DISTRICT COURT OF THE UNITED STATES

FOR THE DISTRICT OF OREGON

ROBERT L. MERZ and SHIRLEY M. MERZ, husband and wife; VINCENT M. HOWARD, JR.; GORDON BRIAN HOWARD; MARCIA LEE SMITH; RICHARD G. SARGENT; RUBY BROEKER; KAREN L. ANDERSON; and AARON U. JONES, Plaintiffs, vs. HECETA WATER DISTRICT, an Oregon municipal corporation; STATE OF OREGON, by and through its Environmental Quality Commission; FRED HANSON and WILLIAM YOUNG in their official capacity as directors of the Department of Environmental Quality; Does I-X in their official capacity as commissioners of the Environmental Quality Commission; WILLIAM B. FINLEY; LARRY STONELAKE; STEVE OLIENYK; ART CONING; BOB SLEEPER; HUGHIE CARTER; ROBERT WICK; and MICHAEL KEATING, Defendants.	ORIGINAL Civil No. 91-817-TC

DEPOSITION OF ROBERT PHILIP BAUMGARTNER

the Clear Lake situation? Is there a way of identifying them?

A. Either method, either the empirical method or the mechanistic method would be adaptable and applicable to Clear Lake. With any kind of analyses the method you use will often be dependent upon what kind of data or information you have and how sensitive the response needs to be.

Q. When you were at OSU did you take any classes from a Prof. Nelson?

A. Yes, I did. Dr. Pete Nelson I assume you mean?

Q. Right.

A. Yes, I did take classes.

Q. Which classes did you take from him?

A. The specific courses I again can't remember which ones he taught. He did teach Environmental Chemistry, I know that, and Dr. Nelson was my major professor and so he would have helped me on my reserach. Actually I should state that he did help me on my research.

Q. For your master's you mean?

A. That's correct.

Q. Have you met with Dr. Nelson on any of the Clear Lake matters?

can't remember.

Q. There's some statements in the cover letter that indicate, "The data do not provide sufficient information to permit quantitative estimates of the concentration of phosphorus which would indicate various levels of concern about the lake.".

Do you agree with that?

A. Would you point out which paragraph that is so I can look, please?

Q. It's in the third paragraph, the second sentence-- the fourth paragraph.

A. That's similar to what I wrote on Page 2, which I refer you to, that only one phosphorus was in control and that makes it difficult to verify phosphorus limitation. And I would also agree that that makes it difficult then to extrapolate at which level phorphorus would become a nitrate.

Q. So, when the letter goes on and states, "It's always risky to extrapolate beyond the data, but to extrapolate from only one data point would be foolhardy," you would agree with that?

A. The terminology certainly isn't mine. The extrapolation from one data point would really be dependant on any other evaluations that you may have done to support that to extrapolate singularly from the

bag tests would be a difficult exercise.

Q. And not very scientifically reliable?

A. Again, I think any extrapolations based on just the data points would be somewhat tenuous. I do think there is information in the controls that help you identify that phosphorus appears to be the limiting nutrient, but to extrapolate that as to which level phosphorus has become limiting is not what the design of the test to have been developed for.

Q. So you can't tell because of the design of the test at what level phosphorus would create algal growth in Clear Lake?

A. From the design of the tests you can not determine what the correlation between nutrient addition and algal growth would be in Clear Lake.

Q. So you can't quantify it?

A. Not from the bag tests, no.

Q. And not from the Coopers tests?

A. Coopers tests were the bag tests.

Q. So, in other words, when you say you can't quantify at what level phosphorus would become a concern in Clear Lake from the bag tests you're also intending to include the Coopers test, is that right? You're referring to them as the same thing?

A. Yes. My understanding is that they were

largely the same thing. That was the inference or connection that I was making.

Q. So, the data in Coopers would not provide a foundation for determining at what point phosphorus would become a problem in creating algal growth in Clear Lake?

A. I believe that is correct.

Q. I would like you to look at what we pointed out earlier as No. 201209. And did you have an opportunity to read that when we first pointed it out to you?

A. Yeah. I've been skimming over 201209 and, again, I'll point out that I don't recognize this as my writing and whether I had involvement in it or not I certainly can't say. Earlier I said that it was not my work but may reflect some of the information I provided or discussions we had out of these memorandums and I did not want to give a false impression that I had nothing to do with it. It's simply over the time I don't remember having written this document and I didn't come across this document in my memos.

Q. In 201209 there's a statement in the second sentence, first paragraph, "It is difficult to predict nutrient limitation without more data than provided in the report." Do you agree with that?

IN THE DISTRICT COURT OF THE UNITED STATES

FOR THE DISTRICT OF OREGON

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DEPOSITION OF TOM CHARBONNEAU

been marked as Deposition Exhibit 3. Appears to be a letter to you from the Lane County Health Department regarding the Heceta Water District Facilities Plan, is that right?

A. Yes.

Q. And that's dated May 17th, 1991. Seems to indicate that the Health Division approved the Facilities Plan that was submitted by Heceta, is that right?

A. Yes. Un-huh.

Q. And that Facilities Plan had called for a treatment facility, but in your May 17th, 1991 date you indicate the study state laws requires installation by June of '93, is that right?

A. Yes.

Q. And again that would have been necessary regardless of any moratoriums or rule modifications by DEQ of any rules in the Clear Lake Watershed, is that right?

A. Right.

Q. Were you aware between 1987 and 1991 of any more expensive filtration systems that would be required to be installed by Heceta Water District with or without the DEQ moratorium in the area?

A. More expensive than--

Q. The one they were proposing to put in?

A. No. Like I said they did look at a couple of other options there, but they didn't pan out too good for them.

Q. So, with or without the moratorium and the EQC regulations in the area Heceta would have to build a filtration facility and you were not aware of any more expensive facility that would be necessary if the moratoriums didn't remain in place?

A. No.

Q. Did anybody ask you whether or not a more expensive filtration facility would be required if the moratoriums were lifted by EQC or DEQ?

A. I guess I don't quite understand that. In terms of the costs they were proposing, like I said, the conventional treatment plant, which is probably the most costly of the plants at that time and I think they still are and that was all I think-- other than the slow sand filtration that's all that they've looked at, as far as I know.

Q. Did you ever indicate to Dick Nichols at DEQ that if the moratorium in the Clear Lake Watershed was lifted Heceta would have to build a more expensive water treatment facility?

A. No. The way we looked at-- see, there's two

would work regardless of, in general, what development that goes on around the lake.

The thing that we wanted to make clear to them though, and at least that was my understanding that they were looking at the less activity around the lake and we would support any controls they have to support-- keep the water quality as good as possible in terms of pristine, although pristine is probably a word that we'll never really see in the environment. But the less activity around the lake the easier the water is to treat. We would always support that. Whatever controls are-- whatever steps Heceta could take to control their watershed we would support essentially at that time and now. Obviously the water quality is important and the better it is the better it is to treat the more safe it is.

Q. Do you recall ever telling Heceta Water District that with or without the moratorium they have to-- let me rephrase the question.

Do you recall ever coming to any conclusion that would indicate, absent a DEQ moratorium in the area, taste and odor would be a problem for Heceta Water District's water?

A. I guess really not. We talked about whether it was Dick Nichols or Heceta in terms of activities

around the lake. Obviously if development does occur there there's some build up and runoff on the lake and that could always impact quality. I just felt that with the treatment plant they could address any of those problems.

Q. And the full conventional treatment plant would do that?

A. Yes, the capability is there. The operator is another story. You have to have a good operator.

Q. But if they built and operated it competently it would deal with any concerns that the health department would have?

A. Yes. Yes. We felt confident in that.

Q. Do you recall reviewing any studies by Professor Nelson at OSU regarding the level of phosphorus that may or may not increase algae growth in Clear Lake?

A. Boy, I do remember some items, but I can't remember anything in detail on them other than he did project over time-- if that's the right study, I think there was more than one on that-- he projected the load on the lake and what kind of growth they might be looking at that might impact the lake in a certain manner and certainly resulting in phosphorus and algae growth was one of the concerns, certainly.

Q. If Professor Nelson projected with full build out under existing zoning that future water quality would be excellent with a low algal productivity would you perceive any problems in treating that water by Heceta Water District for turbidity, taste and odor issues?

A. No. Hun-uh. At least in complying with the regulations, no.

Q. So, if that is an accurate projection with or without a moratorium in the Clear Lake watershed the filtration facility being proposed by Heceta Water District would fully and adquately deal with any issues regarding drinking water?

A. I would anticipate that, yes.

Q. There's an indication in one of your activity reports in your file that Dick Nichols wants to know if algae at what levels can make a filtration operation impossible. Do you recall him asking you that question?

A. Maybe. I can't remember for sure.

Q. Let's go ahead and very this marked?

A. That was probably during some of those soil conservation--

Q. Let him mark it.

(Whereupon, Deposition Exhibit 4 was marked for the purpose

IN THE DISTRICT COURT OF THE UNITED STATES

FOR THE DISTRICT OF OREGON

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DEPOSITION OF RICHARD JAMES NICHOLS

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do you mean by that?

A. If there's something he doesn't know about water quality I don't know what the hell it is. I mean he is-- has done most of the water quality analysis on the Tualatin River, put together Qual 2-E models of the Tualatin. He did the water quality analysis on the Yamhill River, Bear Creek. Developed a model for Pudding River. So, he has a knowledge about biological aspects of water quality as well as a very high level technical engineering knowledge about how to evaluate from a technical aspect impacts on water quality.

Q. Did you feel that the level of expertise was necessary on the Clear Lake Watershed?

A. I think it was useful.

Q. Did you feel like it was an area that you didn't have the qualifications that he did and that you needed?

A. Perhaps.

Q. What did you feel your limits were?

A. I think my knowledge of how to evaluate lakes was somewhat limited. Hadn't done much of an analysis of lakes prior to that time.

Q. Was Clear Lake the first lake that you were doing the water quality analysis on?

A. Could be.

Q. Do you recall any lake prior to that?

A. No.

Q. What background did you have to do the analysis on Clear Lake?

A. Basically the analysis that we did from Clear Lake stemmed from the paper that Bob Gilliom-- Robert Gilliom had prepared. And it was recommended by a professor at Oregon State, Peter-- I forget his last name.

Q. Nelson?

A. There you go, Nelson.

Q. Any other background that you had to rely on in doing the analysis of Clear Lake's water quality?

A. Well, in college in one of the courses that I'd taken did some analysis of lakes.

Q. And other than one course and the recommendation to look at the Gilliom report was there any other background that you had to do the analysis of water quality on Clear Lake?

A. Not specifically to lakes.

Q. And you hadn't previously done any analysis of any other lakes other than Clear Lake?

A. Not that I can recall.

Q. Now, you mentioned a 2-E model. What's a 2-E model?

A. Qual 2-E. It's an EPA supported mathametical model that you can set up to simulate a river or a stream and it will tell you-- or will project or predict what dissolved oxygen levels, temperature, various other parameters that will occur in a river as a result of certain management strategies, assuming that you put the model together correctly.

Q. Is the model also predict phosphorus loadings and things like that?

A. Yes, it will, but not for a lake.

Q. Just for streams?

A. Un-huh. Yes.

Q. Do you know if DEQ has any models that they relay on in predicting the water quality for phosphorus in a lake?

A. The other tool that we've used is some of the relationships that Vollenweider had developed.

Q. Any other tools?

A. Not that I'm aware of.

Q. So, for evaluating the impact on water quality DEQ uses Vollenweider, Gilliom.

A. Un-huh. Yes.

Q. And you refer to Mr. Baumgardner and a Dr. Nelson, is that right?

A. Yes.

Q. Any other sources that DEQ finds reliable in predicting water impacts on water quality in lakes?

A. I believe we've consulted with a professor at Oregon State-- in fact we have him doing some work on the Klamath River for us through CH2M-Hill, and I'm trying to think of his name.

Scott Wells. Actually I took a class from him, which I forgot to tell you about earlier on.

Q. So we add that class to your other class?

A. Yes.

Q. What do you consult Scott Wells for?

A. I haven't personally consulted Scott Wells other than in the class that I took from him.

Q. But, he would be a source that DEQ would find as reliable.

A. Yes.

Q. And Dr. Nelson would be a source that DEQ would find as reliable?

A. Probably.

Q. And Vollenweider?

A. Never met the man.

Q. But that's a source that's used by DEQ?

A. Well, yes, through the literature.

Q. And does DEQ find that a reliable source?

A. Yes.

Q. Would it be fair to say that as of the December 1990 rule modification you didn't know what the different costs were for the different types of filtration facilities?

A. If I did I don't remember knowing that I did.

Q. Would it be fair to say that as of the rule modification in December of 1990 other than the one comment on the slow sand filter that you did not know what the capabilities of the filtration facilities were with regards to silt or algae?

A. I'm sorry, I didn't follow the question.

Q. It was not said real well. Let me try and say it more clearly.

As of the rule modification in December 1990 would it be fair to say that you did not know what the capabilities were of any other type of filtration facility other than the slow sand filter to remove algae or silt?

A. I think that would be fair to say.

Q. Would it also be fair to say that you did not know the capabilities of any filtration facility to remove taste an odor issues that could be created by any type of algae as of the rule modification in December of 1990?

A. I believe so.

similarity in phosphorus concentrations between Collard Lake (0.012 milligrams a liter), Clear Lake, (0.009 milligrams a liter) and the Clear Lake aquifer (0.010 milligrams a liter)."

Was it your understanding that when you read this report that they'd tested for the amount of phosphorus for Collard Lake, Clear Lake and the Clear Lake aquifer?

A. It appears that they did.

Q. And they indicate that those levels show that "the lakes are still close to background levels."

Do you agree with that statement?

MS. FJORDBECK: Well, that's not all that sentence says.

THE WITNESS: The sentence says, "This would indicate that levels in the lakes are still close to background levels. But certainly sufficient for eutrophication to occur."

Now, what was the question?

Q. (By Mr. Batson) Do you agree that those levels show that phosphorus is close to background levels?

A. Well, I don't-- I don't think that concentration of Collard Lake is-- well, I wouldn't call it close to background.

Q. But this particular study did?

A. That's what it says.

Q. And that level is .012 milligrams per liter?

A. Yes.

Q. How about for Clear Lake?

A. In the Cooper Report they had it at about .007, I think, as an average, but that's probably fairly close to background.

Q. And the Clear Lake aquifer at .010, is that close to background?

A. I think that's a tad high.

Q. What would you call background?

A. I think certainly less than ten parts per billion, which is .010.

Q. If it was less than .0101 you consider that background?

A. I would consider that close to background.

Q. And what is background? What does that include?

A. Well, I think one-- if I were interpreting background I would say that's what would naturally be there if there was no anthropogenic influences. And the trouble with figuring that out is nobody took the analyses before there were people there.

Q. But the approach is to try to figure out what

would be there naturally without mankind being around?

A. That's what I would call background.

Q. And you would call it if it was less than .010 milligrams per liter?

A. I think in that system, yes.

Q. If the water stayed at .010 milligrams per liter would you consider that there would be any concern about algae blooms?

A. I think you might have an occasional bloom, but it wouldn't be very much.

Q. Would it cause any problem with drinking water at that level?

A. I don't know.

Q. Don't have the background or knowledge to come to the conclusion one way or the other?

A. Yes.

Q. Now, you prepared the proposed regulations in August of 1990, or the June staff report with proposed regulations in June of 1990?

A. I would have done it-- proposed those regulations obviously prior to the date that it went to the commission. So, it would have been May or June of 1990.

Q. And you proposed a total phosphorus maximum annual loading for the Clear Lake Watershed, is that

right?

A. Which one are you looking at.

Q. Well, at Bates No. 200243, Attachment A to the June 29th, 1990 request for EQC action?

A. I guess I don't have the right-- oh, okay. Now, okay, what was the question?

Q. You prepared the proposed modification to the Clear Lake moratorium rules as reflected in Attachment A to your June 29th, 1990, request for EQC action?

A. Yes.

Q. And those contain specific phosphorus loading requirements, is that right?

A. Yes.

Q. And if we were going to put the requirements in the same language as we were discussing before, which is milligrams per liter, what is the requirement in your proposed regulation in June of 1990?

A. Well, the pounds per year was 265 pounds per year and that translate out, I believe, to a concentration of .095-- .0095.

Q. So less than the .010 --

A. Yeah.

Q. -- that the North Florence Dunal Aquifer said was background?

A. Yes.

Q. And is Pete Nelson one of the people you trust his opinion in this area?

A. Pretty much.

Q. Do you recall during the CRMP process where Mr. Nelson was actually recommended by you to the CRMP participants to provide an analysis of the loading capabilities of Clear Lake?

A. One more time, please.

Q. Did you recommend Mr. Nelson to the CRMP participants?

A. No, I didn't.

Q. Do you recall talking to the CRMP participants and indicating that Mr. Nelson is somebody whose analysis you would place a lot of faith in?

A. I don't believe I did. Pete Nelson was invited to the CRMP by somebody else besides me. That's the first time I ran into him.

Q. Do you know if DEQ helped pay for him to do any loading analysis in the Clear Lake Watershed?

A. I don't believe we did.

(Whereupon, Deposition Exhibit 2 was marked for the purpose of identification.)

Q. (By Mr. Batson) In the CRMP process do you recall seeing a report by Mr. Nelson on the Clear Lake

loading?

A. Yes, I do.

Q. And we've marked that Exhibit 2. Is that the report you saw in the CRMP process?

A. I believe it is.

Q. And was that prior to the report that you wrote in June of 1990?

A. Yes.

Q. And it appears to apply the Vollenweider analysis and also refers to the Gilliom Study, is that correct?

A. It certainly uses the equations by Gilliom which are related, I believe, to Vollenweider.

Q. And this is a site specific analysis of what would happen in Collard Lake and Clear Lake if you had a full build out of septics?

A. I believe that's what he did with this.

Q. And that assumes all buildable lots have a septic system on them, is that right?

A. I think so. I think that's right.

Q. Would you flip to the third page. This is the Clear Lake analysis.

A. Okay.

Q. Does it-- was it your understanding when you saw this report that he was predicting the present loads

that would be imposed on Clear Lake and future loads that would be imposed on Clear Lake, assuming building out of Collard and five near shore dwellings in Clear Lake?

A. Okay. Yeah, that's what it says here.

Q. Was that your understanding at the time that you saw it?

A. I believe so.

Q. Was that before the December 1990 rules were adopted?

A. Yes.

Q. And it applies Gilliom's equations?

A. Yep, it does.

Q. Down at the bottom the projection for the present, what does that say?

A. "Excellent water quality, Group A, Gilliom low algal productivity."

Q. And what does it say for future?

A. "Excellent water quality, Group A, Gilliom algal productivity."

Q. Is there anything in Nelson's analysis that would make you conclude that the water quality would be different in the future as opposed to what it was in the present?

A. Well, what Pete's analysis showed that there

would be an increase in the phosphorus levels at full build out over current.

Q. But he also concludes that the present water quality would be excellent and the future water quality would be excellent, isn't that right?

A. That's what he says, yes.

Q. And then both in the present and the future there would be low algal productivity?

A. That's what it says.

Q. Did you disagree with him?

A. Yes.

Q. Did you go and talk with somebody else with more expertise than Mr. Nelson to explain why you disagreed with him?

A. No, not that I recall.

Q. Did EQC or DEQ go hire anybody to determine whether or not Mr. Nelson's analysis was inaccurate?

A. Nope.

Q. What do you know about Mr. Nelson's background?

A. All I know he's a professor at Oregon State.

Q. Why didn't you use his calculations of loading when you were proposing the regulations in December and June of 1990?

A. Well, the primary reason was in his present

analysis he projected that the phosphorus concentration were in fact substantially less than what they actually were. So, it was my conclusion that there was more getting into the lakes than he projected.

For instance, now here he shows-- I believe this is correct-- present there would be 4.6 micrograms per liter. And in fact the data collected from Coopers was substantially higher that than.

Q. How much higher?

A. Well, the average that I calculated I believe was 7.8 or 7.9.

Q. And do you know whether there's a degree of accuracy in measuring that would indicate that you could measure within three micrograms of accuracy?

A. No. I assume there was.

Q. In fact later tests indicate that you can't measure that accurately don't they?

A. I don't know.

Q. Was that the only reason you ejected his analysis?

A. I believe so.

Q. Let's go to the Coopers Report which is in the second volume. You've already testified that you reviewed the Coopers Report when you first came on the Clear Lake matter in 1989, is that right?

A. I believe so.

Q. Did you also see the cover letter that went with that report, Bates stamped 200548 and 200547?

A. I don't remember seeing it, but I could have.

Q. Do you recall that that report says that they only did two one level of testing for phorphorus treatment? And I'll refer you to the fourth paragraph, last sentence of the cover letter?

A. What paragraph?

Q. Last.

A. I don't remember that. I'm not even sure I know what it means.

Q. Well, do you remember reading in the next paragraph where they say they can't give a quantitative estimate of the response phytoplankton in the lake at phosphorus concentrations other than the one tested?

A. I don't remember any of that.

Q. Do you remember that they indicated that it's risky to extrapolate beyond the data, but to extrapolate from only one data point would be fool hardy?

A. I don't remember all.

Q. Did you use Coopers report primarily to reject Nelson's analysis?

A. Yes.

Q. And to reject Nelson's quantitavie analysis

what be would acceptable for phosphorus loading in Clear Lake?

A. What was the question again?

Q. Did you use the Cooper Report to reject Nelson's quantitavie analysis of what would be acceptable in Clear Lake?

A. Yes.

Q. Were you aware of a subsequent model that was developed by Mr. Christensen regarding what would be most likely to happen in Clear Lake with full build out?

A. I remember that he did one and I believe I looked at it, but I don't remember much about it.

Q. And we've marked that previously as Exhibit 1, is that right?

A. Yes.

Q. And that report appears to come up with a most likely scenario and computer model and a worse case scenario, is that right?

A. I don't know. I don't remember.

Q. Look at Page 2, the bottom paragraph. It refers to the use of a hypothetical worse case situation, is that right?

A. First sentence says, "Evaluating future impacts of phosphorus includes the use of a hypothetical 'worst case' situation."

Q. So they developed a model that showed the worse case, is that right?

A. That's what they say.

Q. And then they have one that they say comes up with the most probable values, and that's at the top of Page 3, is that right?

A. That is what it says, yes.

Q. I would like you to turn to Page 32 and read the last paragraph on that page to the end of that paragraph.

A. Okay. I'm sorry, what's the question?

Q. I just wanted you to read that first and then we'll ask you a couple of questions.

Their most likely scenario assumes a build out of the lots with septics, is that right, in Collard Lake.

A. Well, it talks about going up to the maximum of 70 dwellings, which I don't think is build out.

Q. And then they indicate that even after 50 years under this most likely scenario phosphorus will not exceed .010 milligrams per liter, is that right?

A. I believe that's what it says here.

Q. .010 milligram per liter being the most restrictive definition of an oligotrophic lake?

A. That's the high range of oligotrophy.

A. Yes.

Q. In your analysis did you take into account any differences between the forestry practices that were in effect in the area that Gilliom did his study as opposed to the Clear Lake Watershed?

A. In the calculations that I did to determine background I did not consider that there had been any forest activities affecting that.

Q. Do you know if Gilliom did?

A. Gilliom did take a look at forestry as part of the impacts on lakes and tried to figure out a factor to apply.

Q. Did you apply that same factor in your loading analysis?

A. What I believe I did is I calculated up the loading based on the data in Cooper and then I subtracted out projected phosphorus loads from sewage to come up with the background. I did not subtract out, I don't believe, a load from forestry activities.

Q. Did you take into account in your analysis any differences in the regulations and ability of DEQ to control the methods of installing septics in Clear Lake as opposed to any approach that was used in Gilliom's Puget Sound Study?

A. Did I consider that DEQ's on-site program was

IN THE DISTRICT COURT OF THE UNITED STATES

FOR THE DISTRICT OF OREGON

ROBERT L. MERZ and SHIRLEY M. MERZ, husband and wife; VINCENT M. HOWARD, JR.; GORDON BRIAN HOWARD; MARCIA LEE SMITH; RICHARD G. SARGENT; RUBY BROEKER; KAREN L. ANDERSON; and AARON U. JONES, Plaintiffs, vs. HECETA WATER DISTRICT, an Oregon municipal corporation; STATE OF OREGON, by and through its Environmental Quality Commission; FRED HANSON and WILLIAM YOUNG in their official capacity as directors of the Department of Environmental Quality; Does I-X in their official capacity as commissioners of the Environmental Quality Commission; WILLIAM B. FINLEY; LARRY STONELAKE; STEVE OLIENYK; ART CONING; BOB SLEEPER; HUGHIE CARTER; ROBERT WICK; and MICHAEL KEATING, Defendants.	ORIGINAL Civil No. 91-817-TC

DEPOSITION OF ANDREW L. SCHAEDEL

bit. My memory is little patchy in terms of some of that earlier data, if we thought we were seeing any trend line. Typically though Clear Lake, though, had very little development around it so it seemed to be-- rather than seeing a change in conditions it was really trying to keep it in that condition so you don't see a change.

Q. But my question is, do you recall, sitting here today, any material change over the entire course of your involvement in the phosphorus levels or nitrate levels in Clear Lake?

A. No.

Q. Do you recall any significant change that would have caused you to become alarmed between the first time you were involved in testing in 1979 all the way up to today?

A. No. Again we were looking for protection of the high quality there.

MR. BATSON: Subject to looking at whatever documents that you provided to me in that last box, Denise, I don't have any further questions of Mr. Schaedel. Thank you, sir.

(Whereupon, the deposition was recessed.)

(Signature waived.)

IN THE DISTRICT COURT OF THE UNITED STATES

FOR THE DISTRICT OF OREGON

ROBERT L. MERZ and SHIRLEY M. MERZ, husband and wife; VINCENT M. HOWARD, JR.; GORDON BRIAN HOWARD; MARCIA LEE SMITH; RICHARD G. SARGENT; RUBY BROEKER; KAREN L. ANDERSON; and AARON U. JONES, Plaintiffs, vs. HECETA WATER DISTRICT, an Oregon municipal corporation; STATE OF OREGON, by and through its Environmental Quality Commission; FRED HANSON and WILLIAM YOUNG in their official capacity as directors of the Department of Environmental Quality; Does I-X in their official capacity as commissioners of the Environmental Quality Commission; WILLIAM B. FINLEY; LARRY STONELAKE; STEVE OLIENYK; ART CONING; BOB SLEEPER; HUGHIE CARTER; ROBERT WICK; and MICHAEL KEATING, Defendants.	ORIGINAL Civil No. 91-817-TC

DEPOSITION OF CLAUDE EDWARD SHINN

Q. And then there were also some lake samples that apparently were sent on to the different labs as well, is that right?

A. Yes.

Q. And who took those lake samples?

A. Those were collected by Mark Batista of Scientific Resources Inc., or SRI.

Q. Were they connected with any of the labs that were doing the testing?

A. I believe they were, as far as I know, they were the contract laboratory or the consultant for Aquatic Analyst Laboratory.

Q. And they're the ones that took the lake samples?

A. Yeah.

Q. Now, on the second page you indicate the data that came back from the labs, is that right?

A. Yes, that was the data that was reported--reported to me from the laboratories.

Q. And to make sure I understand this, if you look at the table for the blank sample that would be the RA sample, is that right?

A. Yes.

Q. What would be the results you got back from Aquatic Analyst?

A. Aquatic Analyst found .018 in RA and .017 in RF, which was also a blank.

Q. So, on both of those samples, those blank samples with no phosphorus they were reporting about .017 and .018, is that right?

A. Yes.

Q. And that's milligrams per liter, is that correct?

A. Yes. Milligrams of phosphate phosphorus per liter.

Q. And then the other labs had slightly different results, is that correct?

A. Yes.

Q. Do you know what testing approach the different labs were using in generating the analytical data on Page 2 of your three way total phosphate splits analysis?

A. You mean the analytical method that they used?

Q. Yes.

A. What was reported to me by the various labs was the CCAL lab used standard methods 424-C and 424-F, which is out of the 15th Edition of Standards Methods.

Q. Now, are those cited in your--

A. Yes, on Page 6.

Q. What did Aquatic Analyst use?

responses tend to be either at, slightly above or slightly below what you would expect for a perfect response from the laboratory.

Q. Then you indicate that Aquatic Analyst observations exhibit a positive bias amounting to approximately 0.01 milligrams per liter total phosphates over the full range compared to CCAL and DEQ labs, is that right?

A. Yes.

Q. So, does that mean that Aquatic Analysts consistently reported a result .01 milligrams a liter higher for each of the samples than the other two labs?

A. Roughly .01 milligrams per liter. Not exactly that for each one, but it averaged out to about that. In fact in the table above the difference Aquatic Analysts was actually .012 average difference between the standard and what they reported.

Q. So the .01 is an average, is that right?

A. Yes.

Q. At the bottom of Page 4 and going on to Page 5 you're dealing with a topic captioned "bias." What do you mean by that?

A. When we're talking about bias as an analytical work we're talking about a systematic result that tends to be systematically above or below the true value. It

can be caused by a number of things, a bad batch of distilled water or something that the lab used that they used to make up their standards and if it happens to contain a slight bit of whatever you're looking for it will automatically elevate the levels in there.

Bias is just sort of a general way of saying that they're data tends to be either-- they either have a high bias where the results are a little bit higher than would be expected or a low bias. No bias is the ideal.

Q. Is the ideal. All right.

And in this particular situation there is a scoring system you used to establish which labs had the highest bias and the lowest bias, is that right?

A. Yes.

Q. And which lab had the highest bias?

A. According to this system the Aquatic Analyst showed the highest bias.

Q. And you indicate on Page 6 "Aquatic Analysts data exhibits a distinct systematic error on the high side," is that right?

A. Yes.

Q. You then indicate, "Using all 15 data points from each lab Aquatic Analysts score falls outside the high 2.5 percent limit." What sort of limit are you

A. We went to a higher sensitivity to see what would happen if we did that.

Q. And what did happen when you used the more sensitive tested method?

A. We found generally lower numbers and better agreement with the blind standard samples.

Q. And by that you mean better agreement with the blank sample. You didn't come up with as a high a phosphorus amounts?

A. Yes.

Q. On the lake samples which had been reported in the range .012 through .014 what was the range that you started coming up with?

A. .003 to .008.

Q. So, if you used a more sensitive tested method than what the various labs had been using for the phosphate splits you came up with results that were almost half what the other method was, is that right?

A. Yes.

Q. Based on the results from the different labs would you feel comfortable that Aquatics Analyst was providing accurate data on the testing that they were performing for phosphates?

A. I would have to say it could have been better. That it wasn't as good-- in this test out of three labs

words, is there even phosphorus there for DEQ's testing method is .005, is that right?

A. Okay, yes.

Q. And that will just tell us if it's there --

A. Un-huh.

Q. -- is that right?

A. Yes, we'd report it as being present.

Q. And then you say a practical quantitation limit for DEQ's labs was 0.015 milligrams of phosphorus per liter, is that right?

A. Yes.

Q. What does that mean as far as how accurate when you're quantifying the amount of phosphorus that DEQ's labs would-- I'm sorry, how does that indicate how accurate DEQ's labs would be in determining how much phosphorus would be in any given sample?

A. Could you run that by me again?

Q. Let's take an example.

If DEQ's labs came up up with a test result of .009, what would be the range of where-- of how much phosphorus would really be in the sample?

A. Without my trusty calculator and statistics books I couldn't tell you.

Q. Would you add 0.015 to .009 and subtract .015 from .0019 to determine the range?

A. Roughly-- roughly you could do it that way, yeah.

Q. So, if you had a sample that indicated .009 it could be as much .024, is that correct?

A. It could be, yeah.

Q. Or it could actually be that there wasn't any significant phosphorus in the sample, is that right?

A. Yeah.

Q. So if you needed to quantify whether there was compliance where a standard of .009 phosphates per liter could you accurately quantify to that degree?

A. Using what methods?

Q. The five centimeters optical pathlength?

A. I think you could if you ran enough samples.

Q. How many samples?

A. Again I would need my calculator.

Q. But for just one sample or--

A. For a single sample-- really for a single sample all bets are off.

Q. You couldn't even tell whether or not there was compliance?

A. No.

Q. That was "no"?

A. No.

Q. When you say that you would have to take

Department of Environmental Science and Engineering

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May 10, 1996

Mr. Frederick Batson
Gleaves Swearingen Larsen Potter
Scott & Smith
P.O. Box 1147
Eugene, OR 97440

Dear Mr. Batson:

As you requested, I am enclosing my Curriculum Vitae.

As you requested, we have performed adsorption and desortpion tests on the various soil types around the Clear Lake Watershed. We found that the Clear Lake soils strongly adsorbed (retained) phosphorus. We also found the Clear lake soils would not release phosphorus even if some of the soil reached the lake. The results of our study demonstrate that the native soil and the installation and use of septics around the Watershed will not become a significant source of P to the lake.

Enclosed are the results of (1) our prior tests of the adsorption (or retention) capabilities found in the Clear Lake soils; and (2) our recent desorption (release) tests of the Clear lake soils.

The first table reflects our prior tests of the adsorption (or retention) capabilities found in the Clear Lake soils. The first column is the soluble phosphorus. These numbers are very low, about as low as I have seen for soils anywhere. The second column is P extractable in a standard chemical solution. These are also extremely low. the figures represent how much P the soil will take up if exposed to a phosphorus solution. All the soils have a relatively high retention of phosphorus. That means that phosphorus will not travel very far or very fast.

The second table reflects the maximum distance phosphorus could move in the soil, assuming no vegetation. In low P soils like these, vegetation would remove more phosphorus, so the distances phosphorus could travel in the Clear Lake soils would be less than what is reflected in the table. For instance, in Samples 1, 2, and 6, the maximum distance phosphorus would move is less than 60 feet in

over 100 years. The other samples indicate a maximum distance of detection of less than 100 feet in 100 years.

The third table reflects the desorption (release) tests of the Clear Lake soils. The analyses are consistent with our earlier results, which showed that the soils are naturally very low in phosphorus, and have a considerable ability to remove P from solution when it is added, e.g., in septic tank drainfields.

The first column in the third table describes each site, and the depth to which the soil samples were taken. The "0" level is the boundary between the organic surface layer and the mineral soil. The second column is soil pH, the third is the soil solution phosphorus concentration (2:1 water:soil extract), and the third is the concentration of P in one liter of water in equilibrium with one gram of soil. The third column reflects the maximum amount of P which would be released into the lake from a gram of soil, if the soil were to enter the lake. Our detection limit for P was on the order of 0.01 mg P/L.

The mineral soil is extremely low in P. It is probably equivalent to that in the sediments currently in the lake, meaning that there would be no change in lake P concentrations even if some soil did reach the lake. In addition, because the soil samples typically were sandy, they are not likely to erode or move very far from any building site during construction.

The surface organic layer is higher in P. However, none of this organic material is likely to enter the lake during construction. It would be retained within the first few feet downslopw from any building site, because of the dense vegetation and soil organic layer.

The results of these studies demonstrate that the native soil and the installation and use of septics around the Watershed will not be a significant source of P to the lake, even if allowable rates of runoff and erosion occur during construction. The organic layer serves as a filter and trap for any water or soil that would leave a construction site during the time it is disturbed.

In my opinion, and based on the phosphorus adsorption and desorption tests we have performed on the Clear Lake soils, a moratorium on septics in the Watershed is unnecessary to control P levels in Clear Lake.

Sincerely,

Wesley M. Jarrell, Ph.D.

Florence P

	A	B	C	D
1	Phosphorus data for Florence soil samples - Sept. '91.			
2				
3	Sample	Sat. Ex. P	AB-DTPA P	
4		(ug/ml)	(ug/g)	
5				
6	1	0.029	< d.l.	
7	2	0.025	0.541	
8	3	0.041	0.059	
9	4	0.028	< d.l.	
10	5	0.021	< d.l.	
11	6	0.022	0.022	
12	7	0.023	0.022	
13	8	0.032	2.582	

TABLE 1

SAMPLE 1

Depth of influence m	Length of line m	Downstream impact m	P sorbed by soil mg P/kg	P released per unit mg P/year	Exposure time Years	Movement toward lake, Feet total
1	30	0.48	1000	4000000	5	1.6
1	30	0.95	1000	4000000	10	3.1
1	30	1.90	1000	4000000	20	6.2
1	30	4.76	1000	4000000	50	15.6
1	30	9.52	1000	4000000	100	31.2
1	30	95.24	1000	4000000	1000	312.5

(8.8 lb/year)

SAMPLE 2

Depth of influence m	Length of line m	Downstream impact m	P sorbed by soil mg P/kg	P released per unit mg P/year	Exposure time Years	Movement toward lake, Feet total
1	30	0.87	550	4000000	5	2.8
1	30	1.73	550	4000000	10	5.7
1	30	3.46	550	4000000	20	11.4
1	30	8.66	550	4000000	50	28.4
1	30	17.32	550	4000000	100	56.8
1	30	173.16	550	4000000	1000	568.1

(8.8 lb/year)

These results assume that
(a) The depth of soil interacting with solution is 1 m
(b) Drain lines are 30m (100') long
(c) There is no significant subsurface channeling of flow
(d) The household releases 1kg of P (2.24 lb) per year per capita, with four people per house
(e) Plants take up none of the phosphorus
(f) Lines are laid across slope to minimize slope
(g) Distance estimated by half-saturation of soil volume below release point

TABLE 2

SAMPLE 3

Depth of influence m	Length of line m	Downstream Impact m	P sorbed by soil mg P/kg	P released per unit mg P/year	Exposure time Years	Movement toward lake, Feet total
1	30	1.36	350	4000000	5	4.5
1	30	2.72	350	4000000	10	8.9
1	30	5.44	350	4000000	20	17.9
1	30	13.61	350	4000000	50	44.6
1	30	27.21	350	4000000	100	89.3
1	30	272.11	350	4000000	1000	892.7

(8.8 lb/year)

SAMPLE 4

Depth of influence m	Length of line m	Downstream Impact m	P sorbed by soil mg P/kg	P released per unit mg P/year	Exposure time Years	Movement toward lake, Feet total
1	30	0.87	550	4000000	5	2.8
1	30	1.73	550	4000000	10	5.7
1	30	3.46	550	4000000	20	11.4
1	30	8.66	550	4000000	50	28.4
1	30	17.32	550	4000000	100	56.8
1	30	173.16	550	4000000	1000	568.1

(8.8 lb/year)

These results assume that

(a) The depth of soil interacting with solution is 1 m
(b) Drain lines are 30m (100') long
(c) There is no significant subsurface channeling of flow
(d) The household releases 1kg of P (2.24 lb) per year per capita, with four people per house
(e) Plants take up none of the phosphorus
(f) Lines are laid across slope to minimize slope
(g) Distance estimated by half-saturation of soil volume below release point

TABLE 2

SAMPLE 5

Depth of influence m	Length of line m	Downstream Impact m	P sorbed by soil mg P/kg	P released per unit mg P/year	Exposure time Years	Movement toward lake, Feet total
1	30	1.47	325	4000000	5	4.8
1	30	2.93	325	4000000	10	9.6
1	30	5.86	325	4000000	20	19.2
1	30	14.65	325	4000000	50	48.1
1	30	29.30	325	4000000	100	96.1
1	30	293.04	325	4000000	1000	961.4

(8.8 lb/year)

SAMPLE 6

Depth of influence m	Length of line m	Downstream Impact m	P sorbed by soil mg P/kg	P released per unit mg P/year	Exposure time Years	Movement toward lake, Feet total
1	30	0.53	900	4000000	5	1.7
1	30	1.06	900	4000000	10	3.5
1	30	2.12	900	4000000	20	6.9
1	30	5.29	900	4000000	50	17.4
1	30	10.58	900	4000000	100	34.7
1	30	105.82	900	4000000	1000	347.2

(8.8 lb/year)

These results assume that

(a) The depth of soil interacting with solution is 1 m
(b) Drain lines are 30m (100') long
(c) There is no significant subsurface channeling of flow
(d) The household releases 1kg of P (2.24 lb) per year per capita, with four people per house
(e) Plants take up none of the phosphorus
(f) Lines are laid across slope to minimize slope
(g) Distance estimated by half-saturation of soil volume below release point

[redacted]

SAMPLE 7

Depth of Influence m	Length of line m	Downstream Impact m	P sorbed by soil mg P/kg	P released per unit mg P/year	Exposure time Years	Movement toward lake, Feet total
1	30	0.95	500	4000000	5	3.1
1	30	1.90	500	4000000	10	6.2
1	30	3.81	500	4000000	20	12.5
1	30	9.52	500	4000000	50	31.2
1	30	19.05	500	4000000	100	62.5
1	30	190.48	500	4000000	1000	624.9

(8.8 lb/year)

SAMPLE 8

Depth of Influence m	Length of line m	Downstream Impact m	P sorbed by soil mg P/kg	P released per unit mg P/year	Exposure time Years	Movement toward lake, Feet total
1	30	1.36	350	4000000	5	4.5
1	30	2.72	350	4000000	10	8.9
1	30	5.44	350	4000000	20	17.9
1	30	13.61	350	4000000	50	44.6
1	30	27.21	350	4000000	100	89.3
1	30	272.11	350	4000000	1000	892.7

(8.8 lb/year)

These results assume that
(a) The depth of soil interacting with solution is 1 m
(b) Drain lines are 30m (100') long
(c) There is no significant subsurface channeling of flow
(d) The household releases 1kg of P (2.24 lb) per year per capita, with four people per house
(e) Plants take up none of the phosphorus
(f) Lines are laid across slope to minimize slope
(g) Distance estimated by half-saturation of soil volume below release point

[redacted]

Site Description	pH	Soil solution [P], mg/L (ppm)	Desorbed [P], mg/L 1:1000 dilution
Jones 1, -4 to 0	4.69	0.39	0
Jones 1, 0 - 8"	5.73	0.03	0
Jones 1, 8-14"	5.64	0.03	0.01
Jones 2, 0-9"	5.36	0.02	0
Jones 2, 9-18"	5.40	0.02	0
Jones 3, pine -1 to 0	4.66	0.72	0
Jones 3, pine 0-10"	5.27	0.06	0
Olmid 4, Root mat	4.15	0.60	0
Olmid 4, 0 - 3"	4.53	0.09	0
Olmid 4, 3-12"	5.21	0.07	0
Broeker 5, 0-6"	5.77	0.03	0
Broeker 5, 6-14"	5.85	0.20	0.01
Sargent 6, 0-8"	5.25	0.04	0
Sargent 6, 8-16"	5.02	0.15	0
Merz 7, -6 to 0	4.57	0.90	0
Merz 7, 0-8"	5.18	0.03	0
Merz 8, Dune soil	5.69	0.02	0
Merz, 9 -4 to 0	4.12	0.77	0
Merz, 9 0-8"	4.68	0.01	0
Howard 10 -4 to 0	4.59	0.26	0
Howard 10 0-10"	4.98	0.05	0
Howard 11 -4 to 0	4.42	0.55	0
Howard 11 0-7"	5.00	0.01	0
Howard 11 7-14"	4.90	0.02	0

TABLE 3

Curriculum Vitae

WESLEY M. JARRELL

Professor, Environmental Science and Engineering
Oregon Graduate Institute
P.O. Box 91000
Beaverton, OR 97291-1000
(503)690-1183
FAX (503)690-1273
email: wjarrell@ese.ogi.edu

Place and Date of Birth: Forest Grove, Oregon, May 23, 1948

Education:

1970	A.B.	Stanford University, Stanford, CA, Biological Sciences
1974	M.S.	Oregon State University, Corvallis, OR, Soil Science
1977	Ph.D.	Oregon State University, Corvallis, OR, Soil Science

Teaching and Research Experience:

1991/ Present	Professor, Environmental Science and Engineering, Oregon Graduate Institute, Beaverton, Oregon
1992/ 1994	Department Head, Environmental Science and Engineering, Oregon Graduate Institute, Beaverton, Oregon
1988- 1991	Associate Professor, Environmental Science and Engineering, Oregon Graduate Institute, Beaverton, Oregon
1985- 1988	Director, Dry Lands Research Institute University of California, Riverside
1983- 1988	Associate Professor, Soil Science, University of California, Riverside
1976- 1983	Assistant Professor, Soil Science, University of California, Riverside
1972- 1976	Graduate Research Assistant, Soil Science, Oregon State University, Corvallis

Professional Memberships:

American Society of Agronomy
Soil Science Society of America
Ecology Society of America
American Association for the Advancement of Science
American Society for Horticultural Science
Western Soil Science Society

Certification:

Certified Professional Soil Scientist
Certified Professional Agronomist

Publications

TECHNICAL ARTICLES

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A WATER QUALITY SURVEY OF SELECTED COASTAL LAKES IN THE SAND DUNE REGION OF WESTERN LANE AND DOUGLAS COUNTIES 1972-1973

FINAL REPORT

Douglas W. Larson
Water Quality Studies

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY

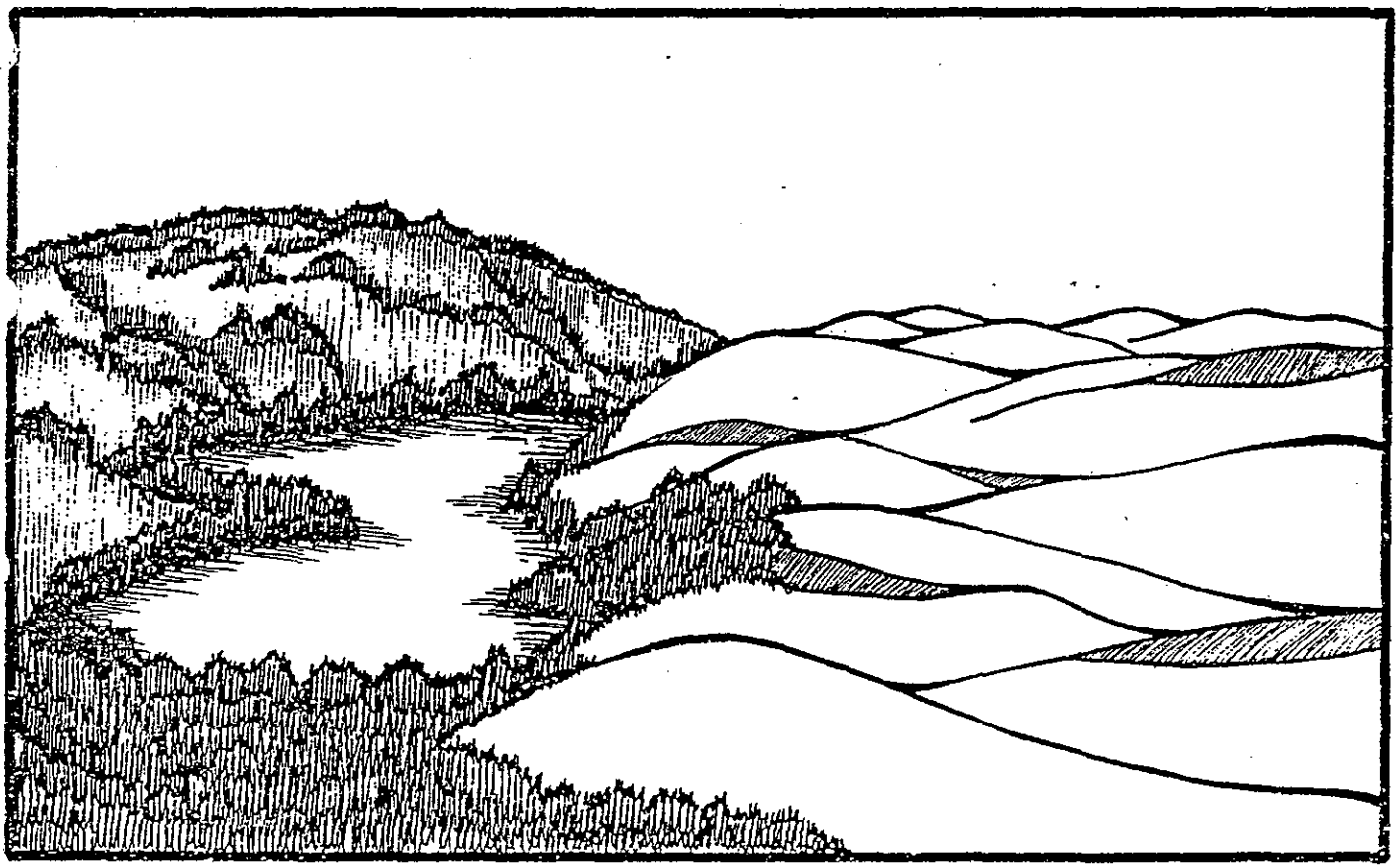
January, 1974

Table 46

Concentrations of nitrogen and phosphorus compared among the study lakes. Data from Department of Environmental Quality survey (1972). Water samples collected from depth of 3-6 feet. Values expressed in milligrams per liter.

Lake	Station	3/20-21/72			6/12-13/72			8/21-22/72			10/30-31/72		
		NH_3-N	NO_3-N	PO_4	NH_3-N	NO_3-N	PO_4	NH_3-N	NO_3-N	PO_4	NH_3-N	NO_3-N	PO_4
Siltcoos	1	-	-	-	0.119	< 0.03	0.01	-	-	-	-	-	-
"	2	0.03	0.63	0.01	0.105	< 0.03	0.01	-	-	-	-	-	-
"	3	0.02	0.68	0.02	0.025	< 0.03	0.01	-	-	-	-	-	-
"	4	-	-	-	0.030	< 0.03	0.01	-	-	-	-	-	-
"	5	0.02	0.60	< 0.01	0.061	< 0.03	0.02	0.04	< 0.03	< 0.01	0.02	0.13	< 0.01
"	6	-	-	-	0.063	< 0.03	< 0.01	0.07	< 0.03	< 0.01	0.04	0.23	0.16
"	7	0.02	0.58	< 0.01	0.031	< 0.03	< 0.01	-	-	-	-	-	-
Woahink	1	0.03	0.24	< 0.01	0.060	0.11	0.01	-	-	-	-	-	-
"	2	-	-	-	0.058	0.15	0.04	-	-	-	-	-	-
"	3	-	-	-	0.021	0.10	< 0.01	-	-	-	-	-	-
"	4	-	-	-	0.021	0.09	0.03	0.06	0.07	< 0.01	0.04	0.21	< 0.01
"	5	0.03	0.20	<0.01	<0.010	0.11	< 0.01	-	-	-	-	-	-
"	6	-	-	-	<0.010	0.10	0.01	-	-	-	-	-	-
"	7	-	-	-	0.021	0.10	0.02	-	-	-	-	-	-
"	8	0.02	0.19	<0.01	0.110	0.09	0.02	-	-	-	-	-	-
Mercer	1	-	-	-	0.068	0.34	0.04	-	-	-	-	-	-
"	2	-	-	-	0.060	0.42	< 0.01	-	-	-	-	-	-
"	3	-	-	-	0.055	0.42	< 0.01	-	-	-	-	-	-
"	4	-	-	-	0.061	0.38	< 0.01	-	-	-	-	-	-
"	5	0.07	0.87	0.19	0.030	0.38	< 0.01	0.03	< 0.03	< 0.01	0.19	0.17	0.02
"	6	0.04	0.77	0.02	0.095	0.38	0.02	-	-	-	-	-	-
"	7	-	-	-	0.115	0.39	< 0.01	-	-	-	-	-	-
Collard	1	0.06	0.40	<0.01	0.068	0.27	< 0.01	-	-	-	-	-	-
"	2	-	-	-	0.132	0.25	< 0.01	0.05	< 0.03	0.02	0.03	0.16	< 0.01
"	3	-	-	-	-	-	-	-	-	-	-	-	-
Clear	1	-	-		0.085	0.	< 0.01	-	-	-	-	-	-
"	2	<0.001	0.17	.01	0.110	0.	0.01	-	-	-	0.03	0.22	0.07
"	3	0.07	0.20	<0.01	0.060	0.12	< 0.01	0.05	< 0.03	0.01			

North Florence Dunal Aquifer Study



June 1982

LCOG Lane Council of Governments
NORTH PLAZA LEVEL PSB / 125 EIGHTH AVENUE EAST / EUGENE, OREGON 97401 / TELEPHONE (503) 687-4283

208 WASTE WATER MANAGEMENT

It appears that groundwater sources low in iron and suitable for use without treatment are found only in or near areas of open sand and away from forests and bogs. Figure 28 maps areas of low iron concentration. For comparison, iron concentrations found at various depths in deep well #1 are shown in Figure 29. It is obvious that high iron concentrations are found in the deep sand layers, and may exceed 10.0 mg/L. Fluctuations in seasonal iron concentration at selected sites are also found in Figure 30.

Bacteriology-Fecal Coliform

Fecal coliform are not normally disease producing but their presence is strongly correlated to human or other mammalian waste and are therefore used as an indicator of the potential for health concern. The levels of fecal coliform contamination found in surface and groundwaters are shown in Table 9. It is worth noting that both median and average levels are less than one for most groundwaters sites except near the landfill. In contrast, all surface sites except Clear Lake show significant concentration of fecal coliforms. This is not unexpected since surface waters are open to human and animal contact, but it is interesting to note that the concentrations found in Clear, Collard, Munsel and Sutton lakes roughly parallels the relative human use of these lakes.

The data show nearly uniform and low bacterial levels in the aquifer and are in conformance with expectations from results of the "Decay and Dispersion Study" which indicated that bacterial concentrations (they have a lifetime of about 30 days in the ground) died off before they had reached a distance of 300' from the point of injection. Groundwater flow as determined from hydrologic modeling indicated rates of travel of about two feet per day or 60 feet in the life expectancy period of the bacteria.

Phosphorus

Table 10 indicates selected total phosphorus concentrations for various sites within the aquifer. Phosphorus levels are generally much lower in the ground water (0.005-0.015 mg/L) than in surface waters (0.01 to 0.06 mg/L). A notable exception is site #30 for which there is no current explanation.

Of particular interest is the similarity in phosphorus concentrations between Collard Lake (0.012 mg/L), Clear Lake (0.009 mg/L) and the Clear Lake Aquifer (0.010 mg/L). This would indicate that levels in the lakes are still close to background levels, but certainly sufficient for eutrophication to occur (approximately 0.005 mg/L minimum according to Table 5).

As noted previously, phosphorus generally is well absorbed by clay soils and, apparently, still sufficiently retarded in sand to keep levels near background throughout the aquifer. Since the eastern part of the watershed contains soils with a higher clay content it is reasonable to

TABLE 10. Phosphate-Phosphorus Levels for Different Types of Areas.

PHOSPHOROUS-PO4-P mg/L

Site Group	# of Sites	Average	Median	# of Values	Range
Open Sand	4+	.011	.007	40	.000-.048
Pine Forest	4+	.010	.007	40	.000-.033
Seasonal Ponds	1+	.017	.012	14	.006-.038
Developed-Unsewered	2+	.013	.009	25	.000-.033
Developed-Sewered	3+	.046	.011	21	.003-.710
Clear Lake Aquifer	4+	.009	.007	40	.000-.048
Clear Lake	1	.014	.007	8	.000-.038
Collard Lake	1	.012	.007	9	.005-.040
Sutton Creek (Lake)	2	.022	.021	18	.017-.039
Munsel Creek (Lake)	1	.012	.013	9	.006-.019
Landfill	1	.020	.019	8	.015-.014
Golf Course	1	.019	.011	8	.005-.056
Hecata Beach	1	.019	.020	8	.005-.028

200978

LIMNOLOGY AND NUTRIENT DYNAMICS OF CLEAR LAKE, LANE COUNTY, OREGON

Prepared for
LANE COUNTY, OREGON

by

Richard B. Raymond, Ph.D
Stephen A. Wille
COOPER CONSULTANTS, INC.
PORTLAND, OREGON

and

James W. Sweet
AQUATIC ANALYSTS
PORTLAND, OREGON

February 1985

Exhibit 2
3

200997

TABLE 1-1 SUMMARY OF DATA FROM EARLIER STUDIES ON CLEAR LAKE (RANGE OF VALUES)

Parameter	1972[1]	1979[2]	1980[3]	1984[4]
pH (units)	6.7 - 7.2	6.2 - 6.7		6.10 - 8.04
Alkalinity (meq/L)	0.14 - 0.18	0.18 - 0.24		0.18 - 0.22
Chlorophylla (mg/m^3)	---	0.7 - 2.8		0.17 - 2.91
Secchi depth (m)	3.9 - 6.1	5.0 - 6.5		4.4 - 7.3
Conductivity (umho/cm)	54 - 70	61 - 82		54 - 59
Phosphorus (mg/L P)	n.d. - 0.07	0.009 - 0.019	n.d. - 0.038	n.d. - 0.01
Nitrate (mg/L N)	n.d. - 0.22	0.01 - 0.10	0.020 - 0.110	n.d. - 0.19
Na (mg/L)	5.8 - 8.6	---		5.17 - 7.68
K (mg/L)	n.d. - 0.5	---		0.658 - 0.95
Turbidity (NTU)	1 - 3	---		0.61 - 2.4

n.d. = not detected

1 Larson 1974.

2 Bryant et al. 1980.

3 Christensen and Rosenthal 1982.

4 This study (data from epilimnion only).

Exhibit 2
4

CLEAR LAKE WATERSHED STUDY

Phosphorus Loading Analysis and Management Recommendations

Peter O. Nelson
Associate Professor
Civil Engineering Department
Oregon State University
Corvallis, Oregon 97331
(503) 737-2751

Exhibit 17
Page 1

700643

Vollenweider Analysis - Phosphorus Loading to Lakes

Reference: Gilliom, R. J., "Estimation of Nonpoint Source Loadings of Phosphorus for Lakes in the Puget Sound Region, Washington" U. S. Geological Survey Water-Supply Paper 2240 United States Department of Interior, 1983.

Predicted epilimnetic steady-state mean phosphorus (P) concentration, ug/L:

$$P_{ss} = \frac{L^{\bullet}(1-R)}{z\,A\,\rho}$$

$L^{\bullet}$ = P-loading to lake, kg P/yr

R = lake retention coefficient

z = mean lake depth, m

A = lake surface area, km^2

ρ = lake flushing rate, number per year (y^{-1})

Predicted lake sensitivity (S) to increased phosphorus loadings (function of physical characteristics of lake):

$$S = \frac{(1-R)}{z\,A\,\rho}$$

Therefore:

$$P_{ss} = L^{\bullet}\,S$$

Phosphorus loading to lake:

$L^{\bullet}$ = precipitation + forest runoff + groundwater input + upstream lakes + residential runoff + wastewater (septic tanks) + agricultural runoff

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Page 2
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Clear Lake Analysis

Sensitivity analysis:

$R = (1+\rho^{0.5})^{-1}$; $\rho = (RT)^{-1} = (1.4)^{-1} = 0.73\ y^{-1}$, where RT = lake retention time, y

$R = (1+0.73^{0.5})^{-1} = 0.54$

$$S = \frac{(1-0.54)}{(12.8)(0.62)(0.73)} = 0.079$$

Gilliom Table 7: $S * 10 = 0.8$ = low sensitivity

Phosphorus loading analysis:

Basis: "present" = present loading from Collard L. and no nearshore dwelling units
"future" = future loading from Collard L. and 5 nearshore (≤250 ft) dwelling units

Present loading:

$L^* =$	12.4	+ 10.6	+ 11.3	+ 0.0	+ 0.0	+ 23.5	= 57.8	kg P/y total
	pptn.	forrest	dunal aquifer	resid. runoff	septic tanks	Collard L.		

Future loading:

$L^* =$	12.4	+ 10.6	+ 11.3	+ 3.0	+ 4.0	+ 49.5	= 90.8	kg P/y total
	pptn.	forrest	dunal aquifer	resid. runoff	septic tanks	Collard L.		

41% loading from Collard Lake (present)

55% loading from Collard Lake (future)

8% loading from resid. runoff and septic tanks (future)

Predicted phosphorus conc.:

$P_{SS} = L^* S = 57.8\ (0.079) = 4.6$ ug P/L (pres.)

$= 90.8\ (0.079) = 7.2$ ug P/L (future)

Present = excellent water qual. (Group A, Gilliom: low algal productivity)

Future = excellent water qual. (Group A, Gilliom: low algal productivity)

700645

Frederick A. Batson
Gleaves Swearingen Larsen & Potter
P. O. Box 1147
Eugene, OR 97401
(503) 686-8833

(Attorneys for Plaintiffs)

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF OREGON

JOHN WHITE and ROSEMARIE WHITE, husband and wife, Plaintiffs, vs. HECETA WATER DISTRICT, an Oregon municipal corporation; ART KONING; STEVE OLIENYK; BOB SLEEPER; HUGHIE CARTER; and ROBERT WICK, individuals, Defendants.	Case No. 91-816-JO AFFIDAVIT OF HAROLD YOUNGQUIST IN SUPPORT OF PLAINTIFF' MOTION FOR PARTIAL SUMMARY JUDGMENT

STATE OF OREGON)
) ss.
County of Lane)

I, Harold Youngquist, being first duly sworn on oath depose and say:

1. I am the Lane County Health Engineer. In the course of my duties I have become aware of the chlorination currently used by Heceta Water District ("Heceta") to treat its water and the treatment requirements that apply to Heceta.

EUGENE, OREGON 97440-1147
(503) 686-8833

2. I am also aware of the concerns about phosphorous raised by Heceta. If additional phosphorus reaches the water used by Heceta, it will not create a drinking water health risk. It may cause algae to grow, but it will have no impact on whether Heceta's water is healthy or safe to drink.

3. By 1993 Heceta will be required to have a filtration facility in addition to the existing chlorination facility. A filtration plant can remove any color or turbidity caused by algae suspension.

4. Treatment beyond what Heceta is required to provide by 1993 is not necessary for the supply of safe, healthy drinking water to Heceta's customers.

Harold J. Youngquist

Harold Youngquist

Signed and sworn to before me on December 23, 1991 by Harold Youngquist.

Notary Public for Oregon
My Commission Expires: 5.7.93

OFFICIAL SEAL
SYLVIA DOGGETT
NOTARY PUBLIC - OREGON

Exhibit 16
Page 2

Frederick A. Batson
Gleaves Swearingen Larsen & Potter
P. O. Box 1147
Eugene, OR 97440
(503) 686-8833

(Attorneys for Plaintiffs)

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF OREGON

ROBERT L. MERZ and SHIRLEY M. MERZ, husband and wife; VINCENT M. HOWARD, JR.; GORDON BRIAN HOWARD; MARCIA LEE SMITH; RICHARD G. SARGENT; RUBY BROEKER; KAREN L. ANDERSON; and AARON U. JONES, Plaintiffs, vs. HECETA WATER DISTRICT, an Oregon municipal corporation; STATE OF OREGON, by and through its Environmental Quality Commission; WILLIAM B. FINLEY; LARRY STONELAKE; STEVE OLIENYK; ART KONING; BOB SLEEPER; HUGHIE CARTER; ROBERT WICK; and MICHAEL KEATING, Defendants.	Case No. 91-817-TC AFFIDAVIT OF HAROLD YOUNGQUIST

STATE OF OREGON)
)ss
County of Lane)

I, Harold Youngquist, after being first duly sworn do depose and say:

I am the Lane County Public Health Engineer. In the course of performing my duties I have become aware of the filtration

Exhibit 16
Page 2

EUGENE, OREGON 97440-1147
(503) 686-8833

requirements and capabilities of the proposed filtration facility which must be built by Heceta Water District to supplement the existing disinfection process. The proposed treatment facility must remove or inactivate 99.9% of giardia cysts and 99.99% of viruses. To do so it must remove, inactivate or make non-viable numerous particles, including particles of algae. Most algae particles are larger than giardia cysts (5-15 microns) and viruses (<1 micron) and should be removed or inactivated by the treatment facility. It is my opinion that a properly designed treatment facility will produce safe drinking water in compliance with Oregon State Health Division rules and, if operated according to accepted practices, should obviate the need for any additional treatment.

Harold Youngquist

Signed and sworn to before me on March 20, 1992 by Harold Youngquist.

Notary Public for Oregon
My Commission Expires: July 27, 1994

OFFICIAL SEAL
ADA M. NOBLE
NOTARY PUBLIC - OREGON
COMMISSION NO. 000149
MY COMMISSION EXPIRES JULY 27, 1994

EUGENE, OREGON 97440-1147
(503) 686-8833

Exhibit 16
Page 4

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

REQUEST FOR EQC ACTION

Meeting Date: December 14, 1990
Agenda Item: K
Division: Water Quality
Section: Surface Water

SUBJECT:

Clear Lake (near Florence): Adoption of Proposed Rules Modifying OAR 340-41-270 Special Policies and Guidelines for the Mid Coast Basin.

PURPOSE:

The rules, if adopted, would establish new loading limitations and other requirements for protecting water quality in Clear and Collard Lakes near Florence, Oregon.

ACTION REQUESTED:

___ Work Session Discussion
___ General Program Background
___ Potential Strategy, Policy, or Rules
___ Agenda Item ___ for Current Meeting
___ Other: (specify)

___ Authorize Rulemaking Hearing
_X_ Adopt Rules
Proposed Rules — Attachment A
Rulemaking Statements — Attachment ___
Fiscal and Economic Impact Statement — Attachment ___
Public Notice — Attachment ___
Other: — Attachment ___

___ Issue a Contested Case Order
___ Approve a Stipulated Order
___ Enter an Order
Proposed Order — Attachment ___

70[illegible]47

V. W. KACZYNSKI, PH.D.
35022 OLIVER HEIGHTS COURT
ST. HELENS, OREGON 97051
TEL: (503) 397-5332
FAX: (503) 397-6984

K0045
May 13, 1996

Ms. Nan Laurence
Associate Planner
Land Management Division
Lane County Court House
125 East 8th Avenue
Eugene, OR 97401

Dear Ms. Laurence:

Subject: Clear Lake Mediation Amendments to Lane County Rural Comprehensive Plan and Florence Comprehensive Plan and Codes.

I am an aquatic scientist with a Ph.D. and M.S. in limnology. I have studied Clear Lake water quality and algal growth issues on a continuing basis since 1982. I believe that I have read and studied every report on Clear Lake that has been issued, and have testified on Clear Lake issues. I am enclosing my current Curriculum Vitae for you review.

I previously analyzed the phosphorus standards adopted by the EQC/ODEQ for the Clear Lake watershed. In April, 1990 I provided to ODEQ the attached letter analysis. In 1992, I analyzed the standards in the context of a rule Heceta Water District was considering adopting. Attached are portions of my analysis at that time. As shown in the attached analysis , even without considering Dr. Jarrell's soil tests in the Clear Lake watershed, the ODEQ approach used compounding safety factors that resulted in a standard that was some 390 to 640% conservative.

I have been asked to give my professional opinion on whether Clear Lake water quality and algal production will change if the ODEQ moratorium is lifted as part of Lane County's plan and before any sewers are installed in the watershed. The summary answer is no (with a high degree of scientific probability as explained below and in the attached analysis of the loading standards adopted by ODEQ/EQC).

Dr. Wesley Jarrell has performed some key studies that allow us to make the above straight forward answer. The studies were performed in a professional manner and the results appear reliable. In essence, Dr. Jarrell's results indicate that the surface soils surrounding Collard and Clear Lakes are naturally deficient in phosphorus and have a high affinity to bind dissolved phosphorus to the individual soil particles. The chemical affinity to bind phosphorus is strong and very little phosphorus can escape this

binding. This means that septic tank or lawn and garden fertilizer phosphorus dissolved in ground water won't travel very far through the surface soils before the phosphorus is scrubbed from the ground water by the soil particles. There is very little chance of any septic tank or lawn-garden phosphorus ever reaching Collard and Clear Lakes.

One might then ask whether soil disturbing activities (such as digging a patio area, or a driveway, or a new house foundation, or a home garden plot) might release soil-bound phosphorus to surface runoff. Dr. Jarrell's studies show that the soil-phosphorous binding is tight and strong and very little bound phosphorus can escape from the soil particles to either surface or ground water as dissolved phosphorus. A soil particle might reach the lake(s) but dissolved phosphorus probably will not.

The measures proposed in the Lane County and Florence Plan and Code Amendments reinforce the natural soil binding situation, add vegetation filtration measures, minimize erosion and surface runoffs, and increase the probability of no dissolved phosphorus reaching the lake from such sources to a very high level of confidence. There is no apparent need for for continuing the moratorium on new septic tanks on the buildable lots in the watershed. No detectable amounts of dissolved phosphorus should be added to Collard or Clear Lakes as a result of lifting the present EQC/ODEQ moratorium on construction of new septic tanks.

The amounts of dissolved phosphorus in Clear Lake should remain at the low levels detected in past and present monitoring studies. Dissolved phosphorus is used by algae for growth. Previous studies by Cooper Consultants concluded that algal growth in Clear Lake is limited by the amount of dissolved phosphorus in the lake water. ODEQ reached the same conclusion that dissolved phosphorus is the limiting nutrient in Clear Lake for algal growth. The amounts and kinds of algae growing (and dissolved phosphorus) in Clear Lake have not changed significantly since monitoring began years ago. Because the amounts of dissolved phosphorus in the lake are not expected to change, the amounts and kinds of algae are not expected to change (from rural home-type development that might occur in the area if the moratorium is lifted). Clear Lake should remain clear, clean, and oligotrophic. We can make these statements with a high degree of confidence.

Respectively submitted,

V.W. Kaczynski, Ph.D.
Limnologist

V.W. Kaczynski
Senior Aquatic Scientist

EDUCATION
Ph. D., M.S. Limnology, Cornell University
B.S. Biology, SUNY at Buffalo

EXPERIENCE
In 1989, Dr. Kaczynski formed his own consulting firm to evaluate and help solve water quality problems. Prior to this, he was the firm wide director of environmental sciences for CH2M-Hill. He is a recognized expert in the interpretation of water quality and toxicological data. Dr. Kaczynski routinely worked as a quality control reviewer on dozens of eutrophication studies related to treated municipal effluent discharges and urban and agricultural non point source runoffs while at CH2M-Hill. He was an instructor on implementing the Clean Water Act amendments and devising strategies to meet total maximum daily loads for conventional and priority pollutants. He served on Oregon Department of Environmental Quality's technical advisory committee for the Tualatin River Basin (dissolved phosphorus and algae problems).

Dr. Kaczynski has been retained off and on for several years to study Clear Lake (Oregon) water quality, phosphorus loading, and potential algal growth issues. He has analyzed several estimates of phosphorus loadings into Clear Lake, the ODEQ/EQC adapted phosphorus standards, all available lake studies, and has presented testimony on these issues.

He was a consultant to the Unified Sewerage Agency of Washington County on the water quality of the Tualatin River and tributaries, Lake Oswego, and the Willamette River (as affected by the Tualatin system). This was a large project that included water quality monitoring assessment, algal bioassays, water quality modeling (hydrologic, nutrients, dissolved oxygen and algal responses), water quality goal setting, development of total maximum daily loads and waste load allocations for dissolved phosphorus, and the design of a 45 acre pilot wetland treatment (polishing) facility. He was a consultant to the City of Portland on the water quality and eutrophication problems in the Columbia Slough, Johnson Creek, and the lower Willamette River. Identified problems included combined sewer overflows, agricultural runoff, urban runoff, and industrial runoff. He was instrumental in the development of action plan strategies and goals for the Columbia Slough cleanup. Nutrient dynamics and excessive algal growth were priority problems (plus toxics control). He analyzed effects of the Tryon Creek Wastewater Plant treated effluent on the water quality of the lower Willamette River. He was a water quality consultant to the Roseburg USA on nutrient and algal problems in the Umpqua River.

He was a consultant to Portland General Electric Company for several projects including preoperational baseline and monitoring studies at the Trojan Nuclear Plant on the lower Columbia River (primary productivity, zooplankton, benthos, fisheries), preoperational studies at the proposed Pebble Springs Nuclear Plant cooling water

intake locations in the John Day Pool (Columbia River). and PCB leachate studies from a decommissioned steam plant on the lower Willamette River (present OMSI site). He studied non-point runoff problems in the Longview Drainage District (Washington) and connecting Columbia River sloughs.

Dr. Kaczynski recently completed a large water quality study for the City of Las Vegas. This study evaluated nitrogen and phosphorus loadings from treated effluent on Lake Mead in Nevada. The study results were used to establish wastewater treatment level goals to protect the oligotrophic nature of Lake Mead. He was the senior aquatic consultant on the Milwaukee, Wisconsin wastewater treatment study and detailed design engineering. This study evaluated nutrient loadings on Lake Michigan and several local rivers and streams and developed a facilities plan to solve excessive loading problems. He was a consultant to Calgary Power on aquatic macrophyte weed growth problems in Waubamun Lake (Alberta), and on algae growth problems in Capital Lake (Washington), for the City of Olympia (Clean Lakes Program). He evaluated the status of water quality in the Fox and Wisconsin Rivers in Wisconsin relative to goals established prior to secondary treatment, and the effectiveness of treatment in meeting those goals.

Most recently, Dr. Kaczynski has been working with the timber industry in a proactive manner to meet water quality and fisheries protection goals in the Pacific Northwest. He has coordinated stream habitat surveys on industry streams and coordinated efforts to begin stream and riparian habitat restoration projects in the Oregon Coast Range (North, Mid, and South Coast Projects).

Dr. Kaczynski was a researcher at the University of Washington while an Assistant Professor of Biological Oceanography. He participated in the Upwelling Program primary and secondary productivity studies along the coasts of Oregon and Washington and studied primary and secondary production in the North Pacific Ocean. He was the Environmental Technical Director, Texas Instruments; President, Beak Consultants Inc.; Vice President for Western Canada, Beak Consultants Ltd.; and Director of Environmental Sciences, CH2M-Hill.

PROFESSIONAL REGISTRATION and SOCIETIES
Certified Aquatic Scientist, American Fisheries Society
American Society of Limnology and Oceanography
New York Academy of Science
Sigma Xi

V. W. KACZYNSKI, PH.D.
12985 S.W. 135TH AVENUE
TIGARD, OREGON 97223
(503) 644-6889

K0011
April 5, 1990
Clear Lake

Mr. Richard Nichols
Water Quality Section
Oregon Dept. Environmental Quality
811 S.W. 6th Ave.
Portland, OR 97204

Dear Mr. Nichols:

Subject: Summary of Observations on Clear Lake Water Quality and Proposed Annual Phosphorus Load Limits and Median Phosphorus and Chlorophyll -a Concentrations.

Dick, here is a summary of my observations and calculations on Clear Lake. Data source for all estimates is Cooper (1985) unless stated otherwise.

PHOSPHORUS

- The best estimate of annual average instantaneous phosphorus quantity within Clear Lake is 170 pounds; lake volume x annual average lake concentration (8.5 billion liters x 9.1 ug P/L). This is a good reference number to compare subsequent estimates.

- The estimate for instantaneous annual average phosphorus quantity within the epilimnion is (11892 g) (epilimnion volume x annual average epilimnion concentration; 1.7 billion liters x 7 ug/L)

- Average summer estimate of phosphorus in lake is 190 pounds. (Average lake summer concentration is 10 ug P/L)

- Average summer estimate of phosphorus in epilimnion is (13166 g) (Average epilimnion summer concentration is 7.8 ug/L)

- The best estimates of annual water inputs are: (Century West, 1985)

Aquifer	1.8 cfs (51 L/s)
Precipitation	1.5 cfs (42 L/s)
Runoff	1.1 cfs (31 L/s)
Collard Crk.	2.4 cfs (68 L/s)
Total	6.8 cfs (193 L/s)

- Lake turnover or replacement times is 510 days or 0.715x/year.

- Initial estimate of annual phosphorus loading is 6.8 cfs (192.6 L/s) @ 0.0091 mg P/L or 122 pounds P/year.

- Or 0.715 x 170 lbs P = 122 pounds P/year.

- A better estimate would be:

Source	Flow	Empirical Concentration	Yearly Loading
Aquifer	51 L/s	...	...
Precipitation	42 L/s	...	...
Runoff	31 L/s	...	...
Collard Crk	68 L/s	0.011 mg P/L	52 Pounds

P.O. Nelson (1990) approximated concentrations, in part apparently from Gilliom (1983):

- Precipitation - 0.0093 mg P/L which is close to the maritime average value of 0.01 used by most researchers, which should be similar here.

- Groundwater - 0.007 mg P/L; I have no basis for comparison other than it is within range of unpolluted groundwater.

- Runoff - 0.011 mg P/L; appears reasonable (to touch high).

- Collard Lake - 0.011 mg P/L; same number as average from Cooper, 1985.

- So we can construct a mass balance loading table to derive a pretty good estimate of annual phosphorus loading to Clear Lake:

Source	L/s Flow	mg P/L Concentration	Pounds P Yearly Load
Aquifer	51.0	0.0070	24.8
Precipitation	42.5	0.0093	27.5
Runoff	31.15	0.0108	23.4
Collard Crk	68.0	0.0110	52.0
Total	192.6	0.00953	127.7, say 128 pounds

P.O. Nelson (1990) estimated the annual P loading at 127 pounds. So we have estimates of 122, 127 and 128 pounds P per year loading. And we have an estimate of P concentration of 0.00953 mg P/L versus a measured annual average of 0.0091. I believe we are pretty close here at 127 to 128 pounds P per year. This appears reasonable.

What is an allowable P nutrient loading for Clear Lake that would retain its oligotrophic nature?

1. EPA, 1986 "Quality Criteria for Water"

   a) In excess of 100 ug P/L may interfere with drinking water treatment processes.

b) In excess of 25 ug P/L in lakes may stimulate excess algal growth.

c) Recommends application of Vollenweider's phosphorus loading approach. Yields allowable annual P loadings that will retain oligotrophic lake quality. Expressed as grams P per square meter of surface area per year. One needs to calculate the ratio of mean depth over hydraulic detention time.

- 12.75m (mean depth)/1.4 years = 9.125 ratio
- Tabular value @ 9.125 is 0.3 g P/M^2 /year.
- @ 667,755M^2 = 200 kg P/year for Clear Lake

Thus, per EPA (Vollenweider) the permissible phosphate phosphorus loading is 200 kg or 441 pounds per year. EPA (1986) points out that most uncontaminated lakes have a P concentration in the rage of 10 to 30 ug P/L.

2. Applying Chapra & Tarapchak @ 2.75 ug chl-a/L yields a permissible loading of about 317 pounds P/year.

3. Applying Dillon & Rigler (Gilliom) @ 2.75 ug chl-a/L yields a permissible loading of about 346 pounds P/year.

So, we can now estimate the quantities of phosphorus that could be added beyond the present loading and still retain oligotrophic status in Clear Lake:- (pounds P/year)

1. EPA (Volenweider) (general oligotrophic quality)	441 (total permissible) -128 (1984) 313 (potential new sources)
2. Chapra & Tarapchak (@ 2.75 ug chl-a/L)	317 -128 189
3. Dillon & Rigler (@ 2.75 ug chl-a/L	346 -128 218

So, our estimate of allowable new source load is between 189 and 313 pounds P/year, and the maximum allowable phosphorus loading is between 317 to 441 pounds.

Let us address the proposal median concentration limits of P and chl-a:

(2) Total phosphorus maximum annual loading (between 317 to 441 pounds) deemed exceeded if:

(a) Median concentration in epilimnion (between May 1 and Sept. 30) exceeds 9.5 ug P/L in two consecutive years.

(b) Median chl-a concentration in epilimnion (between May 1 and Sept. 30) exceeds 2.75 ug chl-a/L in two consecutive years.

Comments:

The use of 2 variables to decide if there is a problem in compliance is good. One variable by itself could be exceeded by sampling variability (shown below). The odds of two variables being exceeded by chance in sampling is remote. Therefore the criteria wording should b 2(a) and (b) exceeded in 2 consecutive years.

Cooper's 1984 data (reported in 1985) yield a mean estimate of 7.75 ug P/L in the epilimnion in Summer with a SD of 3.5 ug P/L.

The epilimnion (summer) computed median chl-a was 2.5 ug chl-a/L. Missing sample values clearly indicate that the actual summer 1984 median epilimnion value was higher. See attached table.

DEQ's tentative proposed median values appear tight. EPA's general guidance is 25 ug P/L for lakes. 10 ug P/L is in the low range (ultraoligotrophic) for lakes. 2.75 ug chl-a/L appears to be below the actual median value observed in 1984 in the Cooper study. The actual 1984 median value appears to be about 3.0, substituting typical weekly values for missing values. If there is a late spring or late summer, the actual 1984 median value would probably be about 3.0 as well. Mean summer chl-a values (and standard deviations) follow:

Data Computed		Estimate Missing Values		Late Spring	
$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
3.26	3:74	2.97	3.22	3.56	3.22

These data indicate that a standard error estimate is 0.08 to 0.12. So, we should anticipate average measurements of chl-a in the epilimnion of Clear Lake in summer to be about 2.9 to 3.1 mg/1 (low range) and 3.4 to 3.7 ug/L (high range), under existing conditions.

I sincerely hope this information is useful to you.

Best regards,

Vic

V. W. Kaczynski, Ph.D.
Limnologist

VWK:mf

VWK letter to Nichols April 5, 1990

5 of 5

Clear Lake 1984 Chl-a Values, Epilimnion "Summer"

Stations	1	4	5	6	7	8	9	
Dates	(5.0)	(4.0)	(5.0)	(5.0)	(4.0)	(5.0)	(11.0)	(April) Spring Bloom
08 May	0.7	1.4	1.4	1.0	1.4	1.4	3.0	
05 Jun	3.0	3.0	x	2.0	x	6.0	7.0	(use 3.0 for missing values)
1 Jul	12.0	4.0	1.0	1.0	1.0	1.0	19.0	
31 Jul	3.0	3.0	x	x	x	x	x	(use 3.0 for missing values)
27 Aug	2.0	2.0	3.0	3.0	3.0	3.0	3.0	
4 Sep	1.2	1.2	x	x	x	x	x	(use 1.2 for missing values)

AFFIDAVIT OF V. W. KACZYNSKI

STATE OF OREGON)
) ss.
County of Washington)

I, V. W. Kaczynski, being first duly sworn on oath depose and say:

I am a Senior Aquatic Consultant. Attached hereto as Exhibit "1" is a copy of my Resumé.

I was asked to review the need for Heceta Water District's proposed Regulations 5 and 6 (second draft of Regulation 5 dated May 23, 1992) relative to protecting Clear Lake water quality. These regulations are not necessary given the Oregon Department of Environmental Quality's (ODEQ) June 29, 1990 protective rules for Clear Lake. The reasons for my conclusion follow.

I have professionally followed Clear Lake water quality issues since 1982. I believe that I have reviewed all of the scientific and policy documents that relate to Clear Lake water quality and use. The Cooper Consultants, Inc. 1985 study, "Limnology and Nutrient Dynamics of Clear Lake, Oregon" (Cooper, 1985) and the Century West Corporation 1985 study, "Technical Feasibility Analysis and Economic Evaluation" (Century West, 1985) provide good relevant background information. In addition, ODEQ has subsequent monitoring results and analytical information in its June, 1990 rules document.

From the available data one can summarize and estimate basic limnological information for Clear Lake. These follow:

- Lake volume, 8.5 billion liters (Cooper, 1985).
- Annual water inputs (Century West, 1985).
  - Aquifer 1.8 cfs (51 liters/second).
  - Precipitation 1.5 cfs (42 liters/second).
  - Runoff 1.0 cfs (31 liters/second).
  - Collard Creek 2.4 cfs (68 liters/second).

  Total 6.8 cfs (193 liters/second).
- Lake water replacement time (turnover rate) is 510 days or 0.715 times per year (Cooper, 1985).
- Average annual phosphorus concentration is 9.1 micrograms per liter, 9.1 mg/P/L (Cooper, 1985).
- Average instantaneous quantity of phosphorus in Clear Lake is about 170 pounds; 8.5 billion liters times 9.1 mg P/L = 77,350 grams P or 170.5 pounds. (Cooper, 1985 data).
- Simple estimate of average annual phosphorus loading into Clear Lake is about 122 pounds; 0.715 times per year replacement rate times 170 pounds phosphorus instantaneous quantity in lake.
- Mass balance estimate of annual phosphorus loading of Clear Lake based on source concentration

estimates from P. O. Nelson (1990) and Century West water input estimates (1985) follows:

Source	L/s Flow	mg P/L Concentration	Pounds P Yearly Load
Aquifer	51.0	0.0070	24.8
Precipitation	42.5	0.0093	27.5
Runoff	31.1	0.0108	23.4
Collard Lake	68.0	0.0110	52.0
Totals	192.6	0.0095	127.7

- P. O. Nelson (1990) independently estimated the Clear Lake annual phosphorus loading at 127 pounds.
- So we have three estimates of annual phosphorus input (loading) with good agreement of 122, 127 and 128 pounds.
- ODEQ monitoring data indicate no change in phosphorus concentration since the 1985 Cooper study.
- ODEQ (1990) used a present annual phosphorus loading plus department reserve (safety factor) of 192 pounds per year in its protective rules. This was very conservative. There is at least a 64 pound P per year safety factor, a one-third level of safety.

- ODEQ (1990) set the allowable annual phosphorus loading limit in Clear Lake at 241 pounds per year to maintain Clear Lake's present high level of quality (oligotrophic lake condition). This was very conservative as we will soon see.
- Three scientific methods exist that have been used to evaluate permissible annual phosphorus load limits to retain Clear Lake in an oligotrophic high quality state:

Method	P Pounds Annual Load Limit
Vollenweider (EPA, 1986)	441
Chapra and Tarapchak (1976)	317
Gilliom (1983)	346

- ODEQ's (1990) 241 pound annual loading limit for Clear Lake has a safety factor of at least 76 pounds P per year in its rules. This is at least a one-third to one-half safety factor.
- ODEQ's 1990 rules have compounded safety factors in allowing additional phosphorus loadings. Per ODEQ 1990 rules, some 49 pounds of additional phosphorus load are permissible without compromising Clear Lake water quality. This is ultra-conservative. The commonly applied (and accepted) scientific methods yield permissive additions of between 189 and 313 pounds P per year. (Vollenweider's 441 - 128 annual existing P loading = 313 pounds P

permissive additions; Chapra's 317 - 128 annual P loading = 189 pounds P permissive additions). The compounded safety factor is between 390 and 640 percent!

- ODEQ (1990) conservatively estimates Collard Lake phosphorus loadings at 0.99 pounds per year per residence (0.88 pounds for on site sewage disposal and 0.11 pounds for storm runoff). Subsequent Clear Lake loading was estimated at 0.51 pounds P per year per Collard Lake residence and activity (0.52 factor).
- Let us use the 0.51 pounds P per year per residence to estimate the Clear Lake loading of eight additional Collard Lake residences and one new Clear Lake residence (note: according to phosphorus soil adsorption experiments performed by Dr. Wesley Jarrell of the Oregon Graduate Institute, the actual addition of phosphorus from the potential Clear Lake residence with a properly designed and installed septic tank is closer to zero for the next 100 years).
- Nine times 0.51 equals 4.59 pounds P per year additional potential loading to Clear Lake from these 9 possible residences and activities.
- Total estimated additional phosphorus loading into Clear Lake under the interim situation is less than

5 pounds per year, until Lane County completes its land use rules required by the 1990 ODEQ Clear Lake water quality protection rules.

- This is less than 10 percent of the allowable ultra conservative 49 pounds of additional phosphorus loading permitted by ODEQ (1990).
- This is less than 2 to 3 percent allowable by the three scientific methods commonly used to calculate allowable phosphorus load limits that would protect the oligotrophic quality of Clear Lake.

The above calculations and comparisons are all conservative and the results clearly indicate that ODEQ's protective rules are ultra conservative and provide very rigorous water quality protection for Clear Lake. Possible development of nine residences would pose no danger to the present high quality of Clear Lake. Prescribed monitoring of phosphorus concentration would detect changes in the epilimnion if they occurred, but no significant change is anticipated and no violation is anticipated.

The proposed Regulations 5 and 6 are completely unnecessary on a technical scientific basis to protect water quality given that only eight potential residences in the Collard Lake watershed and one potential residence in the Clear Lake watershed could be built and occupied at the present time. Even if all Collard Lake residences increased their phosphorus loading 20 percent, this would only amount

to about a 10.4 pound addition to the present 52 pound annual loading from Collard Creek. Again, there is a great level of safety in the permissible Clear Lake phosphorus loading. Such an increase in phosphorus loading to Clear Lake would still be within the allowable increase of 49 pounds under ODEQ 1990 rules (4.6 pounds potential new plus 10.4 pounds related to 20 percent increase equals 15 pounds, less than one-third of the allowable ultra-conservative 49 pounds).

V W Kaczynski

V. W. Kaczynski

Signed and sworn to before me on July 13, 1992 by V. W. Kaczynski.

John W. Hulbert Jr.

Notary Public for Oregon
My Commission Expires: 6-4-96

OFFICIAL SEAL
JOHN W. HULBERT JR.
NOTARY PUBLIC - OREGON
COMMISSION NO.015874
COMMISSION EXPIRES JUNE 04, 1996

Analysis of
- Drinking Water
- Waste Water
- Industrial Chemicals
- Solid Waste
- Bacteriology

Analytical Laboratory & Consultants, Inc.
361 West Fifth Ave.
Eugene, OR 97401
Oregon Certified Lab #16
(541) 485-8404

Lab Report No.: 69061
Client P.O.:
Date Received: 7/17/96 1520

ANALYSIS REPORT

Attention: Larry Stonelake
Client: Heceta Water District
87845 Hwy 101
Florence, OR 97439

Collected Date: 7/17/96 Time: 0720
Collected by: Larry Stonelake
Source: Water
Location: Clear Lake

PARAMETER	METHOD	DETECTION LEVEL	RESULTS
Nitrate-N	EPA 353.3/ SM 4500-NO_3 E	0.05	0.30
Total Phosphorus	EPA 365.3 / SM 4500-P E	0.005	ND

ND means "not detected"

APPROVED [signature]

DATE 7/30/96

Analysis of
- Drinking Water
- Waste Water
- Industrial Chemicals
- Solid Waste
- Bacteriology

Analytical Laboratory & Consultants, Inc.
361 West Fifth Ave.
Eugene, OR 97401
Oregon Certified Lab #16
(541) 485-8404

Lab Report No.: 69062
Client P.O.:
Date Received: 7/17/96 1520

ANALYSIS REPORT

Attention Larry Stonelake
Client Hecata Water District
87845 Hwy 101
Florence, OR 97439

Collected Date 7/17/96 Time 0720
Collected by Larry Stonelake
Source Water
Location Collard Lake

PARAMETER	METHOD	DETECTION LEVEL	RESULTS
Nitrate-N	EPA 353.3 / SM 4500-NO_3 E	0.05	0.16
Total Phosphorus	EPA 365.3 / SM 4500-P E	0.005	ND

ND means "not detected"

APPROVED John Hayden DATE 7/30/96

SETTLEMENT AGREEMENT

This AGREEMENT memorializes a settlement of the case of Robert L. Merz, et al. v. State of Oregon, et al., United States District Court Case No. 91-817-TC entered into on the 12th day of July, 1996, in a settlement conference conducted through the good offices of the Honorable Thomas M. Coffin, United States Magistrate Judge. The parties to the Agreement are as follows:

> Robert L. Merz and Shirley M. Merz, husband and wife; Gordon Brian Howard and Marcia Lee Smith, individually and as successors in interest to the Estate of Vincent M. Howard, Jr.; Richard G. Sargent; Ruby Broeker; Karen L. Anderson; Aaron U. Jones; Erling G. Omlid; Lloyd F. Omlid; and Ellis L. Rackleff, hereinafter called "the Plaintiffs";
>
> State of Oregon, acting by and through its Environmental Quality Commission and Department of Environmental Quality; Fred Hanson, William Young, and Langdon Marsh in their official capacity as current and former directors of the Department of Environmental Quality; William P. Hutchinson, Jr., Dr. Emery N. Castle, William W. Wessinger, Henry C. Lorenzen, Carol A. Whipple, Tony Van Vliet, and Linda McMahan in their official capacities as commissioners of the Environmental Quality Commission, hereinafter called "the State."

1. RECITALS.

A. Each of the Plaintiffs is the current or former owner of real property located within the area commonly known as the "Clear Lake Watershed" in Lane County, Oregon. In or around April 1983, the Environmental Quality Commission imposed a moratorium on the issuance of site approvals or permits for septic installations in the Clear Lake Watershed. Because of the moratorium and a subsequent modification of the moratorium adopted on or about December 1990, the Plaintiffs have been unable to

obtain site evaluations or septic permits for their properties.

B. As a result of the events set forth in Paragraph A., a lawsuit was filed in the United States District Court for the District of Oregon, Southern Division, entitled as follows:

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF OREGON

ROBERT L. MERZ and SHIRLEY M. MERZ, husband and wife; GORDON BRIAN HOWARD and MARCIA LEE SMITH, individually and as successors in interest to the Estate of Vincent M. Howard, Jr.; RICHARD G. SARGENT; RUBY BROEKER; KAREN L. ANDERSON; AARON U. JONES; ERLING G. OMLID; LLOYD F. OMLID, and ELLIS L. RACKLEFF, Plaintiffs, vs. HECETA WATER DISTRICT, an Oregon municipal corporation; STATE OF OREGON, by and through its Environmental Quality Commission; FRED HANSON, WILLIAM YOUNG and LANGDON MARSH in their official capacity as directors of the Department of Environmental Quality; WILLIAM P. HUTCHINSON, JR., DR. EMERY N. CASTLE, WILLIAM W. WESSINGER, HENRY C. LORENZEN, CAROL A. WHIPPLE, TONY VAN VLIET, and LINDA McMAHAN in their official capacities as commissioners of the Environmental Quality Commission; WILLIAM B. FINLEY; LARRY STONELAKE; ART KONING; BOB SLEEPER; STEVE OLIENYK; and MICHAEL KEATING, Defendants.	Case No. 91-817-TC

This suit concerned the matters set forth in A. above.

C. The court, through the Honorable Thomas M. Coffin, entered an Order regarding the moratorium and the modifications of the moratorium that is attached hereto as Exhibit A.

D. The parties met with their respective counsel and principals on July 2, 1996, and again on July 11 and July 12, 1996. A settlement was reached between the Plaintiffs and the State on July 12, 1996, which is memorialized below.

E. The parties to this agreement have expressly agreed to waive their rights to appeal or object to Magistrate Judge Coffin's order and the Plaintiffs and the State defendants, under LR 135-1 and 28 USC 636(c), have consented to Magistrate Judge Thomas M. Coffin conducting any and all proceedings, making dispositive decisions and entering Judgment in this case as noted above.

2. TERMS OF AGREEMENT.

The Plaintiffs and the State agree to the following:

A. The State's undertakings:

1. Upon receipt of this settlement agreement fully executed by all Plaintiffs and in full settlement of all claims against it, the State will pay without delay the sum of $900,000.00, inclusive of all costs, disbursements, attorney fees, damages and all other sums for which it could have been found liable as a result of the above-captioned

litigation. The check shall be made payable to the trust account of Gleaves Swearingen Larsen Potter Scott & Smith.

2. The State shall take appropriate action to repeal the moratorium on or before October 15, 1996, before it becomes a taking. No new restrictions on Plaintiffs' property shall be imposed as part of this rule making except as otherwise set forth in this agreement.

3. The State shall not object to or appeal from the entry of judgment on Magistrate Judge Coffin's order in the form attached as Exhibit B.

4. The State may testify in favor of the ordinances proposed to be adopted by Lane County, as set forth in a separate letter to Lane County Administrator William Van Vactor from Denise G. Fjordbeck, dated July 15, 1996 (copy attached hereto as Exhibit C).

5. DEQ and its agents shall honor any prior septic site approvals obtained by Plaintiffs and shall immediately issue septic permits for those parcels, subject only to the usual Statutes and Administrative Rules applicable to septic tanks within the State of Oregon.

6. DEQ shall, at its own cost, perform site evaluations on each of the parcels owned by each of the Plaintiffs (including, without limitation, the parcel owned by Gordon Brian Howard and Marcia Lee

Smith for which a partition has been approved but is being appealed) located in some part within the Clear Lake Watershed, and shall immediately issue site approvals and septic permits for each of those parcels, subject only to the usual Statutes and Administrative Rules applicable to septic tanks within the State of Oregon (other than the 1983 and 1990 Clear Lake regulations). After the moratorium has been lifted, septic permits will be handled in the ordinary course of business by DEQ's agent, Lane County. It is expressly understood and agreed that the applicable rules may require installation of low pressure distribution systems as a condition of septic approval if soil conditions so warrant. In this regard, Plaintiffs will be treated like any other similarly situated property owners in the State of Oregon.

B. Plaintiffs' Undertakings:

1. Upon receipt and collection of the $900,000.00, the Plaintiffs will dismiss the above-captioned suit with prejudice as to the State and its employees and agents, with each side to bear its own fees and costs, as provided in the Judgment attached hereto as Exhibit B.

2. The Plaintiffs release the State from any and all claims which they may have of any nature whatsoever arising out of or in any way connected to the Clear

Lake Watershed or the moratoriums adopted by the Environmental Quality Commission through today's date except as specifically stated in the Judgment attached hereto as Exhibit B.

3. The Plaintiffs agree that it is their responsibility to contact Greg Farrell, Regional On Site Program Manager at the Roseburg DEQ office and make arrangements for site evaluations for septic permits. DEQ shall immediately perform such site evaluations and immediately issue the septic permits as required by the court's order and the judgment attached as Exhibit B hereto. Solely for the purpose of preparing such site evaluations, Plaintiffs agree to allow DEQ staff to enter their real property. The Plaintiffs agree to abide by the usual applicable Statutes and Administrative Regulations governing septic installations and applicable to septic tanks within the State of Oregon. It is expressly understood and agreed that the Plaintiffs will, if required by DEQ under the currently existing general septic regulations, install low pressure distribution systems as part of any septic installation if soil conditions so warrant. In this regards, Plaintiffs will be treated like any other similarly situated property owners in the State of Oregon.

4. The Plaintiffs with lots located in the Collard Lake Subdivision agree to hook up their lots located in the Collard Lake Subdivision to any community sewer system at the same cost as that charged to other similarly situated lot owners when such a sewer system becomes available without remonstrance.

5. Dale A. Riddle will testify before the Lane County Commission in favor of the adoption of certain Clear Lake Watershed Regulations, as set forth in a separate letter (marked Exhibit C hereto) and dated July 15, 1996 to Lane County Administrator Bill Van Vactor from Assistant Attorney General Denise G. Fjordbeck. The Plaintiffs or other representatives of the Plaintiffs may also testify regarding of these provisions, if they wish to do so, but will

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not take positions contrary to those taken by Mr. Riddle in the letter attached hereto as Exhibit C.

IN WITNESS OF THE FOREGOING AGREEMENT, the parties have signed this agreement on the dates indicated below:

Robert L. Merz
Dated: Sept 6, 1996

Shirley M. Merz
Dated: Sept. 6, 1996

Gordon Brian Howard
Dated: Sept. 13, 1996

Marcia Lee Smith
Dated: Sept. 13, 1996

Richard G. Sargent
Dated: SEPT. 18, 1996

Ruby Broeker
Dated: Sept. 9, 1996

Karen L. Anderson
Dated: Sept 9, 1996

Aaron U. Jones
Dated: 9-19-96, 1996

Erling G. Omlid
Dated: SEPT 10, 1996

Lloyd F. Omlid
Dated: Sept. 11, 1996

Ellis L. Rackleff
Dated: Sept 17, 1996

APPROVED AS TO FORM:

GLEAVES SWEARINGEN LARSEN POTTER SCOTT & SMITH

By: _____
Frederick A. Batson
Of Attorneys for Plaintiffs

STATE OF OREGON

By: _____
Langdon Marsh, Director,
Department of Environmental Quality

Denise G. Fjordbeck
Attorney for State Defendants

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF OREGON

ROBERT L. MERZ and SHIRLEY M. MERZ, husband and wife; VINCENT M. HOWARD, JR.; GORDON BRIAN HOWARD; MARCIA LEE SMITH; RICHARD G. SARGENT; RUBY BROEKER; KAREN L. ANDERSON; AARON U. JONES; ERLING G. OMLID; LLOYD F. OMLID, and ELLIS L. RACKLEFF,	)	
Plaintiffs,	)	Civil No. 91-817-TC
v.	)	O R D E R
HECETA WATER DISTRICT, an Oregon municipal corporation; STATE OF OREGON, by and through its Environmental Quality Commission; FRED HANSON, WILLIAM YOUNG and LANGDON MARSH in their official capacities as directors of the Department of Environmental Quality; WILLIAM P. HUTCHISON, JR., DR. EMERY N. CASTLE, WILLIAM W. WESSINGER, HENRY C. LORENZEN, CAROL A. WHIPPLE, TONY VAN VLIET, and LINDA McMAHAN in their official capacities as commissioners of the Environmental Quality Commission; RICHARD NICHOLS, BARBARA BURTON, LYDIA TAYLOR, and GARY MESSER in their official capacities at the Department of Environmental Quality; WILLIAM B. FINLEY; LARRY STONELAKE; ART KONING; BOB SLEEPER; STEVE OLIENYK; and MICHAEL KEATING,	)	
Defendants.	)	

EXHIBIT A
Page 1

COFFIN, Magistrate Judge:

This lawsuit emanates from moratoriums on development in the Clear Lake Watershed. Plaintiffs are lot owners and parcel owners in the Watershed, and seek damages related to the loss of the use of their property during the period that the bans on development have been in effect. Plaintiffs and defendants have each filed motions for summary judgment. The court rules as follows as to the motions presented by plaintiffs and defendant State of Oregon:

1) The Environmental Quality Commission (EQC) is a commission appointed by the Governor of the State of Oregon to establish policies for the Department of Environmental Quality (DEQ). It has the authority to regulate water quality and issues regarding on-site waste disposal within the boundaries of defendant Heceta Water District, and has adopted regulations regulating water-quality and on-site waste disposal regarding the Clear Lake Watershed.

2) On April 7, 1983, EQC established a moratorium [OAR 340-71-460(6)(f), or the "1983 EQC Moratorium"] on the issuance of sewage construction installation permits or approved site evaluation reports for all properties within the Watershed for the purpose of protecting the water quality of Clear Lake. By its terms, the moratorium expired on July 1, 1985.

3) DEQ continued to enforce the 1983 moratorium after its expiration date.

4) On December 14, 1990, EQC adopted another moratorium on on-site sewage systems within the Watershed, which again had the effect of prohibiting development within the Watershed [OAR 340-41-270, or the "1990 EQC Moratorium"] for an indefinite period.

5) The enforcement of the "1983 EQC Moratorium" by DEQ between July 1, 1985 and December 14, 1990 was arbitrary and capricious and, as such, a violation of plaintiffs' due process rights, in that the moratorium had expired on July 1, 1985. Plaintiffs are entitled to prevail on their § 1983 claims pertaining to this issue. As plaintiffs would each have been entitled to septic permits during this time period, DEQ is hereby ordered to issue the plaintiffs in this action septic permits, providing their lots otherwise qualify for such.

6) The "1990 EQC Moratorium" is a valid exercise of authority by EQC, insofar as the regulation represents a temporary moratorium on development while efforts were to be made to implement permanent protection for the quality of water of Clear Lake. At some point, however, a lengthy moratorium or a moratorium that is indefinite in duration operates as a de facto takings of the property affected, and such takings mandate compensation for the owners of the property subject to the moratorium. Because the EQC and DEQ do not have eminent domain powers, it is the ruling of this court that should the "1990 EQC Moratorium" not be repealed as of October 15, 1996, it shall be invalid and of no force and effect. The continued enforcement of the moratorium thereafter will constitute a takings by EQC and DEQ of all properties within the Watershed affected thereby, for which damages will have to be paid.

So ORDERED.

DATED this 16th day of July, 1996.

Thomas M. Coffin

THOMAS M. COFFIN
United States Magistrate Judge

EXHIBIT A
Page 3

Frederick A. Batson
Bruce Smith
GLEAVES SWEARINGEN LARSEN POTTER
SCOTT & SMITH
P. O. Box 1147
Eugene, OR 97440
(541) 686-8833

(Of Attorneys for Plaintiffs)

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF OREGON

ROBERT L. MERZ and SHIRLEY M. MERZ, husband and wife; GORDON BRIAN HOWARD and MARCIA LEE SMITH, individually and as successors in interest to the Estate of Vincent M. Howard, Jr.; RICHARD G. SARGENT; RUBY BROEKER; KAREN L. ANDERSON; AARON U. JONES; ERLING G. OMLID; LLOYD F. OMLID, and ELLIS L. RACKLEFF,

Plaintiffs,

vs.

HECETA WATER DISTRICT, an Oregon municipal corporation; STATE OF OREGON, by and through its Environmental Quality Commission; FRED HANSON, WILLIAM YOUNG and LANGDON MARSH in their official capacity as directors of the Department of Environmental Quality; WILLIAM P. HUTCHINSON, JR., DR. EMERY N. CASTLE, WILLIAM W. WESSINGER, HENRY C. LORENZEN, CAROL A. WHIPPLE, TONY VAN VLIET, and LINDA McMAHAN in their official capacities as commissioners of the

Case No. 91-817-TC

FINAL JUDGMENT AS TO CLAIMS AGAINST THE STATE OF OREGON AND ITS OFFICIAL CAPACITY DEFENDANTS

EXHIBIT B
Page 1

GLEAVES SWEARINGEN LARSEN POTTER SCOTT & SMITH
975 Oak Street · P.O. Box 1147
Eugene, Oregon 97440-1147
(503) 686-8833

Environmental Quality Commission; WILLIAM B. FINLEY; LARRY STONELAKE; ART KONING; BOB SLEEPER; STEVE OLIENYK; and MICHAEL KEATING,

Defendants.

---

1. The court having ruled on Plaintiffs' and the State Defendants' cross motions for summary judgment, and the court having been informed that the Plaintiffs and the State of Oregon and the official capacity defendants for the State of Oregon Department of Environmental Quality and for the Environmental Quality Commission have resolved all the Plaintiffs' claims against the State of Oregon and the official capacity defendants for the State of Oregon for monetary damages, attorney fees and costs arising out of this court's decision regarding the moratoriums, it is hereby ordered and adjudged that all claims by Plaintiffs against the State of Oregon and the official capacity defendants for the State of Oregon are dismissed with prejudice, provided however, the court's Order dated and filed July 16, 1996 and attached hereto as Exhibit "A" shall continue in full force and effect:

   a. regarding any continued validity and enforceability of the 1983 moratorium and the modification thereof in 1990;

   b. regarding the validity of the 1990 Clear Lake Moratorium after October 15, 1996 and any liability

OLIVER OTTERSTEIN LARSEN
OTTER SCOTT & SMITH
975 Oak Street - P.O. Box 1147
Eugene, Oregon 97440-1147
(503) 686-8833

EXHIBIT B
Page 2

created by any continued enforcement after October 15, 1996 of OAR 340-41-270 and 340-71-460(6); and

c. regarding the issuance to Plaintiffs of the permits specified therein.

2. There is no just reason for delay of entry of this judgment as a final judgment as to all claims between the Plaintiffs and the State of Oregon and the official capacity defendants for the Department of Environmental Quality and the Environmental Quality Commission. It is hereby ordered that this judgment be entered as a final judgment as to all such claims.

Dated _____, 1996.

_____
THOMAS M. COFFIN
United States Magistrate Judge

APPROVED AS TO FORM:

By: _____
Frederick A. Batson, OSB 82188
Of Attorneys for Plaintiffs

THEODORE R. KULONGOSKI
Attorney General

_____
Denise G. Fjordbeck, OSB 82257
Assistant Attorney General
Trial Attorney
Of Attorneys for Defendants

GRAVES SWEAKINGEN LARSEN
OTTER SCOTT & SMITH
975 Oak Street · P.O. Box 1147
Eugene, Oregon 97440-1147
(503) 686-8833

EXHIBIT B
Page 3

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF OREGON

ROBERT L. MERZ and SHIRLEY M. MERZ, husband and wife; VINCENT M. HOWARD, JR.; GORDON BRIAN HOWARD; MARCIA LEE SMITH; RICHARD G. SARGENT; RUBY BROEKER; KAREN L. ANDERSON; AARON U. JONES; ERLING G. OMLID; LLOYD F. OMLID, and ELLIS L. RACKLEFF,	)	
Plaintiffs,	)	Civil No. 91-817-TC
v.	)	ORDER
HECETA WATER DISTRICT, an Oregon municipal corporation; STATE OF OREGON, by and through its Environmental Quality Commission; FRED HANSON, WILLIAM YOUNG and LANGDON MARSH in their official capacities as directors of the Department of Environmental Quality; WILLIAM P. HUTCHISON, JR., DR. EMERY N. CASTLE, WILLIAM W. WESSINGER, HENRY C. LORENZEN, CAROL A. WHIPPLE, TONY VAN VLIET, and LINDA McMAHAN in their official capacities as commissioners of the Environmental Quality Commission; RICHARD NICHOLS, BARBARA BURTON, LYDIA TAYLOR, and GARY MESSER in their official capacities at the Department of Environmental Quality; WILLIAM B. FINLEY; LARRY STONELAKE; ART KONING; BOB SLEEPER; STEVE OLIENYK; and MICHAEL KEATING,	)	
Defendants.	)	

EXHIBIT A
Page 1

COFFIN, Magistrate Judge:

This lawsuit emanates from moratoriums on development in the Clear Lake Watershed. Plaintiffs are lot owners and parcel owners in the Watershed, and seek damages related to the loss of the use of their property during the period that the bans on development have been in effect. Plaintiffs and defendants have each filed motions for summary judgment. The court rules as follows as to the motions presented by plaintiffs and defendant State of Oregon:

1) The Environmental Quality Commission (EQC) is a commission appointed by the Governor of the State of Oregon to establish policies for the Department of Environmental Quality (DEQ). It has the authority to regulate water quality and issues regarding on-site waste disposal within the boundaries of defendant Heceta Water District, and has adopted regulations regulating water-quality and on-site waste disposal regarding the Clear Lake Watershed.

2) On April 7, 1983, EQC established a moratorium [OAR 340-71-460(6)(f), or the "1983 EQC Moratorium"] on the issuance of sewage construction installation permits or approved site evaluation reports for all properties within the Watershed for the purpose of protecting the water quality of Clear Lake. By its terms, the moratorium expired on July 1, 1985.

3) DEQ continued to enforce the 1983 moratorium after its expiration date.

4) On December 14, 1990, EQC adopted another moratorium on on-site sewage systems within the Watershed, which again had the effect of prohibiting development within the Watershed [OAR 340-41-270, or the "1990 EQC Moratorium"] for an indefinite period.

5) The enforcement of the "1983 EQC Moratorium" by DEQ between July 1, 1985 and December 14, 1990 was arbitrary and capricious and, as such, a violation of plaintiffs' due process rights, in that the moratorium had expired on July 1, 1985. Plaintiffs are entitled to prevail on their § 1983 claims pertaining to this issue. As plaintiffs would each have been entitled to septic permits during this time period, DEQ is hereby ordered to issue the plaintiffs in this action septic permits, providing their lots otherwise qualify for such.

6) The "1990 EQC Moratorium" is a valid exercise of authority by EQC, insofar as the regulation represents a temporary moratorium on development while efforts were to be made to implement permanent protection for the quality of water of Clear Lake. At some point, however, a lengthy moratorium or a moratorium that is indefinite in duration operates as a de facto takings of the property affected, and such takings mandate compensation for the owners of the property subject to the moratorium. Because the EQC and DEQ do not have eminent domain powers, it is the ruling of this court that should the "1990 EQC Moratorium" not be repealed as of October 15, 1996, it shall be invalid and of no force and effect. The continued enforcement of the moratorium thereafter will constitute a takings by EQC and DEQ of all properties within the Watershed affected thereby, for which damages will have to be paid.

So ORDERED.

DATED this 16th day of July, 1996.

THOMAS M. COFFIN
United States Magistrate Judge

EXHIBIT A
Page 3

[DEPARTMENT OF JUSTICE LETTERHEAD]

July 24, 1996

William Van Vactor
County Administrator
Lane County Courthouse
125 East Eighth Street
Eugene, OR 97401

Re: Clear Lake Watershed Protection Zone

Dear Bill:

During the course of settlement negotiations in the Merz v. Heceta Water District litigation, the Department of Environmental Quality has achieved substantial agreement with Dale Riddle, attorney for the plaintiffs, regarding the protective measures needed for the Clear Lake Watershed. We understand that there are many provisions in the regulations which deal with issues which are related only tangentially to environmental protection, such as fire suppression and measures designed to achieve political consensus; however, Mr. Riddle and I felt that it might be helpful to you and your staff to know the position of the parties to the litigation as you prepare to take the watershed regulations before the County Commission.

DEQ and plaintiffs agree that the following concepts are appropriate for the protection of the Watershed. Most of these concepts are contained in the final draft of the Clear Lake Watershed Protection Zone (11-9-94) and the items below generally refer to such provisions:

1. Farming should be restricted to areas more than 300 feet above ordinary high water.

2. Fill or extraction in freshwater lakes and marshes should be prohibited outright.

3. Development should generally be prohibited within 100 feet of ordinary high water except as described in the proposed ordinances.

4. Drainfields should be located a minimum of 100 feet from ordinary high water.

Exhibit C
Page 1

5. Each lot on Collard Lake should be required to hook up to a community sewer system when it becomes available.

6. Provisions regarding the submissions of plot plans should be retained, including those provisions regarding submissions by a licensed engineer or architect.

7. The provisions regarding percentage of impervious surfaces and coverage should be replaced with a provision which requires that no run-off from impervious structures leave the site. This would accomplish the environmental aims of the ordinances and give property owners greater flexibility.

8. Buildings on compressible dunes should be required to have engineered foundations.

9. Site investigation reports should be required as generally set forth in the proposed ordinances.

10. Land division provisions need to be promulgated consistent with the new standards set forth in HB 3661. It is also appropriate to add a provision that land divisions will not be a basis for siting additional dwellings, or serve as a justification for rezoning or redesignation of the parcel consistent with SB 683.

11. The Watershed Vegetation Regulations appear to be appropriate and should be adopted as proposed.

12. It appears that the proposed Forestry provisions are preempted by the Forest Practices Act. DEQ will likely request that the Oregon Department of Forestry consider the possible impacts of ash in developing smoke management plans for the area.

13. The provisions on use of herbicides and pesticides appear to be preempted by ORS 634.009, adopted by the 1995 Legislature.

14. Boating regulations should be adopted as proposed, with the exception of the provisions regarding approval of only existing launch locations.

15. Construction and erosion control regulations should be adopted generally as proposed, with the exception of the provision requiring on-site retention ponds or drywells. The provision requiring that no off-site run-off occur addresses this concern.

Mr. Riddle, on behalf of the plaintiffs, and representatives of the Department of Environmental Quality intend to appear before the County Commission to voice their support for these protective regulations. The State regards these protections as essential to the long-term viability of Clear Lake as a source of water for the Florence area. We intend to provide whatever assistance we can to you and your staff in accomplishing our mutual goals of water quality protection.

If you have any questions or concerns, please don't hesitate to call me.

Very truly yours,

Denise G. Fjordbeck
Assistant Attorney General
Commercial & Environmental
Litigation Unit

JTT21CF0/dgf
Enclosure
cc: Dave Williams, County Counsel
Dale Riddle, Attorney at Law
Barbara Burton, DEQ

Exhibit C
Page 3

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY **MEMORANDUM**

Date: February 7, 1997

To: Environmental Quality Commission

From: Langdon Marsh

Subject: Agenda Item F, EQC Meeting February 28, 1997

Background

Section 401 of the Federal Clean Water Act requires that any applicant for a federal license or permit to conduct any activity which may result in a discharge to waters of the state, must provide the licensing or permitting agency certification from DEQ of compliance with water quality requirements and standards. Types of land uses that require DEQ 401 Certification include agriculture, mining, ports, transportation projects, and industrial siting/construction and operations. Federal licensed or permitted activities that involve dredging, fill or that otherwise alter a waterway require permits from the Division of State Lands(DSL) and U.S. Army Corps of Engineers. For these projects, DSL and DEQ have established a joint process.

In the 401 Certification process, applicants often are required to incorporate protective measures or Best Management Practices in their plans to ensure compliance with water quality laws and standards. Examples of measures include bank stabilization, treatment of stormwater runoff, spill protection, and fish and wildlife protection.

The Director has authorized the Water Quality Division, with assistance of the Deputy Director, to proceed with temporary administrative rules that would provide a 401 Certification process for federal grazing permits. Department staff have developed temporary rules language which is provided in Attachment B.

A federal district court entered judgment on November 29, 1996, directing the U.S. Forest Service to require permit applicants to provide State 401 Water Quality Certification before issuing or renewing grazing permits. The DEQ and Oregon Department of Agriculture(ODA) have proceeded to work together to develop temporary administrative rules to respond to applications for 401 Certification of grazing leases.

The DEQ and ODA propose adoption of temporary rules to provide a streamlined process for issuing 401 Certifications for the 1997 grazing season. The ODA rules will provide the conditions to be placed into a 401 Certification to assure protection of water quality. The DEQ temporary rules will provide the authority and process for certifying federal grazing lease permits.

It is the longer-term objective of DEQ and ODA to develop permanent rules for 401 Certification of grazing activities. One alternative that will be considered is a process by which the federal agency would seek general certification for all leases. The key objective, however, will be to evaluate all options in creating an efficient and workable process that addresses the specific issues and needs related to grazing practices, and that provides water quality protection.

Issue this Proposed Rulemaking Action is Intended to Address

These temporary rules are intended to provide a streamlined process for the DEQ to issue 401 Certification to applicants for USFS grazing leases during the current cycle. A permanent rulemaking process will be developed by ODA and DEQ. It is necessary to adopt temporary rules because of the immediate need to provide certification of the 1997 grazing lease permittees. The ODA is concurrently adopting temporary rules which will provide the conditions to be placed in 401 certificates issued for the 1997 grazing season. It is estimated 32 permits will need renewal this spring.

Relationship to Federal and Adjacent State Rules

These temporary rules apply to the Section 401 of the Federal Clean Water Act. This Act requires states to certify that projects or activities subject to federal permits or license requirements will not violate applicable water quality requirements and standards.

Authority to Address the Issue

The authority to develop and adopt these temporary rules for the issuance of 401 Certification for grazing activities is provided in ORS 183.335; ORS 468.020, and ORS 468B.035.

Process for Development of the Rulemaking Proposal (including Advisory Committee and alternatives considered)

Due to the immediate need for the USFS to issue or renew grazing leases for 1997, the Department is utilizing the use of temporary rules for ensuring that a timely process is in place. The rulemaking proposal has been drafted by Department staff through coordination with ODA staff. The proposed temporary rules provide for the certification of grazing leases and makes other text adjustments to accommodate the inclusion of grazing leases into Division 48.

Summary of Rulemaking Proposal Presented for Public Hearing and Discussion of Significant Issues Involved.

A public hearing is not required for temporary rules. When the Department adopts the permanent rules, public notice and an opportunity to comment will be provided.

Summary of Significant Public Comment and Changes Proposed in Response

Not applicable to temporary rulemaking.

Summary of How the Proposed Rule Will Work and How it Will be Implemented

Under the proposed temporary rules, DEQ will accept applications from individuals seeking federal grazing lease permits. The ODA, also through temporary rulemaking, will provide the water quality conditions for inclusion in a 401 certificate. The DEQ, by application of the ODA established conditions, will determine application compliance with all relevant water quality requirements and standards. Enforcement of the conditions will be the responsibility of the USFS.

Recommendation for Commission Action

It is recommended that the Commission adopt the temporary rules regarding 401 Certification of grazing lease applications as presented in Attachment A of the Department Staff Report.

Attachments

A. Temporary Rules Proposed for Adoption
B. Statement of Need and Justification

Reference Documents (available upon request)

U.S. District Court Civil No. 94-522-HA Opinion and Order

Approved:

Section:

Division:

Report Prepared By: Roberta Young

Phone: 229-6408

Date Prepared: January 29, 1997

F:\TEMPLATE\FORMS\EQCRULE.DOT
10/19/95

Attachment A

STATEMENT OF NEED AND JUSTIFICATION
Before the Environmental Quality Commission

In the matter of	)	Statutory Authority,
	)	Statement of Need,
	)	Principal Documents Relied
	)	Upon and Statement of
	)	Justification

1. **Citation of statutory authority:** ORS 183.335; ORS 468.020; ORS 468B.035; and the Clean Water Act Section 401 (33 USC, Section 1341)

2. **Need for the rules:** Temporary rules are needed for the DEQ to issue 401 Certification for grazing activities on federal lands.

3. **Documents relied upon:** U.S. district Court Civil No. 94-522-HA Opinion and Order.

4. **Justification of temporary rules:** Temporary rules are necessary so that the U.S. Forest Service 1997 grazing permits and renewals can be issued with a DEQ 401 Certification. Failure to act promptly will result in serious prejudice to the public interest and interest to concerned parties because, on November 29, 1996 the U.S District Court issued an order which directs the 401 Certification of grazing leases on federal lands. It is estimated that approximately 30 U.S. Forest Service grazing leases need to be approved for the 1997 grazing season. DEQ is unable to issue 401 Certification for the 1997 leases under existing rules. Without the certification of grazing lease permits, cattle ranchers will lose their ability to graze on federal lands for the 1997 season.

5. **Housing Cost Impact Statement:**
The Department has determined that this rule change will not affect the cost of development of a 6,000 square foot parcel and the construction of a 1,200 square foot detached single family dwelling on that parcel.

2/11/97
Date

Lydia Taylor
Signature

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

Date: February 26, 1997

To: Environmental Quality Commission

From: Langdon Marsh

Subject: Agenda Item F, EQC Meeting February 28, 1997

The Department is proposing several changes to the text of the rules attached to Agenda Item F Memorandum dated February 7, 1997. Additional language is being proposed to be added to OAR 340-48-023(1) to ensure that the Department and the Department of Agriculture will have the information necessary to determine that the federal agency's grazing plan is adequately supported. The change also allowed the Department to request additional information if the Department deems it necessary to complete its review.

OLD LANGUAGE:

340-48-023
Certification of Federal Grazing Leases
(1) Any person seeking a grazing lease from a federal land management agency may request certification from the Department. The application for certification must include the following information:
(a) Name and address of the lessee;
(b) Location of the land to be leased and a description of all streams or other waterbodies within or adjacent to the area to be leased;
(c) Name of the federal land management agency with authority to approve the grazing lease;
(d) Copies of conditions, if any, relating to the protection of water quality imposed by the federal land management agency; and
(e) Whether the area proposed to be leased is subject to an agricultural water quality management plan, and if so, copies of any applicable pollution prevention and control measures in the plan.
(2) If an applicant for certification under these rules seeks individual certification conditions in lieu of the standard conditions adopted by the Oregon Department of Agriculture or applicable pollution prevention and control measures established in an agricultural water quality management plan, the application must include the information required under section (1) of this rule and proposed individual conditions for certification (including any supporting analysis and data).
(3) In lieu of an application under sections (1) or (2) of this rule, a federal land management agency may submit proposed conditions for certification of all its grazing leases within the state or a specified geographical area within the state. If the conditions are accepted by DEQ and the

a specified geographical area within the state. If the conditions are accepted by DEQ and the Oregon Department of Agriculture, a general certification shall be issues for leases within the area covered by the agency's application.
(4) If the Department determines that an application is not complete, it shall notify the applicant.
(5) Interested persons, including local governments, special districts, and agencies of the state or federal government, may request to be notified of applications for certification under sections (1) or (2) of this rules. This request may be limited to applications within a specified geographical area. The Department will mail or electronically transmit a copy of complete application to persons requesting notification within seven days after a complete application is filed. The Department will consider written comments received by the Department within 28 days after a complete application is filed.
(6) Conditions of certification for grazing leases will be determined by the Oregon Department of Agriculture pursuant to ORS 561.191 and OAR Chapter 603, Division 76.

NEW LANGUAGE:

(1) Any person seeking a grazing lease from a federal land management agency may request certification from the Department. The application for certification must include the following information:
(a) Name and address of the lessee;
(b) Location of the land to be leased and a description of all streams or other waterbodies within or adjacent to the area to be leased;
(c) Name of the federal land management agency with authority to approve the grazing lease;
(d) Copies of conditions, if any, relating to the protection of water quality imposed by the federal land management agency; ~~and~~
(e) Whether the area proposed to be leased is subject to an agricultural water quality management plan, and if so, copies of any applicable pollution prevention and control measures in the plan; ~~.~~
(f) Other documentation that the Department or the Oregon Department of Agriculture deems necessary to assist in adequately evaluating the impacts on water quality.
(2) If an applicant for certification under these rules seeks individual certification conditions in lieu of the standard conditions adopted by the Oregon Department of Agriculture or applicable pollution prevention and control measures established in an agricultural water quality management plan, the application must include the information required under section (1) of this rule and proposed individual conditions for certification (including any supporting analysis and data).
(3) In lieu of an application under sections (1) or (2) of this rule, a federal land management agency may submit proposed conditions for certification of all its grazing leases within the state or a specified geographical area within the state. If the conditions are accepted by DEQ and the Oregon Department of Agriculture, a general certification shall be issues for leases within the area covered by the agency's application.

(4) If the Department determines that an application is not complete, it shall notify the applicant of any other information the Department deems is necessary to complete the application.
(5) Interested persons, including local governments, special districts, and agencies of the state or federal government, may request to be notified of applications for certification under sections (1) or (2) of this rules. This request may be limited to applications within a specified geographical area. The Department will mail or electronically transmit a copy of complete application to persons requesting notification within seven days after a complete application is filed. The Department will consider written comments received by the Department within 28 days after a complete application is filed.
(6) Conditions of certification for grazing leases will be determined by the Oregon Department of Agriculture pursuant to ORS 561.191 and OAR Chapter 603, Division 76.

TEMPORARY

OREGON ADMINISTRATIVE RULES

DEPARTMENT OF ENVIRONMENTAL QUALITY

CHAPTER 340

DIVISION 48

CERTIFICATION OF COMPLIANCE WITH WATER QUALITY REQUIREMENTS AND STANDARDS

NOTE:

The underlined portions of text represent additions made to the rules

The ~~[bracketed]~~ portions of text represent deletions made to the rules

340-48-010, 340-48-020, 340-48-022, & 340-48-023

DEFINITIONS

340-48-010

As used in these rules unless otherwise required by context:

(1) ''Certification'' means a written declaration by the Department of Environmental Quality, signed by the Director, that a project or activity subject to federal permit or license requirements will not violate applicable water quality requirements or standards.

(2) ''Clean Water Act'' means the Federal Water Pollution Control Act of 1972, Public Law 92-500, as amended.

(3) ''Coast Guard'' means U.S. Coast Guard.

(4) ''Commission'' means Oregon Environmental Quality Commission.

(5) ''Corps'' means U.S. Army Corps of Engineers.

(6) ''Department'' or ''DEQ'' means Oregon Department of Environmental Quality.

(7) ''Director'' means Director of the Department of Environmental Quality or the Director's authorized representative.

(8) ''Domestic Livestock'' means any type of animal for which a grazing permit may be issued by a federal land management agency and includes but is not limited to horses, mules, asses, cattle, sheep, goats, swine, and fowl.

(9) ''Federal Land Management Agency'' means the United States Bureau of Land Management, Fish and Wildlife Service, Forest Service or National Park Service.

(10) ''Grazing Lease'' means a lease or other approval to graze domestic livestock on lands owned or managed by a federal land management agency.

~~[(8)]~~ (11) ''Local Government'' means county and city government.

State. Auth.: ORS Ch. 468
Hist.: DEQ 18-1985, f. & ef. 12-3-85

APPLICATION FOR CERTIFICATION

340-48-020

(1) Except as provided in OAR 340-48-022 (application filed with Division of State Lands) and OAR 340-48-023 (grazing leases), applications for certification are subject to the provisions outlined in section (2) of this rule ~~[section (6) below, completed applications for project certification shall be filed directly with the DEQ)]~~.

(2) ~~[A completed application filed with DEQ shall contain, at a minimum, the following information]~~ An application containing the following information must be filed with DEQ:

(a) Legal name and address of the project owner.

(b) Legal name and address of owner's designated official representative, if any.

(c) A description of the project location sufficient to locate and distinguish proposed project facilities.

(d) Names and addresses of immediately adjacent property owners.

(e) A complete description of the project proposal, using written discussion, maps, diagrams, and other necessary materials.

(f) Name of involved waterway, lake, or other water body.

(g) Copies of the environmental background information required by the federal permitting or licensing agency or such other environmental background information as may be necessary to demonstrate that the proposed project or activity will comply with water quality requirements.

(h) Copy of any public notice and supporting information, issued by the federal permitting or licensing agency for the project.

(i) An exhibit which:

(A) Identifies and cites the specific provisions of the appropriate local land use plan and implementing regulations that are applicable to the proposed project;

(B) Describes the relationship between the proposed project and each of the provisions identified in paragraph (A) of this section; and

(C) Discusses the potential direct and indirect relationship to water quality of each item described in paragraph (B) of this section.

(D) If specific land use compatibility findings have been prepared by the local planning jurisdiction, these findings should be submitted as part of this exhibit and may be substituted for the requirements in paragraphs (A) and (B) of this section.

(j) For hydroelectric projects, an exhibit which:

(A) Identifies and cites the applicable provisions of ORS 469.371 and 543.017 and implementing rules adopted by the Energy Facility Siting Council and Water Resources Commission;

(B) Describes the relationship between the proposed project and each of the provisions identified in paragraph (A) of this section; and

(C) Discusses the potential direct and indirect relationship to water quality each item described in paragraph (B) of this section.

(k) An exhibit which identifies and describes any other requirements of state law applicable to the proposed project which may have a direct or indirect relationship to water quality.

(3) The DEQ reserves the right to request any additional information necessary to complete an application or to assist the DEQ to adequately evaluate the project impacts on water quality. Failure to complete an application or provide any requested additional information within the time specified in the request shall be grounds for denial of certification.

(4) The Department shall notify the applicant by certified mail of the date the application is determined to be complete. The application will be immediately deemed complete if a preliminary review indicates that all information required by section (2) of this rule is provided and the exhibit required by subsection (i) of section (2) contains findings of the local planning jurisdiction. If findings of the local planning jurisdiction are not included, the Department shall forward the exhibit submitted in response to subsection (i) of section (2) to the local planning jurisdiction for review and comment. The application shall not be deemed complete until the local planning jurisdiction provides comments to the Department, or 60 days have elapsed, whichever occurs first. If no comment is received within the 60 day period, the Department will continue to seek information from the planning jurisdiction, but will deem the application complete and proceed with evaluation of public notice as provided in section (5) of this rule.

(5) In order to inform potentially interested persons of the application, a public notice announcement shall be prepared and circulated in a manner approved by the Director. Notice will be mailed to adjacent property owners as cited in the application. The notice shall tell of public participation opportunities, shall encourage comments by interested individuals or agencies, and shall tell of any related documents available for public inspection and copying. The Director shall specifically solicit comments from affected state agencies. The Director shall provide a period of not less than 30 days following the date of the public notice during which time interested persons may submit written views and comments. All comments received during the 30-day period shall be considered in formulating the Department's position. The Director shall add the name of any person or group upon request to a mailing list to receive copies of public notice.

(6) The Director shall provide an opportunity for the applicant, any affected state, or any interested agency, person, or group of persons to request or petition for

a public hearing with respect to certification applications. If the Director determines that new information may be produced thereby, a public hearing will be held prior to the Director's final determination. Instances of doubt shall be resolved in favor of holding the hearing. There shall be public notice of such a hearing.

~~[(7) For projects or activities where the Division of State Lands is responsible for compiling a coordinated state response (normally applications requiring permits from the Corps or Coast Guard), the following procedure for application and certification shall apply:~~

~~(a) Application to the federal agency for a permit constitutes application for certification.~~

~~(b) Applications are forwarded by the federal agency to the Division of State Lands for distribution to affected agencies.~~

~~(c) Notice is given by the federal agency and Division of State Lands through their procedures. Notice of request for DEQ certification is circulated with the federal agency notice.~~

~~(d) All comments including DEQ Water Quality Certification are forwarded to the Division of State Lands for evaluation and coordination of response. The Division of State Lands is responsible for assuring compatibility with the local comprehensive plan or compliance with statewide planning goals.]~~

~~[(8)]~~ (7) In order to make findings required by OAR 340-48-025(2), the Department's evaluation of an application for project certification may include but need not be limited to the following:

(a) Existing and potential beneficial uses of surface or groundwater which could be affected by the proposed facility.

(b) Potential impact from the generation and disposal of waste chemicals or sludges at a proposed facility.

(c) Potential modification of surface water quality or water quantity as it affects water quality.

(d) Potential modification of groundwater quality.

(e) Potential impacts from the construction of intake or outfall structures.

(f) Potential impacts from waste water discharges.

(g) Potential impacts from construction activities.

(h) The project's compliance with plans applicable to Section 208 of the **Federal Clean Water Act**.

(i) The project's compliance with water quality related standards established in Sections 3 and 5 of Chapter 569. Oregon Laws 1985 (ORS 543.017 and 469.371) and rules adopted by the Water Resources Commission and the Energy Facility Siting Council implementing such standards.

State. Auth.: ORS Ch. 468
Hist.: DEQ 18-1985, f. & ef. 12-3-85; DEQ 1-1987, f. & ef. 1-30-87

DIVISION OF STATE LANDS — COORDINATED RESPONSE

340-48-022

For projects or activities where the Division of State Lands is responsible for compiling a coordinated state response (normally applications requiring permits from the Corps or Coast Guard), the following procedure for application and certification shall apply:

(1) Application to the federal agency for a permit constitutes application for certification.

(2) Applications are forwarded by the federal agency to the Division of State Lands for distribution to affected agencies.

(3) Notice is given by the federal agency and Division of State Lands through their procedures. Notice of request for DEQ certification is circulated with the federal agency notice.

(4) All comments including DEQ Water Quality Certification are forwarded to the Division of State Lands for evaluation and coordination of response. The Division of State Lands is responsible for assuring compatibility with the local comprehensive plan or compliance with statewide planning goals.

(5) Evaluation of the application will be consistent with the provisions of OAR 340-48-020(7).

CERTIFICATION OF FEDERAL GRAZING LEASES

340-48-023

(1) Any person seeking a grazing lease from a federal land management agency may request certification from the Department. The application for certification must include the following information:

(a) Name and address of the lessee;

(b) Location of the lands to be leased and a description of all streams or other waterbodies within or adjacent to the area to be leased;

(c) Name of the federal land management agency with authority to approve the grazing lease;

(d) Copies of conditions, if any, relating to the protection of water quality imposed by the federal land management agency; and

(e) Whether the area proposed to be leased is subject to an agricultural water quality management plan, and, if so, copies of any applicable pollution prevention and control measures in the plan.

(2) If an applicant for certification under these rules seeks individual certification conditions in lieu of the standard conditions adopted by the Oregon Department of Agriculture or applicable pollution prevention and control measures established in an agricultural water quality management plan, the application must include the information required under section (1) of this rule and proposed individual conditions for certification (including any supporting analysis and data).

(3) In lieu of an application under sections (1) or (2) of this rule, a federal land management agency may submit proposed conditions for certification of all its grazing leases within the state or a specified geographical area within the state. If the conditions are accepted by DEQ and the Oregon Department of Agriculture, a general certification shall be issued for leases within the area covered by the agency's application.

(4) If the Department determines that an application is not complete, it shall notify the applicant.

(5) Interested persons, including local governments, special districts, and agencies of the state or federal government, may request to be notified of applications for certification under sections (1) or (2) of this rule. This request may be

limited to applications within a specified geographical area. The Department will mail or electronically transmit a copy of complete application to persons requesting notification within seven days after a complete application is filed. The Department will consider written comments received by the Department within 28 days after a complete application is filed.

(6) Conditions of certification for grazing leases will be determined by the Oregon Department of Agriculture pursuant to ORS 561.191 and OAR Chapter 603, Division 76.

OREGON ADMINISTRATIVE RULES

DEPARTMENT OF ENVIRONMENTAL QUALITY

CHAPTER 340

DIVISION 18

STATE AGENCY COORDINATION PROGRAM

NOTE:

The underlined portions of text represent additions made to the rules

The ~~[bracketed]~~ portions of text represent deletions made to the rules

340-18-030

APPLICABILITY

340-18-030

The provisions of this rule, OAR 340-18-000 through 340-18-200 apply to Department programs and actions subsequently determined to have significant effects on land use pursuant to ORS 197.180 and OAR 660-30-075. Department land use actions are identified below:

(1) Air Quality Division:

(a) Approval of Noise Impact Boundaries for Motor Racing Facilities;

(b) Approval of Airport Noise Abatement Program and Noise Impact Boundaries;

(c) Approval of Notice of Construction;

(d) Issuance of Air Contaminant Discharge Permit;

(e) Issuance of Indirect Source Construction Permit;

(f) Approval of Parking and Traffic Circulation Plan;

(g) Employee Commute Options

(2) Environmental Cleanup Division: Issuance of Environmental Hazard Notice.

(3) Hazardous and Solid Waste Division:

(a) Issuance of Solid Waste Disposal Permit;

(b) Issuance of Waste Tire Storage Permit; and

(c) Issuance of Hazardous Waste and PCB Storage, Treatment and Disposal Permit.

(4) Management Services Division: Approval of Pollution Control Bond Fund Application.

(5) Water Quality Division:

(a) Approval of Wastewater System and Facility Plans;

(b) Approval of Construction Grant Program Application;

(c) Approval of State Revolving Loan Application;

(d) Issuance of On-site Sewer Permit;

(e) Issuance of NPDES and WPCF Permits;

(f) Development of Water Quality Wetland Protection Criteria;

(g) Requirement of an Implementation Plan to Meet Restrictions for Waste Load Allocations on Water Quality Limited Waterways (TMDLs);

(h) Certification of Compliance with Water Quality Requirements and Standards for Federal Permits~~[,]~~ and Licenses, except for applications for grazing leases under OAR 340-48-023;

(i) Development of Action Plan for Declared Ground Water Management Area;

(j) Development of Nonpoint Source Management Plan;

(k) Development of Estuary Plans;

(l) Development of Oil Spill Regulations.

Stat. Auth.: ORS Ch. 197
Hist.: DEQ 36-1990, f. & cert. ef. 8-28-90, _____

Environmental Quality Commission

☒ Rule Adoption Item
☐ Action Item
☐ Information Item

Agenda Item G _____
February 27-28, 1997 Meeting

Title:

Amendments to Waste Tire Carrier Rules

Summary:

These amendments will establish a new class of waste tire carrier permit, Common Carrier Class Waste Tire Carrier Permit, and place a limit on the total amount of permit fee which will be charged to holders of this permit. Under the present rules, large trucking companies which haul waste tires are required to pay a permit applications fee, permit compliance fee, and purchase a $25 decal for each truck used to haul waste tires. The rule amendments allow a large trucking company with more than 15 trucks to pay a single fee, equivalent to the cost of 15 decals, in lieu of purchasing a decal for every truck. The proposed rule also waives the requirement that each truck covered under a Common Carrier Class Waste Tire Carrier Permit a display a decal.

The proposed amendment were distributed to all affected parties. There were no public comments on the proposed amendments.

Department Recommendation:

The Department recommends Commission adoption of the proposed rule amendments

William R Bree
Report Author

Mary Wahl
Division Administrator

Langdon Marsh
Director

Accommodations for disabilities are available upon request by contacting the Public Affairs Office at (503)229-5317(voice)/(503)229-6993(TDD).

State of Oregon
Department of Environmental Quality Memorandum

Date: February 7, 1997

To: Environmental Quality Commission

From: Langdon Marsh

Subject: Agenda Item G, Amendments to Waste Tire Carrier Rules, EQC Meeting February 27-28, 1997

Background

On November 8, 1996, the Director authorized the Waste Management and Cleanup Division to proceed with rulemaking on proposed amendments to the waste tire carrier rules. These amendments would establish a new class of waste tire carrier permit.

Based on the very limited scope and administrative nature of the proposed amendments it was determined that a public hearing was not appropriate. Therefore, pursuant to the Director's authorization, a public notice of an opportunity to provide written comments was published in the Secretary of State's Bulletin on December 1, 1996. On November 21, 1996, the Notice and informational materials were mailed to the mailing list of those persons who have asked to be notified of rulemaking actions, and to a mailing list of persons known by the Department to be potentially affected by or interested in the proposed rulemaking action.

No written comments were received. Since there was no public hearing and no written comments were received the "Presiding Officer's Report," "Staff Evaluation and Response to Comments," and "Staff Modification of the Initial Rulemaking" are not attached to this report.

The following sections summarize the issue that this proposed rulemaking action is intended to address, the authority to address the issue, the process for development of the rulemaking proposal including alternatives considered, a summary of how the rule will work and how it is proposed to be implemented, and a recommendation for Commission action.

Issue this Proposed Rulemaking Action is Intended to Address

Existing waste tire management rules, found in OAR 340, Division 64, require that any person hauling more than four waste tires in the state of Oregon must have a Department of Environmental Quality waste tire carrier permit. These rules also require that every permitted carrier must display a State of Oregon waste tire carrier decal on any vehicle used to haul waste tires. These provisions of the existing rules work adequately for companies with a limited number of vehicles which are used extensively to haul waste tires. The existing rule does not work well for large trucking companies who have a large number of trucks and haul tires on an occasional basis. The cost of a permit and decals for all of their

trucks has excessive economic impact on these few companies. As a result most of these large companies are either not hauling tires or are hauling tires without the required permit and decals. The proposed rule amendment provides a new permitting process which will allow large common carriers to haul tires legally in Oregon without undue economic burden.

Authority to Address the Issue

The Commission has authority to adopt rules relating to waste tire management under the provisions of Oregon Revised Statute 459.785(1) "In accordance with the applicable provisions of ORS 183.310 to 183.550 the Commission shall adopt rules necessary to carry out the provisions of ORS 459.705 to 459.790."

Process for Development of the Rulemaking Proposal

A workgroup of waste tire program stakeholders met with Department staff in May 1996. This workgroup was composed of eight members representing tire dealers, waste tire processors, waste tire haulers, recyclers, and local governments. Department solid waste planning and waste tire program staff were also involved. Department staff developed these draft rule amendments from the discussion at the workgroups meeting. In November 1996 the Department's Solid Waste Advisory Committee also reviewed and commented upon the proposed rule amendments.

Scrap Tire Management Workgroup	
Mark Hope, Waste Recovery, Inc.	Dick Nordness, NW Independent Tire Dealers
Paula Kinzer, Bend Recycling Team	Carol Brown, Clean Washington Center
Dan Roberts, Les Schwab Tires	Andy Sloop, Metro
Scott Kleig, Metro	Tim Ackerman, Silver Eagle Industries

Summary of Rulemaking Proposal and Discussion of Significant Issues Involved.

These amendments establish a new class of waste tire carrier permit, Common Carrier Class Waste Tire Carrier Permit, and place a limit on the total amount of permit fee which will be charged to holders of this permit. Under the present rules large trucking companies which haul waste tires are required to pay a one-time $25 permit applications fee, a $175 permit compliance fee, and purchase a $25 decal for each truck used to haul waste tires. The rule amendments allow a large trucking company with more than 15 trucks to pay a single $375 fee, equivalent to the cost of 15 decals, in lieu of purchasing a decal for every truck. The common carrier class permit allows the company to use as many trucks as they want and waives the requirement that each truck have a decal. Common carrier class waste tire carriers are not excused from any other requirement of the waste tire carrier permit program.

Under the proposed rule amendments, a large trucking company could get a common carrier class permit. The permit cost would include a $25 one-time permit application fee, $175 compliance fee, and $375 permit fee. The $375 permit fee is equivalent to the purchase of 15 truck decals.

The following table shows the effect the proposed rules on companies with different sized truck fleets.

Costs Before and After Adoption of Proposed Rule Amendments			
Before		After	
Number of trucks	Total fees	Number of trucks	Total fees
1	$225	1	$225
5	$325	5	$325
10	$450	10	$450
15	$575	15	$575
20	$700	20	$575
100	$2700	100	$575

The proposed amendments will allow large trucking companies to obtain a permit to haul waste tires for a lower fee than under the present rules. The Department estimates this will be less than twenty companies. There will be no direct impact on other companies or the public. Since all large trucking companies would have to pay the same permit fee there should be no direct impact on competition between these firms. The total fees generated annually are estimated to be $11,500 if twenty large trucking companies purchase common carrier class permits.

The companies which hire large trucking companies to haul waste tires might be either large or small businesses. These companies would be either waste tire processors or disposal sites. For the most part the cost of the tire carrier permits will be passed on to either the waste tire processor or the waste tire generator. This permit cost will represent a very small part of their cost of doing business. The estimated maximum cost would be $.01 per tire if a permit holder transported a minimum of 55,000 tires per year. This cost would decrease if each company hauled more of the 3.3 million tires presently transported in Oregon.

There will be no direct fiscal impact and no measurable indirect fiscal impact on the general public. If the total cost associated with the proposed rules were passed directly back to the public in the cost of a new tire, it would be less than 1/3 of a cent per tire.

Summary of How the Proposed Rule Will Work and How it Will be Implemented

The proposed rule amendment will not require any change in implementation of the Department's waste tire carrier permit program. The establishment of this new class of waste tire carrier permit will

result in less than twenty new permits. Since the new class of permit will be administered as part of the existing waste tire carrier permit program without need for additional staff, training, or resources. Department staff will start to issue the new class of permits as soon as the proposed amendments are adopted.

Recommendation for Commission Action

It is recommended that the Commission adopt the rule amendments regarding waste tire carrier permits as presented in Attachment A of the Department Staff Report.

Attachments

A. Rule (Amendments) Proposed for Adoption
B. Supporting Procedural Documentation:
   1. Legal Notice of Hearing
   2. Fiscal and Economic Impact Statement
   3. Land Use Evaluation Statement
   4. Questions to be Answered to Reveal Potential Justification for Differing from Federal Requirements
   5. Cover Memorandum from Public Notice
C. Advisory Committee Membership and Report
D. Rule Implementation Plan

Approved:

Section: _____

Division: _____

Report Prepared By: William R. Bree
Phone: (503) 229-6046
Date Prepared: December 27, 1996

WRB:wrb
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12/27/96

PROPOSED AMENDMENTS

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY
ADMINISTRATIVE RULES
DIVISION 64 - SOLID WASTE MANAGEMENT: WASTE TIRES
12/27/96

Proposed additions shown in underlining.
Proposed deletions shown in ~~strikeout.~~

Waste Tire Carrier Permit Required

340-64-055 (1) After January 1, 1989, any person engaged in picking up, collecting or transporting waste tires for the purpose of storage, processing or disposal is required to obtain a waste tire carrier permit from the Department.

(2) After January 1, 1989, no person shall collect or haul waste tires or advertise or represent himself/herself as being in the business of a waste tire carrier without first obtaining a waste tire carrier permit from the Department.

(3) The following persons are exempt from the requirement to obtain a waste tire carrier permit:

(a) Solid waste collectors operating under a license or franchise from any local government unit;

(b) A private individual transporting the individuals own waste tires to a processor or for proper disposal;

(c) A private carrier transporting the carriers own waste tires to a processor or for proper disposal;

(d) A person transporting fewer than five tires to a processor or for proper disposal;

(e) Persons transporting tire-derived products to a market;

(f) Persons transporting tire chips that meet the chipping standards in OAR 340-64-052;

(g) The Unites States, the State of Oregon, any county, city, town or municipality in this state or any agency of the United States, the State of Oregon or a county, city, town or municipality of this state.

(4) A combined tire carrier/storage permit may be applied for by tire carriers:

(a) Who are subject to the carrier permit requirement; and

(b) Whose business includes or wants to establish a site which is subject to the waste tire storage permit requirement.

(5) The Department shall supply a combined tire carrier/storage permit application to such persons. Persons applying for the combined tire carrier/storage permit shall comply with all other regulations concerning storage sites and tire carriers established in these rules.

(6) ~~Persons who transport waste tires for the purpose of storage, processing or disposal must apply to the Department for a waste tire carrier permit within 90 days of the effective date of this rule.~~ Persons who want to ~~begin~~ transporting waste tires for the purpose of storage, processing or disposal must apply to the Department for a waste tire carrier permit at least 90 days before beginning to transport the tires.

(7) Large trucking companies with 15 or more trucks in their fleet, whether leased or owned, may apply for a common carrier class waste tire carrier permit to haul waste tires.

(a) All waste tire carrier permit rules will apply, except for Sections (8)(a), (17), and (18) of this rule.

(b) Large trucking companies who apply for this permit must pay all application and compliance fees required in OAR 340-64-063(9)(a) and in section (10) of this rule in addition to an annual permit fee of $375 applicable to companies operating 15 or more trucks.

(c) Cab decals are not required on the trucks, however the common carrier class waste tire carrier permit must remain on file and must be available for review by the Department at the permittee's principal Oregon office.

(d) Any truck in the company's fleet may be used to haul waste tires as long as the company is in compliance with the common carrier class waste tire carrier permit.

(~~7~~8) Applications shall be made on a form provided by the Department. The application shall include such information as required by the Department. It shall include but not be limited to:

(a) A description, license number and registered vehicle owner for each truck used for transporting waste tires;

(b) The PUC authority number under which each truck is registered;

(c) Where the waste tires will be stored, processed or disposed of;

(d) Any additional information required by the Department.

(8~~9~~) A corporation which has more than one separate business location may submit one waste tire carrier permit application which includes all the locations. All the information required in section (~~7~~8) of this rule shall be supplied by location for each individual location. The corporation shall be responsible for amending the corporate application whenever any of the required information changes at any of the covered locations.

(9~~10~~) An application for a tire carrier permit shall include a $25 nonrefundable application fee and an annual compliance fee as listed in OAR 340-64-063 or subsection (7)(b) of this rule, as applicable.

(~~10~~11) An application for a combined tire carrier/storage permit shall include a $250 application fee, $50 of which shall be non-refundable, and an annual compliance fee as listed in OAR 340-64-063. The rest of the application fee may be refunded in whole or in part when submitted with an application if either of the following conditions exists:

(a) The Department determines that no permit will be required;

(b) The applicant withdraws the application before the Department has granted or denied the application.

(~~11~~12) The application for a waste tire carrier permit shall also include a bond in the sum of $5,000 in favor of the State of Oregon. In lieu of the bond, the applicant may submit financial assurance acceptable to the Department. The Department will accept as financial assurance only those instruments listed in and complying with requirements in OAR 340-94- 145 or 340-71-600(4)(a) through (c).

(~~12~~13) The bond or other financial assurance shall be filed with the Department and shall provide that:

(a) In performing services as a waste tire carrier, the applicant shall comply with the provisions of ORS 459.705 through 459.790 and of this rule; and

(b) Any person injured by the failure of the applicant to comply with the provisions of ORS 459.705 through 459.790 or this rule shall have a right of action on the bond or other financial assurance in the name of the person. Such right of action shall be made to the principal or the surety company within two years after the injury.

(~~13~~14) Any deposit of cash, certificate of deposit, letter of credit, or negotiable securities submitted under sections (~~11~~12) and (~~12~~13) of this rule shall remain in effect for not less than two years following termination of the waste tire carrier permit.

(~~14~~15) A waste tire carrier permit or combined tire carrier/storage permit shall be valid for up to three years.

(~~15~~16) Waste tire carrier permits shall expire on March 1. Waste tire carrier permittees who want to renew their permit must apply to the Department for permit renewal by January 1 of the year the permit expires. The application for renewal shall include all information required by the Department, and a permit renewal fee.

(~~16~~17) A waste tire carrier permittee may add another vehicle to its permitted waste tire carrier fleet if it does the following before using the vehicle to transport waste tires:

(a) Submits to the Department:

(A) The information required in section (~~7~~8) of this rule; and

(B) A fee of $25 for each vehicle added.

(b) Displays on each additional vehicle decals from the Department pursuant to OAR 340-64-063(1)(b).

(~~17~~18) A waste tire carrier permittee may lease additional vehicles to use under its waste tire carrier permit without adding that vehicle to its fleet pursuant to section (~~16~~17) of this rule, under the following conditions:

(a) The vehicle may not transport waste tires when under lease for a period of time exceeding 30 days (short-term leased vehicles). If the lease is for a longer period of time, the vehicle must be added to the permittee's permanent fleet pursuant to section (~~16~~17) of this rule;

(b) The permittee must give previous written notice to the Department that it will use short-term leased vehicles;

(c) The permittee shall pay a $25 annual compliance fee in advance to allow use of short-term leased vehicles, in addition to any other fees required by sections (9~~10~~), (~~10~~11) and (~~16~~17) of this rule, and OAR 340-64-063 (9) and (10);

(d) Every permittee shall keep a daily record of all vehicles leased on short term, with beginning and ending dates used, license numbers, PUC authority, PUC temporary pass or PUC plate/marker, and person from whom the vehicles were leased. The daily record must be kept current at all times, subject to verification by the Department. The daily record shall be maintained at the principal Oregon office of the permittee. The daily record shall be submitted to the Department each year as part of the permittee's annual report required by OAR 340-64-063 (8);

(e) The permittee's bond or other financial assurance required under section (~~11~~12) of this rule must provide that, in performing services as a waste tire carrier, the operator of a vehicle leased by the permittee shall comply with the provisions of ORS 459.705 through 459.790 and of this rule;

(f) Each vehicle being used on a short-term lease basis by a permittee must carry a properly filled out cab card provided by the Department in the power vehicle at all times when hauling waste tires. Information on the cab card shall include the starting and ending dates of the short-term lease;

(g) The permittee is responsible for ensuring that a leased vehicle complies with OAR 340-64-055 through 340-64-063, except that the leased vehicle does not have to obtain a separate waste tire carrier permit pursuant to section (1) of this rule while operating under lease to the permittee.

(~~18~~19) A holder of a combined tire carrier/storage permit may purchase special block passes from the Department. A person located outside of Oregon who is a holder of a waste tire carrier permit issued by the Department may also purchase special block passes from the Department if he or she also holds a valid permit allowing storage of waste tires issued by the responsible state or local agency of that state, and if such permit is deemed acceptable by the Department. The block passes will allow the permittee to use a common carrier which does not have a waste tire carrier permit. Use of a block pass will allow the unpermitted common carrier to haul waste tires under the permittee's waste tire carrier permit:

(a) Special block passes shall be available in sets of at least five, for a fee of $5 per block pass. Only a holder of a combined tire carrier/storage permit may purchase block passes. Any unused block passes shall be returned to the Department when the permittee's waste tire permit expires or is revoked;

(b) The permittee is responsible for ensuring that a common carrier operating under a block pass from the permittee complies with OAR 340-64- 055 through 340-64-063, except that the common carrier does not have to obtain a separate waste tire carrier permit pursuant to section (1) of this rule while operating under the permittee's block pass;

(c) A block pass may be valid for a maximum of ten days and may only be used to haul waste tires between the origin(s) and destination(s) listed on the block pass;

(d) A separate block pass shall be used for each trip hauling waste tires made by the unpermitted common carrier under the permittee's waste tire permit. (A trip begins when waste tires are picked up at an origin, and ends when they are delivered to a proper disposal site(s) pursuant to OAR 340-64-063(4));

(e) The permittee shall fill in all information required on the block pass, including name of the common carrier, license number, PUC authority if applicable, PUC temporary pass or PUC plate/ marker if applicable, beginning and ending dates of the trip, address(es) of where the waste tires are to be picked up and where they are to be delivered, and approximate numbers of waste tires to be transported;

(f) Each block pass shall be in triplicate. The permittee shall send the original to the Department within five days of the pass's beginning date, one copy to the common carrier which shall keep it in the cab during the trip, and shall keep one copy;

(g) The permittee shall be responsible for ensuring that any common carrier hauling waste tires under the permittee's waste tire permit has a properly completed block pass;

(h) While transporting waste tires, the common carrier shall keep a block pass properly filled out for the current trip in the cab of the vehicle;

(i) An unpermitted common carrier may operate as a waste tire carrier using a block pass no more than three times in any calendar quarter. Before a common carrier may operate as a waste tire carrier more than three times a quarter, he or she must first apply for and obtain a waste tire carrier permit from the Department

State of Oregon
Department of Environmental Quality
Public Notice of Rulemaking

Proposed Amendments to Waste Tire Carrier Rules

Notice of Rulemaking

This notice contains information on a proposal by the Department of Environmental Quality to adopt rule amendments regarding waste tire carrier permits for large trucking companies. This notice also provides information about the Environmental Quality Commission's intended action to adopt a rule.

What is proposed

The proposed rules would establish a new class of waste tire carrier permit for large trucking companies, Common Carrier Class Waste Tire Carrier Permit. They would also place a limit on the total amount of permit fees which will be charged for this new permit. And, they would eliminate the requirement that each truck display a decal.

Background

Under the present rules large trucking companies which haul waste tires are required to pay a permit application fee, permit compliance fee, and purchase a $25 decal for each truck used to haul waste tires. The proposed rule amendments allow a large trucking company, with more than 15 trucks, to pay a single fee equivalent to the cost of 15 decals, in lieu of purchasing a decal for every truck.

Public Comment

If you are interested in the details of these proposed rule amendments, you are invited to request additional information. If you contact the Department, we will send you a copy of the complete rulemaking packet. After you review this material you can present written comment on the proposed rule changes. **Written comments must be presented to the Department by 5:00 p.m., December 27, 1996.** Please forward all comments to Department of Environmental Quality, Attn: William R. Bree, 811 S.W. 6th Avenue, Portland, Oregon, 97204, or deliver them to the Department of Environmental Quality's 10th floor reception area at 811 S.W. 6th Avenue, Portland, Oregon between 8:00 a.m. and 5:00 p.m.

Public Hearing

If written comments indicating significant public interest or written requests from 10 persons, or an organization representing at least 10 persons, are received regarding this proposed rule, the Department will provide a public hearing. Requests for a hearing must be in writing and received by the Department by 5:00 p.m., December 27, 1996. No comments can be accepted after the close of the comment period

- MORE -

What Happens Next

Following close of the public comment period, the Department will prepare a report which summarizes the comments received and evaluates the rulemaking proposal in light of all information received during the comment period. The Environmental Quality Commission will receive a copy of this report and will consider the Department's recommendation for rule adoption during one of their regularly scheduled public meetings. The targeted meeting date for consideration of this rulemaking proposal is February 27, 1997.

For More Information

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

William R. Bree
Waste Management and Cleanup Division
Oregon Department of Environmental Quality
811 S. W. 6th Ave.
Portland, Oregon 97204
Phone: (503) 229-6046, Fax: (503) 229-5830
Email: William.R.Bree@STATE.OR.US

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
Rulemaking Proposal
for
Proposed Amendments To Waste Tire Carrier Rules
Fiscal and Economic Impact Statement

Introduction

The proposed rule amendments do not establish a new permit fee. They do establish a new class of permit and place a limit on the total amount of the present fee which can be charged for this new permit. This new class of permit is the Common Carrier Class Waste Tire Carrier Permit. This class of permit will allow large trucking companies to legally provide waste tire hauling service in Oregon at a reasonable cost. There are an estimated twenty companies who might want to provide this service. If all of these companies purchased permits from the Department the total cost would be $11,500. This is approximately 1/3 of a cent per new tire sold in Oregon.

Existing waste tire management rules, found in OAR 340, Division 64, require any person hauling more than four waste tires in the state of Oregon to have a Department of Environmental Quality waste tire carrier permit. Another rule requirement is that every permitted carrier must display a State of Oregon waste tire carrier decal on any vehicle used to haul waste tires. These provisions work adequately for companies with a limited number of vehicles which are used extensively to haul waste tires. The existing rule does not work well for large trucking companies who have a large number of trucks and haul tires on an occasional basis. The cost of a permit and decals for all of their trucks is an excessive economic burden. As a result it is assumed that many of these large companies are not hauling tires or are hauling tires without the required permit and decals. The proposed rule amendment provides a new permit class which will allow large carriers to haul tires legally in Oregon without undue economic burden.

Under the proposed rule amendments, a large trucking company could get a common carrier class permit. The permit cost would include a $25 one-time permit application fee, $175 compliance fee, and $375 permit fee. The $375 permit fee is equivalent to the purchase of 15 truck decals. The common carrier class permit allows the company to use as many trucks as they want and waives the requirement that each truck have a decal. Common carrier class waste tire carriers are not excused from any other requirement of the waste tire carrier permit program.

Summary of permit costs

The following table shows that effect the proposed rules on companies with different sized truck fleets.

Costs Before and After Adoption of Proposed Rule Amendments

Before		After	
Number of trucks	Total fees	Number of trucks	Total fees
1	$225	1	$225
5	$325	5	$325
10	$450	10	$450
15	$575	15	$575
20	$700	20	$575
100	$2700	100	$575

General Public

There will be no direct fiscal impact and no measurable indirect fiscal impact on the general public. If the total cost associated with the proposed rules were passed directly back to the public in the cost of a new tire, it would be less than 1/3 of a cent per tire.

Small Business

It appears that the major economic impact will be on large businesses. The same factors which will affect large businesses will also affect small ones. Please refer to the discussion below.

Large Business
The estimated twenty large trucking companies which might want to haul waste tires in Oregon would all qualify as large businesses. The proposed rule amendments would allow these companies to provide this service with an annual permitting cost of $550. This fee would be passed on to their customers either directly or in the form of higher rates. Since all large trucking companies would have to pay the same permit fee there should be no direct impact on competition between these firms. The total fees generated annually are estimated to be $11,500 if twenty large trucking companies purchase common carrier class permits.

The companies which hire large trucking companies to haul waste tires might be either large or small businesses. These companies would be either waste tire processors or disposal sites. For the most part the cost of the tire carrier permits will be passed on to either the waste tire processor or the waste tire generator. This permit cost will represent a very small part of their cost of doing business. The estimated maximum cost would be $.01 per tire if a permit holder transported a minimum of 55,000 tires per year. This cost would decrease if each company hauled more of the 3.3 million tires presently transported in Oregon.

This cost would in turn be passed on to the customers of the waste tire processors or disposal sites. These customers are either the end users of processed tire products, such as tire-derived fuel, or the waste tire generators, such as tire dealers who are paying to have their tires hauled away and processed or disposed. Again the costs will be relatively low since the volume transported by these companies will be large.

It is important to note that almost all waste tires in Oregon are transported by permitted carriers. The cost of the permits is already included in the cost of doing business. And, the actual permit cost per tire will depend on how many tires each permittee transports.

Local Governments
The proposed rules have no direct or indirect economic impact on local government.

State Agencies
Fiscal impact to the Department of Environmental Quality:

Staff Required - There will be no additional Department staff required to issue the additional permits resulting from the proposed rule amendments. Issuing waste tire carrier permits is presently a part of the work load for one staff position.

Revenues - If the estimated twenty large trucking companies all applied for the new permit, the additional annual revenue to the Department would be $11,500.

Expenses - The estimated cost to the Department of issuance and compliance review of twenty Common Carrier Class waste tire carrier permits is $11,500.

Fiscal impact to other agencies: None

Assumptions
- There are currently 27 Department-permitted tire carriers in Oregon.
- None of these small carriers has purchased decals for more than 15 trucks.
- Large trucking companies are not presently obtaining waste tire carrier permits from the Department because the cost of purchasing a decal for every truck would be excessive.
- The Department estimates that there are approximately 20 large trucking companies, with more than 15 trucks, which would purchase a Common Carrier Class Waste Tire Carrier Permit.
- There are more than 3 million tires transported and processed in Oregon each year.

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking Proposal
for
Proposed Amendments To Waste Tire Carrier Rules

Land Use Evaluation Statement

1. Explain the purpose of the proposed rules.

Existing waste tire management rules, found in OAR 340, Division 64, require any person hauling more than four waste tires in the state of Oregon to have a Department of Environmental Quality waste tire carrier permit. These rules also require every permitted carrier to display a State of Oregon waste tire carrier decal on any vehicle used to haul waste tires. These provisions of the existing rules work adequately for companies with a limited number of vehicles which are used extensively to haul waste tires. The existing rule does not work well for large trucking companies who have a large number of trucks and haul tires on an occasional basis. The cost of a permit and decals for all of their trucks is an excessive economic burden on these few companies. As a result most of these large companies are either not hauling tires or are hauling tires without the required permit and decals. The proposed rule amendment provides a new permitting process which will allow large common carriers to haul tires legally in Oregon without undue economic burden.

2. Do the proposed rules affect existing rules, programs or activities that are considered land use programs in the DEQ State Agency Coordination (SAC) Program?
Yes____ No_x_
   a. **If yes, identify existing program/rule/activity:**
   b. **If yes, do the existing statewide goal compliance and local plan compatibility procedures adequately cover the proposed rules?**
      Yes____ No____ (if no, explain):
   c. **If no, apply the following criteria to the proposed rules.**

In the space below, state if the proposed rules are considered programs affecting land use. State the criteria and reasons for the determination.

No, the proposed rule do not affect land use. They limit the level of fees charged to a very small specific class of waste tire haulers.

3. If the proposed rules have been determined a land use program under 2. above, but are not subject to existing land use compliance and compatibility procedures, explain the new procedures the Department will use to ensure compliance and compatibility.
Not applicable

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking proposal
for
Proposed Amendments To Waste Tire Carrier Rules

Questions to be Answered to Reveal
Potential Justification for Differing from Federal Requirements.

1. **Are there federal requirements that are applicable to this situation? If so, exactly what are they?**
   None
2. **Are the applicable federal requirements performance based, technology based, or both with the most stringent controlling?**
   None
3. **Do the applicable federal requirements specifically address the issues that are of concern in Oregon? Was data or information that would reasonably reflect Oregon's concern and situation considered in the federal process that established the federal requirements?**
   Not applicable
4. **Will the proposed requirement improve the ability of the regulated community to comply in a more cost effective way by clarifying confusing or potentially conflicting requirements (within or cross-media), increasing certainty, or preventing or reducing the need for costly retrofit to meet more stringent requirements later?**
   Not applicable
5. **Is there a timing issue which might justify changing the time frame for implementation of federal requirements?**
   Not applicable
6. **Will the proposed requirement assist in establishing and maintaining a reasonable margin for accommodation of uncertainty and future growth?**
   Not applicable
7. **Does the proposed requirement establish or maintain reasonable equity in the requirements for various sources? (level the playing field)**
   Yes
8. **Would others face increased costs if a more stringent rule is not enacted?**
   Not applicable
9. **Does the proposed requirement include procedural requirements, reporting or monitoring requirements that are different from applicable federal requirements? If so, Why? What is the "compelling reason" for different procedural, reporting or monitoring requirements?**
   Not applicable
10. **Is demonstrated technology available to comply with the proposed requirement?**
    Not applicable
11. **Will the proposed requirement contribute to the prevention of pollution or address a potential problem and represent a more cost effective environmental gain?**
    Yes

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

Date: November 15, 1996

To: Interested and Affected Public

Subject: Rulemaking Proposal and Rulemaking Statements
Proposed amendments to waste tire carrier rules

This memorandum contains information on a proposal by the Department of Environmental Quality to adopt rule amendments regarding waste tire carrier permits for large trucking companies. Pursuant to ORS 183.335, this memorandum also provides information about the Environmental Quality Commission's intended action to adopt a rule.

This proposal would establish a new class of waste tire carrier permit, Common Carrier Class Waste Tire Carrier Permit, and place a limit on the total amount of permit fee which will be charged. Under the present rules large trucking companies which haul waste tires are required to pay a permit application fee, permit compliance fee, and purchase a $25 decal for each truck used to haul waste tires. The proposed rule amendments allow a large trucking company, with more than 15 trucks to pay a single fee, equivalent to the cost of 15 decals, in lieu of purchasing a decal for every truck. The proposed rule also waive the requirement that each truck display a decal.

The Department has the statutory authority to address this issue under ORS Chapter 459.

What's in this Package?

Attachments to this memorandum provide details on the proposal as follows:

Attachment A The official statement describing the fiscal and economic impact of the rule.
Attachment B A statement providing assurance that the proposed rules are consistent with statewide land use goals and compatible with local land use plans.
Attachment C Questions to be Answered to Reveal Potential Justification for Differing from Federal Requirements.
Attachment D The actual language of the proposed rule amendments.

Public Comment Period

You are invited to review these materials and present written comment on the proposed rule changes. **Written comments must be presented to the Department by 5:00 p.m., December 27, 1996.** Please forward all comments to Department of Environmental Quality, Attn: William R. Bree, 811 S.W. 6th Avenue, Portland, Oregon, 97204, or deliver them to the Department of Environmental Quality, 811 S.W. 6th, 10th Floor between 8:00 a.m. and 5:00 p.m.

In accordance with ORS 183.335(13), no comments can be accepted after the close of the comment period. Thus if you wish for your comments to be considered by the Department in the development of these rules, your comments **must** be received prior to the close of the comment period. Interested parties are encouraged to present their comments as early as possible prior to the close of the comment period to ensure adequate review and evaluation of the comments presented.

If written comments indicating significant public interest or written requests from 10 persons, or an organization representing at least 10 persons, are received regarding this proposed rule, the Department will provide a public hearing. Requests for a hearing must be in writing and received by the Department by 5:00 p.m., December 27, 1996.

What Happens After the Public Comment Period Closes

Following close of the public comment period, the Department will prepare a report which summarizes the comments received. The Environmental Quality Commission will receive a copy of this report.

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

The Commission will consider the Department's recommendation for rule adoption during one of their regularly scheduled public meetings. The targeted meeting date for consideration of this rulemaking proposal is February 27, 1997. This date may be delayed if needed to provide additional time for evaluation and response to the public comments received.

You will be notified of the time and place for final Commission action if you submit written comment during the comment period or ask to be notified of the proposed final action on this rulemaking proposal.

Background on Development of the Rulemaking Proposal

Why is there a need for the rule?

Existing waste tire management rules, found in OAR 340, Division 64, require any person hauling more than four waste tires in the state of Oregon to have a Department of Environmental Quality waste tire carrier permit. These rules also require that every permitted carrier must display a State of Oregon waste tire carrier decal on any vehicle used to haul waste tires. These provisions work adequately for companies with a limited number of vehicles which are used extensively to haul waste tires. The existing rule does not work well for trucking companies who have a large number of trucks and haul tires on an occasional basis. The cost of a permit and decals for all of their trucks is an excessive economic burden on these few companies. As a result most of these large companies are either not hauling tires or are hauling tires without the required permit and decals. The proposed rule amendment provides a new permit class which will allow large trucking companies to haul tires legally in Oregon without undue economic burden.

How was the rule developed?

A workgroup of waste tire program stakeholders met with Department staff in May 1996. This workgroup was composed of eight members representing tire dealers, waste tire processors, waste tire haulers, recyclers, and local governments. The Department's Solid Waste Advisory Committee has also reviewed and commented upon the proposed rule amendments.

Scrap Tire Management Workgroup

Mark Hope, Waste Recovery, Inc.
Paula Kinzer, Bend Recycling Team
Dan Roberts, Les Schwab Tires
Scott Klag, Metro
Dick Nordness, NW Independent Tire Dealers
Carol Brown, Clean Washington Center
Andy Sloop, Metro
Tim Ackerman, Silver Eagle Industries

The Department did not rely upon any documents in the development of this rulemaking proposal.

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

This rule will have a direct impact on large trucking companies who want to haul waste tires in Oregon. The Department estimates this will be less than twenty companies. The proposed amendments will allow these companies to obtain a permit to haul waste tires for a lower fee than under the present rules. There will be no direct impact on other companies or the public. The proposed amendments would allow a few new companies to enter the waste tire carrier system.

How will the rule be implemented

The proposed rule amendment will not require any change in implementation of the Department's waste tire carrier permit program. The establishment of this new class of waste tire carrier permit will result in less than twenty new permits. The new class of permit will be administered as part of the existing waste tire carrier permit program without need for additional staff, training , or resources.

Are there time constraints?

None

Contact for more information

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

William R. Bree
Waste Management and Cleanup Division
Oregon Department of Environmental Quality
811 S. W. 6th Ave.
Portland, Oregon 97204
Phone: (503) 229-6046
Fax: (503) 229-5830
Email: William.R.Bree@STATE.OR.US

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
Rulemaking Proposal
for
Proposed Amendments to Waste Tire Carrier Rules
Advisory Committee Membership and Report

A workgroup of waste tire program stakeholders met with Department staff in May 1996. This workgroup was composed of eight members representing tire dealers, waste tire processors, waste tire haulers, recyclers, and local governments Department solid waste planning and waste tire program staff were also involved. The workgroup discussed a number of waste tire related issues. Of those issues covered the need for an adequate permit for large trucking companies was the only issue which needed resolution and cold not be resolved within the existing program rules. Department staff developed these draft rule amendments from the discussion at the workgroup meeting. Members of the work group have reviewed the proposed rules in draft and final form. All of their comments have been considered and when appropriate incorporated in the final proposed amendments.

Scrap Tire Management Workgroup	
Mark Hope, Waste Recovery, Inc.	Dick Nordness, NW Independent Tire Dealers
Paula Kinzer, Bend Recycling Team	Carol Brown, Clean Washington Center
Dan Roberts, Les Schwab Tires	Andy Sloop, Metro
Scott Kleig, Metro	Tim Ackerman, Silver Eagle Industries

The final draft of the proposed amendments was also distributed to the Department's Solid Waste Advisory Committee. The proposed rules were reviewed and commented upon by the committee members at their November 1996 meeting. There were no comments from the committee which required an modification of the proposed amendments.

Members of both advisory committees and other interested parties also received a copy of the full rulemaking packet. There were no comments received from either the public or committee members.

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
Rulemaking Proposal
for
Proposed Amendments to Waste Tire Carrier Rules
Rule Implementation Plan

Introduction

Existing waste tire management rules, found in OAR 340, Division 64, require any person hauling more than four waste tires in the state of Oregon to have a Department of Environmental Quality waste tire carrier permit. Another rule requirement is that every permitted carrier must display a State of Oregon waste tire carrier decal on any vehicle used to haul waste tires. These provisions work adequately for companies with a limited number of vehicles which are used extensively to haul waste tires. The existing rule does not work well for large trucking companies who have a large number of trucks and haul tires on an occasional basis. The cost of a permit and decals for all of their trucks is an excessive economic burden. As a result it is assumed that many of these large companies are not hauling tires or are hauling tires without the required permit and decals. The proposed rule amendment provides a new permit class which will allow large carriers to haul tires legally in Oregon without undue economic burden.

Under the proposed rule amendments, a large trucking company could get a common carrier class permit. The permit cost would include a $25 one-time permit application fee, $175 compliance fee, and $375 permit fee. The $375 permit fee is equivalent to the purchase of 15 truck decals. The common carrier class permit allows the company to use as many trucks as they want and waives the requirement that each truck have a decal. Common carrier class waste tire carriers are not excused from any other requirement of the waste tire carrier permit program.

The proposed rule amendments do not establish a new permit fee. They do establish a new class of permit and place a limit on the total amount of the present fee which can be charged for this new permit. This new class of permit is the Common Carrier Class Waste Tire Carrier Permit. This class of permit will allow large trucking companies to legally provide waste tire hauling service in Oregon at a reasonable cost. There are an estimated twenty companies who might want to provide this service. If all of these companies purchased permits from the Department the total cost would be $11,500. This is approximately 1/3 of a cent per new tire sold in Oregon.

Implementation Plan

The Department's waste tire carrier permit program is presently implemented by the Solid waste program in the Western Region, Medford office. All aspects of the waste tire carrier permit program are a portion of one individual's work load. There are presently 27 waste tire carrier permits. Applications for Common Carrier Class Waste Tire Carrier permits will be received and processed along with other tire carrier new applications and renewals.

The rule amendments will be implemented as soon as they are effective. Application materials will be sent to large trucking companies as part of the next round of permit renewals.

Organizational impact

The proposed rule amendment will have on organizational impact on the Department. They represent a very small procedural change in a single Department program.

Fiscal Impact

There will be a small fiscal impact on the Department from the proposed rule amendments. The new permit class may encourage a small number of large trucking companies to obtain waste tire carrier permits. If the estimated twenty large trucking companies all applied for the new permit, the annual revenue to the Department would be $11,500. At the same time the cost of issuing and follow-up on the new permits is estimated to be approximately the same as the expected income, $11,550. If fewer than twenty companies apply for the new permit both the income and cost will be reduced proportionally.

Environmental Quality Commission

☒ Rule Adoption Item
☐ Action Item
☐ Information Item

Agenda Item H
February 28, 1997 Meeting

Title:

Clarification of Tank Vessel Per Trip Fees and Oil Spill Contingency Planning Requirements

Summary:

This proposal would clarify the classification of small self-propelled tank vessels for fee purposes, allowing such vessels to operate under the fee charged to similar non-self-propelled vessels. The rule change would also provide DEQ with authority to waive certain response time requirements to facilitate mutual aid requests from other states for response and cleanup resources. This will allow response contractors to move equipment and personnel to neighboring jurisdictions during oil spill cleanup projects.

Department Recommendation:

It is recommended that the Commission adopt the rule amendments regarding vessel fees and authorization of cross border movement of oil spill response resources as presented in Attachment A of the Department Staff Report.

Report Author | Division Administrator | Director

Accommodations for disabilities are available upon request by contacting the Public Affairs Office at (503)229-5317(voice)/(503)229-6993(TDD).

State of Oregon
Department of Environmental Quality Memorandum

Date: February 10, 1997

To: Environmental Quality Commission

From: Langdon Marsh

Subject: Agenda Item H, EQC Meeting February 28, 1997

Background

On December 12, 1996, the Director authorized the Waste Management and Cleanup Division to proceed to a rulemaking hearing on proposed rules which would allow the Department to adopt new rules and rule amendments clarifying the fee category for self-propelled tank vessels operating on Oregon waters and to develop a process for authorization of cross border movement of oil spill cleanup equipment in response to requests for mutual aid.

Pursuant to the authorization, hearing notice was published in the Secretary of State's Bulletin on January 1, 1997. The Hearing Notice and informational materials were mailed to the mailing list of those persons who have asked to be notified of rulemaking actions, and to a mailing list of persons known by the Department to be potentially affected by or interested in the proposed rulemaking action on regulations pertaining to oil spills into public waters.

A Public Hearing was held on January 14, 1997 with Michael Zollitsch serving as Presiding Officer. Written comment was received through January 22, 1997. The Presiding Officer's Report (Attachment C) summarizes the written comments received. There was no oral testimony presented at the hearing. (A copy of the comments is available upon request.)

Department staff have evaluated the comments received (Attachment D). Based upon that evaluation, no modifications to the initial rulemaking proposal are being recommended by the Department, however due to an error in printing the proposed rules, grammatical errors were corrected.

The following sections summarize the issue that this proposed rulemaking action is intended to address, the authority to address the issue, the process for development of the rulemaking proposal including alternatives considered, a summary of the rulemaking proposal presented for public hearing, significant public comments (no changes are proposed in response to those comments), how

the rule will work and how it is proposed to be implemented, and give a recommendation for Commission action.

Issue this Proposed Rulemaking Action is Intended to Address

Tank Vessel Per Trip Fees

This rule would , if adopted, treat small tank vessels (under 300 gross tons) differently from large tank vessels for fee purposes. Under the present rules, which did not contemplate the operation of small tank vessels operating entirely within the confines of the Columbia and Willamette Rivers, all self propelled tank vessels are assessed a $650 per trip fee for entry into Oregon waters. Non self-propelled tank vessels (tank barges) pay a fee of $28. The proposed revision allows small self-propelled tank vessels to pay the lower fee. The change reflects the fact the small self - propelled tank vessels are used in the same manner as tank barges. Charging the small self - propelled tank vessels the higher fee would make their operation financially difficult.

Oil Spill Contingency Planning

This rule will also provide DEQ with authority to waive response time requirements in response to equipment mutual aid requests from other states. This will allow response contractors to move equipment and personnel to neighboring jurisdictions to clean up spills. This authority allows Oregon to become signatory to the West Coast States/British Columbia Oil Spill Task Force Mutual Aid Agreement, which provides for equipment sharing among adopting states. Oregon will benefit from this rule and provisions of the Mutual Aid Agreement as equipment from other states will then be available to respond to spills in Oregon.

Relationship to Federal and Adjacent State Rules

Tank Vessel Per Trip Fees

The US Coast Guard maintains jurisdiction over the operation of commercial vessels. If the Department used the Coast Guard classification system, self propelled tank vessels would be classified as cargo vessels under 300 gross tons and would pay no fees to the State of Oregon for oil spill contingency planning even though they are transporting petroleum products as their primary cargo. This would also give the self-propelled barges an operating advantage over tank barges that are required to pay a fee.

The State of Washington supports their oils spill programs with a per barrel tax on imported crude oil.

Oil Spill Contingency Planning

The US Coast Guard maintains jurisdiction over response to marine oil spills and could require a plan holder to move equipment to another zone in response to an oil spill. Without the proposed revision, such an action could place the plan holder in violation of its state approved response plan.

The States of Washington and California (as well as other west coast states) would benefit from the proposed revision should a major oil spill occur in their region and additional resources be required. The State of Oregon could also benefit from the proposed revision by taking advantage of spill response equipment from other states.

Authority to Address the Issue

Oil Spill Contingency Planning

Fee Policy Issues: The Commission is granted the authority to establish by rule a schedule of fees to be assessed on offshore facilities, on shore facilities, and on self-propelled tank vessels by ORS 468B.405.

Oil Spill Contingency Planning

Cross Border Equipment Movement (Mutual Aid): The Commission is granted the authority to adopt by rule standards for the preparation of contingency plans for facilities and covered vessels by ORS 468B.350.

Process for Development of the Rulemaking Proposal (including Advisory Committee and alternatives considered)

Tank Vessel Per Trip Fees

Department staff examined the Tank Vessel Per Trip Fees on suggestion from the public. After examination of the prior fee structure, and consultation with affected industries, the Department adopted temporary rules clarifying how fees should be charged. The Department then began the process of adopting permanent rules.

Oil Spill Contingency Planning

Oregon is a member of the West Coast States/British Columbia Oil Spill Task Force. The Task Force developed the concept of a Mutual Aid Agreement allowing equipment sharing among adopting states. Copies of the Mutual Aid Agreement are available upon request.

There was no advisory committee involved with developing these rules because of the limited scope of the rules. Extensive contact with the maritime industry has occurred. Interested parties have been generally supportive of this rule.

Summary of Rulemaking Proposal Presented for Public Hearing and Discussion of Significant Issues Involved.

A public hearing was held on January 14, 1997 at 3:00 PM, at DEQ offices located in Portland, Oregon. No public testimony was received at the hearing. The Hearing Package sent to interested parties prior to the hearing identified the same issues as discussed in this proposal to the EQC.

Summary of Significant Public Comment and Changes Proposed in Response

Tank Vessel Per Trip Fees

There were no public comments with regard to the proposed rule change on vessel fees.

Oil Spill Contingency Planning

There were public comments submitted by oil spill response organizations. The concerns raised were:

1) The proposed Oregon rule focused on pre-approval by plan holders while the States/BC Task Force Mutual Aid Agreement addresses requests for pre-approval by contractors.

Department Response: Several members of the States/BC Task Force regulate oil spill response organizations and therefore have mechanisms to facilitate requests for mutual aid from these organizations. Oregon regulates the plan holders rather than the oil spill response organizations and has no authority to negotiate pre-approval of mutual aid requests from these organizations.

2) The pre-approval process should be held in the public forum with notice to interested parties. Public hearings should be part of the pre-approval process in order that the interests of both the public and private sector be duly considered.

Department Response: The Department's pre-approval process does not require plan modification or updates of individual plans. The public was invited to comment on the proposed rule and a public hearing was held.

3) The proposed rule is silent on the issue of liability of a plan holder in the event of a resident spill while equipment is out of the area on mutual aid.

Department Response: A plan holder will remain liable in the event of a resident spill for which they are the responsible party. The Department is waiving response times specified in their plan if resources are out of the area due to mutual aid. While exposure to liability is a disincentive to mutual aid services, the Department recognizes that it is the plan holder's responsibility to evaluate measures to prevent or reduce the potential for discharges during the period of reduced response capability and to negotiate with their oil spill response organization for appropriate coverage.

Summary of How the Proposed Rule Will Work and How it Will be Implemented

The proposed rules are in place now as temporary rules, adopted in October, 1996. If adopted as permanent rules, the Department would continue to apply those rules as it is now doing.

Tank Vessel Per Trip Fees : The lower $28 fee would be charged to small self-propelled tank vessels in the same manner as for similar non-self-propelled tank vessels.

Oil Spill Contingency Planning: The Department would have authority to approve or disapprove requests for allowing equipment listed in contingency plans to be used to respond to out of state spills. If the Department approves requests for mutual aid, conditions would be placed on plan holders requiring that a base level of equipment be kept in place at all times. The Department will work with plan holders and oil spill response organizations to develop a clear understanding on procedures with regard to mutual aid.

Recommendation for Commission Action

It is recommended that the Commission adopt the rule amendments regarding vessel fees and authorization of cross border movement of oil spill response resources as presented in Attachment A of the Department Staff Report.

Attachments

A. Rule (Amendments) Proposed for Adoption
B. Supporting Procedural Documentation:
   1. Legal Notice of Hearing
   2. Fiscal and Economic Impact Statement
   3. Land Use Evaluation Statement
   4. Questions to be Answered to Reveal Potential Justification for Differing from Federal Requirements
   5. Cover Memorandum from Public Notice
C. Presiding Officer's Report on Public Hearing
D. Department's Evaluation of Public Comment
E. Rule Implementation Plan

Reference Documents (available upon request)

States/BC Oil Spill Task Force Mutual Aid Agreement

Written Comments Received (listed in Attachment D)

Approved:

Section: Michael J. Zollitsch for Lauria McCulloch

Division: _____

Report Prepared By: Michael J. Zollitsch

Phone: 503-229-6931

Date Prepared: January 27, 1997

Proposed Rule Revisions

Definitions

340-047-0010

As used in these regulations unless otherwise required by context:

. . .

(7) "Covered vessel" means a tank vessel, self-propelled tank vessel, cargo vessel, or passenger vessel ~~of 300 tons or more~~. For purposes of this chapter:

(a) "Cargo vessel" means a self-propelled ship in commerce, other than a tank vessel or a passenger vessel, of 300 or more gross tons. "Cargo vessel" does not include a vessel used solely for commercial fish harvesting;

(b) "Passenger vessel" means a ship of 300 or more gross tons carrying passengers for compensation; and

(c) "Tank vessel" means a ship that is constructed or adapted ~~adopted~~ to carry, or that carries, oil in bulk as cargo or cargo residue. "Tank vessel" does not include:

(A) A vessel carrying oil in drums, barrels, or other packages;

(B) A vessel carrying or storing oil as fuel for that vessel; or

(C) An oil spill response barge or vessel.

(d) "Self-propelled tank vessel" means a tank vessel that is capable of moving under its own power.

. . .

Stat. Auth.: ORS Ch. 449 & 468B.345 - 468.390
Hist.: DEQ 45, f. 6-15-72, ef. 7-1-72; DEQ 30-1991, f. & cert. ef. 12-20-91; DEQ 22-1992, f.& cert. ef. 8-13-92

Program Administration and Compliance Fees

340-047-0035

(1) All offshore and onshore facilities required to develop oil spill prevention and emergency response plans under ORS 468B.345 shall be assessed an annual fee of $3,000. The fee period shall correspond with the state's fiscal year (July 1 through June 30) and the fee shall be paid annually during the month of July. For the 1991 - 1992 fiscal year only, fees will be due on or before January 1, 1992.

(2) The Department will assess all ~~All~~ self-propelled tank vessels ~~required to develop oil spill prevention and emergency response plans under ORS 468B.345~~ of 300 gross tons or more ~~shall be assessed~~ a per trip fee of $650. The Department will assess all self-propelled tank vessels under 300 gross tons a per trip fee of $28. The fee shall be remitted to the Department within thirty (30) days of conclusion of each trip.

(3) Fees assessed under this rule may be used by the Department to administer the Oil Spill Prevention Act under ORS468B.300 - 468B.420, including the review of facility and vessel oil spill prevention and emergency response plans, plan compliance inspections, exercises, training, and other duties pursuant to administration and implementation of the Act.

(4) Moneys collected under this rule shall be deposited in the State Treasury to the credit of the Oil Spill Prevention Fund established by ORS 468B.410.

Stat. Auth.: ORS Ch. 468B

Hist.: DEQ 30-1991, f. & cert. ef. 12-20-91

Equipment Mutual Aid

340-047-0240

(1) The Department may preapprove the transfer of equipment, materials, or personnel by a plan holder to another plan holder or person, when necessary to assist in response to an oil discharge.

(2) The Department's preapproval may include:

(A) Waiver of response times specified in a plan;

(B) Conditions specified by the Department regarding, but not limited to, notification to the Department, return or replacement or equipment, materials or personnel, and measures necessary to prevent or reduce the potential for discharges during the period of reduced response capability.

(3) Preapproval under this rule does not require plan modification or update.

NOTICE OF PROPOSED RULEMAKING HEARING

(Rulemaking Statements and Statement of Fiscal Impact **must** accompany this form.)

Department of Environmental Quality — WMC

OAR Chapter 340

DATE:	TIME:	LOCATIONS:
January 14, 1997	3 PM	Room 3A, 811 SW 6th Ave., Portland, OR 97204

HEARINGS OFFICER(s): Michael Zollitsch

STATUTORY AUTHORITY: ORS 468.020, 468B.300

ADOPT: 340-047-0240

AMEND: 340-047-0010, 0035

Amendments or additions to other sections of Division 047 listed above (or related administrative rules) may be made in response to information or public comment received by the Department.

☒ This hearing notice is the initial notice given for this rulemaking action.

☐ This hearing was requested by interested persons after a previous rulemaking notice.

☒ Auxiliary aids for persons with disabilities are available upon advance request.

SUMMARY:

These rule changes would allow small self-propelled vessels to operate within Oregon waters under a fee classification system consistent with similar non-self-propelled vessels, and allows for the cross-border movement of spill response equipment to offer assistance to neighboring jurisdictions.

LAST DATE FOR COMMENT: January 22, 1997

DATE PROPOSED TO BE EFFECTIVE: Upon adoption by the Environmental Quality Commission and subsequent filing with the Secretary of State.

AGENCY RULES COORDINATOR: Susan Greco, (503) 229-6775

AGENCY CONTACT FOR THIS PROPOSAL: Benjamin M. Allen

ADDRESS: Waste Management and Cleanup Division
811 S. W. 6th Avenue
Portland, Oregon 97204

TELEPHONE: (503) 229-6047
or Toll Free 1-800-452-4011

Interested persons may comment on the proposed rules orally or in writing at the hearing. Written comments will also be considered if received by the date indicated above.

Benjamin M. Allen — Dec. 12, 1996

Signature of Author of rulemaking package — Date

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking Proposal

for

Rules Regarding Clarification of Tank Vessel Per Trip Fee
and Oil Spill Contingency Planning Requirements

Fiscal and Economic Impact Statement

Introduction

Tank Vessel Per Trip Fees

There are no direct fiscal impacts related to the proposed rule changes. The rule change will establish a new classification for self-propelled tank vessels for fee purposes. At the time the original fee structure was established, smaller self-propelled tank vessels were not known to be operating in Oregon Waters. The fee would be $28, the same fee currently being paid by tank barges which provide similair services as the self propelled tank vessel.

Oil Spill Contingency Planning

The rule change affecting oil spill contingency planning requirements would allow DEQ the authority to waive response time requirements and allow for the cross border movement of oil response equipment (mutual aid).

General Public

Oil Spill Contingency Planning

The maritime industry has evolved and the local delivery of bulk oil products by small vessels that never leave the Columbia and Willamette Rivers could become a viable business. The potential operators would be able to operate more efficiently than the current system of using a tank barge and tug or arranging for a truck delivery at a dock.

Small Business

Oil Spill Contingency Planning

There is currently only one self-propelled tank vessel in operation. At least one other company has considered entering the business. The change in fee application could create opportunities for small businesses to enter the market. The potential operators would be able to operate more efficiently than the current system of using a tank barge and tug.

Such changes might harm the operators of current systems.

Large Business

Large vessel operators could benefit from the existence of self-propelled tank vessels on the rivers. Such a system might be more efficient than the current system of using a tank barge and tug, and could lead to cost savings for large vessel operators.

Local Governments

The existence of self-propelled tank vessels and their possible efficiencies could make the Port of Portland a more attractive port, which might lead to increased business.

State Agencies

The Department does not expect any increase in FTEs or any significant change in revenue as a result of the proposed rule. Other agencies would not be affected.

Housing Cost Impact Statement

The Department has determined that this proposed rulemaking will have no effect on the cost of development of a 6,000 square foot parcel and the construction of a 1,200 square foot detached single family dwelling on that parcel.

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking Proposal
for
Rules Regarding Clarification of Tank Vessel Per Trip Fees and
Oil Spill Contingency Planning Requirements

Land Use Evaluation Statement

1. **Explain the purpose of the proposed rules.**

   These rule changes allow small self-propelled vessels to operate within Oregon waters under a fee classification system consistent with similar operations and allows for the cross border movement of spill response equipment to offer assistance to neighboring jurisdictions.

2. **Do the proposed rules affect existing rules, programs or activities that are considered land use programs in the DEQ State Agency Coordination (SAC) Program?**

   Yes X **No** ____

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

OAR 340-18-0030(5)(l) - State Agency Coordination Program/Water Quality Division/ Development of Oil Spill Regulations

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

   Yes X **No** _____ **(if no, explain):**

3. **If the proposed rules have been determined a land use program under 2. above, but are not subject to existing land use compliance and compatibility procedures, explain the new procedures the Department will use to ensure compliance and compatibility.**

Mary Wahl
Division

Intergovernmental Coord.

12/6/96
Date

Attachment B.3

Questions to be Answered to Reveal
Potential Justification for Differing from Federal Requirements.

1. Are there federal requirements that are applicable to this situation? If so, exactly what are they?

Tank Vessel Per Trip Fees

The US Coast Guard maintains jurisdiction over the operation of commercial vessels. Their regulations read as follows: Tank vessel means any vessel especially constructed or converted to carry liquid bulk cargo in tanks (including tank barges). Tankship means any tank vessel propelled by power or sail.

The Coast Guard certifies vessels carrying bulk liquid cargo in an amount not to exceed 20 percent of the vessel's deadweight tonnage as a cargo or passenger vessel instead of a tank vessel. Oregon's statutory definition of cargo vessel reads: "... a self propelled ship in commerce other than a tank vessel of 300 gross tons or more." If the Department were to follow the Coast Guard classification, small tanker vessels could be classified as cargo vessels under 300 gross tons. If this were the case, the small tankers would pay no fees and would have an operating advantage over tank barges.

Oil Spill Contingency Planning

The Coast Guard maintains jurisdiction over the response to marine oil spills. Should a plan holder have a spill in a particular juridsacition, the Coast Guard may require them to summon all equipment identified in their response plan. Without the proposed revision, such an action could place the plan holder in violation of their state approved response plan.

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

Tank Vessel Per Trip Fees

Not applicable.

Oil Spill Contingency Planning

Performance based.

3. Do the applicable federal requirements specifically address the issues that are of concern in Oregon? Was data or information that would reasonably reflect Oregon's concern and situation considered in the federal process that established the federal requirements?

Tank Vessel Per Trip Fees

4. Will the proposed requirement improve the ability of the regulated community to comply in a more cost effective way by clarifying confusing or potentially conflicting requirements (within or cross-media), increasing certainty, or preventing or reducing the need for costly retrofit to meet more stringent requirements later?

Tank Vessel Per Trip Fees

Yes. Clarifying the applicability of the vessel fees will allow operation of small self-propelled tank vessels, which would otherwise be prohibitively expensive. Use of such vessels may be more efficient than the traditional method of tugs and tank barges.

Oil Spill Contingency Planning

Yes. Because response providers will be able to respond to more incidents, costs to response plan holders may decrease.

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

Not applicable.

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

Tank Vessel Per Trip Fees

Yes.

Oil Spill Contingency Planning

Yes. The proposed rule would leave the Department with discretion to allow or not allow plans providing for out of state response.

7. Does the proposed requirement establish or maintain reasonable equity in the requirements for various sources? (level the playing field)

Tank Vessel Per Trip Fees

If no distinction were made between fees for small and large self-propelled tank vessels, the small tank vessel fee would be $650 and operation of these vessels would not be feasible. The proposed rule would charge such vessels the same $28 per trip fee that non-self-propelled tank vessels currently pay.

Oil Spill Contingency Planning

If there is no distinction made between small and large tank vessels for fee purposes, the small tank vessel fee would be $650 and operation of these vessels would not be feasible.

Not charging a fee for small tank vessels would be unfair to tank barges that currently pay a $28 per trip fee.

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

No.

9. Does the proposed requirement include procedural requirements, reporting or monitoring requirements that are different from applicable federal requirements? If so, Why? What is the "compelling reason" for different procedural, reporting or monitoring requirements?

No.

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

Not applicable.

11. Will the proposed requirement contribute to the prevention of pollution or address a potential problem and represent a more cost effective environmental gain?

Tank Vessel Per Trip Fees

No. The proposed rule would have no effect on pollution prevention. It would make financially feasible the operation of small self-propelled tank vessels, which could lead to cost savings for tanker operators, with no loss of environmental protection.

Oil Spill Contingency Planning

Yes. The proposed rule would allow Oregon to take advantage of spill response equipment in other states, and would allow Oregon-based equipment to be used on spills in other states. Access to more equipment would reduce response costs and make responses more effective.

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

Date: **December 15, 1996**

To: Interested and Affected Public

Subject: Rulemaking Proposal and Rulemaking Statements - Clarification of Tank Vessel Per Trip Fees and Oil Spill Contingency Planning Requirements

This memorandum contains information on a proposal by the Department of Environmental Quality (Department) to adopt new rules/rule amendments regarding the establishment of a distinct fee for self-propelled tank vessels operating on Oregon waters and to establish a process for authorization of cross border movement of oil spill cleanup equipment in response to requests for mutual aid[SoO4]. Pursuant to ORS 183.335, this memorandum also provides information about the Environmental Quality Commission's intended action to adopt a rule.

This proposal would clarify the classification of small self-propelled tank vessels for fee purposes, allowing such vessels to operate under the fee charged to similar non-self-propelled vessels. The rule change will also provide DEQ with authority to waive response time requirements and permit mutual aid requests for response and cleanup equipment. This will allow response contractors to move equipment and personnel to neighboring jurisdictions during oil spill cleanup projects.

The Department has the statutory authority to address this issue under ORS 468.020, 468b.300 and; OAR 340-047.

What's in this Package?

Attachments to this memorandum provide details on the proposal as follows:

Attachment A The official statement describing the fiscal and economic impact of the proposed rule. (required by ORS 183.335)

Attachment B A statement providing assurance that the proposed rules are consistent with statewide land use goals and compatible with local land use plans.

Attachment C Questions to be Answered to Reveal Potential Justification for Differing from Federal Requirements.

Attachment D The actual language of the proposed rule (amendments).

Hearing Process Details

The Department is conducting a public hearing at which comments will be accepted either orally or in writing. The hearing will be held as follows:

Date: January 14, 1997
Time: 3 PM
Place: Room 3A, DEQ, 811 SW 6th Ave, Portland, OR 97204

Deadline for submittal of Written Comments: January 22, 1997

Michael Zollitsch will be the Presiding Officer at the hearing.

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

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

What Happens After the Public Comment Period Closes

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

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

The EQC will consider the Department's recommendation for rule adoption during one of their regularly scheduled public meetings. The targeted meeting date for consideration of this rulemaking proposal is February 28, 1997. This date may be delayed if needed to provide additional time for evaluation and response to testimony received in the hearing process.

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

Background on Development of the Rulemaking Proposal
Why is there a need for the rule?

Tank Vessel Per Trip Fees

This rule will treat small tank vessels (under 300 gross tons) separately from large tank vessels for fee purposes. Under the present rules, which did not contemplate the operation of small tank vessels operating entirely within the confines of the Columbia and Willamette Rivers, all self propelled tank vessels are assessed a $650 per trip fee for entry into Oregon waters. Non self-propelled tank vessels (tank barges) pay a fee of $28. The proposed revision allows small self propelled tank vessels to pay the lower fee. The change reflects the fact the small self propelled tank vessels are used in the same manner as tank barges. Charging the small self propelled tank vessels the higher fee would make their operation financially impossible.

Oil Spill Contingency Planning

This rule will also provide DEQ with authority to waive response time requirements in response to equipment mutual aid requests from other states. This will allow response contractors to move equipment and personnel to neighboring jurisdictions to clean up spills. This authority will allow Oregon to become signatory to the West Coast States/British Columbia Oil Spill Task Force Mutual Aid Agreement, which allows equipment sharing among adopting states. Oregon will benefit from this rule and subsequent signing of the Mutual Aid Agreement as equipment from other states will then be available to respond to spills in Oregon.

How was the rule developed?

Tank Vessel Per Trip Fees

Department staff examined the Tank Vessel Per Trip Fees on suggestion from the public. After examination of the prior fee structure, and consultation with affected industries, the Department adopted temporary rules clarifying how fees should be charged. The Department then began the process of adopting permanent rules.

Oil Spill Contingency Planning

Oregon is a member of the West Coast States/British Columbia Oil Spill Task Force. The Task Force developed the concept of a Mutual Aid Agreement allowing equipment sharing

among adopting states. Copies of the Mutual Aid Agreement are available from Mike Zollitsch, 503-229-6931.

No advisory committee was involved with developing these rules.

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

The group most affected by this rule are operators of small tank vessels operating entirely within Oregon on the Columbia and Willamette Rivers. If there is no distinction made between small and large tank vessels for fee purposes, the small tank vessel fee would be $650 and operation of these vessels would not be feasible. Not charging a fee for small tank vessels would be unfair to tank barges that currently pay a $28 per trip fee.

How will the rule be implemented

The same rules are in place now as temporary rules, adopted in October, 1996. If adopted as permanent rules, the Department would continue to to apply those rules as it is now doing.

Tank Vessel Per Trip Fees

The lower $28 fee would be charged to small self-propelled tank vessels in the same manner as for similar non-self-propelled tank vessels.

Oil Spill Contingency Planning

Companies using response providers would have the option of allowing the providers to respond to out of state spills. The Department could approve or disapprove response plans allowing such an option, and would place conditions in response plans requiring that a base level of equipment be kept in place at all times.

Are there time constraints

Yes. Temporary rules were adopted at the October 11, 1996 EQC meeting. The Department has 180 days (March 12, 1997) from the date the temporary rules were adopted to make permanent rule changes.

Contact for more information

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

Michael Zollitsch 503-229-6931

State of Oregon
Department of Environmental Quality Memorandum

Date: January 24, 1997

To: Environmental Quality Commission

From: Michael J. Zollitsch

Subject: Presiding Officer's Report for Rulemaking Hearing
Hearing Date and Time: January 14, 1997, beginning at 3:00 PM
Hearing Location: Department of Environmental Quality Room 3A
811 S.W. Sixth Avenue, Portland, Oregon

Title of Proposal: Clarification of Tank Vessel Per Trip Fees and Oil Spill Contingency Planning Requirements

The rulemaking hearing on the above titled proposal was convened at 3:20 P.M. People were asked to sign witness registration forms if they wished to present testimony. People were also advised that the hearing was being recorded and of the procedures to be followed.

Two people were in attendance, no people signed up to give testimony.

Prior to receiving testimony, Michael Zollitsch briefly explained the specific rulemaking proposal, the reason for the proposal, and responded to questions from the audience.

Summary of Oral Testimony

No oral testimony was presented.

Written Testimony

No written comments were received.

There was no further testimony and the hearing was closed at 3:25.

ATTACHMENT C
EQC AGENDA ITEM H
February 28, 1997

State of Oregon
Department of Environmental Quality Memorandum

Date: January 24, 1997

To: Environmental Quality Commission

From: Michael J. Zollitsch

Subject: Department's Evaluation of Public Comments
Title of Proposal: Clarification of Tank Vessel Per Trip Fees and Oil Spill Contingency Planning Requirements

Comment Period Open December 17, 1996 to January 22, 1997

Written comments were received from the following parties:

Liz Wainwright, Executive Secretary
Maritime Fire and Safety Association
200 S.W. Market Street Suite 190
Portland, Oregon 97201

Mark A. Copeland, Manager
Clean Rivers Cooperative, Inc.
200 S.W. Market Street Suite 190
Portland, Oregon 97201

Summary and Evaluation

The Maritime Fire and Safety Association (MFSA) indicates that they are supportive of the concept of the States/British Oil Spill Task Force Mutual Aid Agreement Policy and believe it will be beneficial to the State's interest.

The Clean Rivers Cooperative indicates that they are in agreement with the concerns raised by MFSA.

ATTACHMENT D
EQC AGENDA ITEM H
February28, 1997

The issues raised by the MFSA and Departments evaluation are:

♦The proposed Oregon rule focuses on pre-approval by plan holders while the mutual aid agreement addresses requests for pre-approval by contractors.

Department analysis: Several members of the States/BC Task Force regulate oil spill response organizations and therefore have mechanisms to facilitate requests for mutual aid from these organizations. Oregon regulates the plan holders rather than the oil spill response organizations and has no authority to negotiate pre-approval of mutual aid requests from these organizations. To regulate the oil spill response organizations to the extent of negotiating approval of their movement of equipment for the purpose of providing mutual aid, the Department would be required to develop additional rules and administrative procedures.

♦The pre-approval process for plan holders or contractors should be held in the public forum with notice to interested parties, particularly plan holders whose plans list the contractor equipment and personnel proposed for mutual aid use. Public hearings should be part of the pre-approval process in order that the interests of both the public and private sector be duly considered.

Department analysis: The public was invited to comment on the proposed rule and a public hearing was held. While pre-approval implies that oil spill response organizations will be able to take equipment out of the state, plan holders will be required to notify the Department of their reduced capacity to respond to a spill. The plan holders may have to adjust their operations due to the reduced capacity to respond or negotiate allocation of oil spill response resources with their contractors. The Department will be required to use its expertise in establishing limits on the amount protection required to remain in the state. The Department would be involved in making decisions on equipment movement through discussions with the Unified Command for the incident.

♦The proposed rule is silent on the issue of liability of a plan holder in the event of a resident spill while equipment is out of area on mutual aid. Unless such protection is provided, the exposure to liability is a disincentive to mutual aid services.

Department analysis: A plan holder will remain liable in the event of a resident spill for which they are the responsible party. The Department is waiving response times specified in their plan

if resources are out of the area due to mutual aid. While exposure to liability is a disincentive to mutual aid services, the Department recognizes that it is the plan holder's responsibility to evaluate measures to prevent or reduce the potential for discharges during the period of reduced response capability and to negotiate with their oil spill response organization for appropriate coverage.

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking Proposal
for
Clarification of Tank Vessel Per Trip Fees
and
Oil Spill Contingency Planning Requirements

Rule Implementation Plan

Summary of the Proposed Rule

This proposal would clarify the classification of small self-propelled tank vessels for fee purposes, allowing such vessels to operate under the fee charged to similar non-self-propelled vessels. The rule change would also provide DEQ with authority to waive certain response time requirements to facilitate mutual aid requests from other states for response and cleanup resources. This will allow response contractors to move equipment and personnel to neighboring jurisdictions during oil spill cleanup projects.

Proposed Effective Date of the Rule

April 9, 1997

Proposal for Notification of Affected Persons

Affected persons will be notified of the rule change by mail.

Proposed Implementing Actions

The same rules are in place now as temporary rules adopted by the EQC in October 1996. If the proposed rules are adopted as permanent rules, the Department would continue to apply those rules as it is now doing.

Tank Vessel Per Trip Fees

The $28 fee for self-propelled tank vessels would be charged in the same manner as for similar non-self-propelled tank vessels.

Oil Spill Contingency Planning

Oil spill contingency plan holders using oil spill response providers would have the option of allowing the providers to respond to out of state spills. The Department would place conditions on response plan holders requiring that a base level of equipment be kept in place at all times.

Proposed Training/Assistance Actions

Training and technical assistance will be provided for plan holders and oil spill response organizations to ensure that procedures for mutual aid are clear. The Department will develop guidance on procedures for participating in mutual aid requests and will hold a meeting with the regulated community to explain such procedures.

State of Oregon
Department of Environmental Quality Memorandum

Date: February 28, 1997

To: Environmental Quality Commission

From: Langdon Marsh, Director

Subject: Agenda Item I, Total Dissolved Gas Waiver Request, EQC Meeting February 28, 1997

Acknowledgment

The Department gratefully acknowledges the input and collaboration of the Oregon Department of Fish and Wildlife and the Fish Passage Center in the writing and compilation of this staff report. This issue impinges closely on fisheries management, and the assistance of these two agencies has been invaluable. Particular appreciation is due Kirk Beinengen and Tony Nigro from the Department of Fish and Wildlife, and Margaret Filardo from the Fish Passage Center.

Statement of Purpose

The National Marine Fisheries Service (NMFS) has petitioned the Commission for a variance to the state's total dissolved gas standard to enable spill over Columbia River hydroelectric dams to assist outmigrating salmon smolts.

The petition falls into two distinct parts:

1. the period from March 13 to March 23, 1997 during which spill over Bonneville Dam is requested for outmigrating Spring Creek Hatchery smolts; and

2. the period from April 10 to August 31, 1997 during which spill over all Columbia River projects is requested for outmigrating threatened and endangered Snake and Columbia River salmon smolts.

The Spring Creek hatchery is charged with producing fish as mitigation for human caused losses due to Federal water projects, specifically anadromous fish losses as a result of the Dalles and John Day dams. The hatchery will release 7.2 million fish, but a large number of these will be caught as a result of Canadian-US treaty allocations. Capture of these fish reduces the potential for harvesting of endangered species. The US Fish and Wildlife Service estimates increased survival due to spill with a dissolved gas level of 120 percent at four percent. This translates to 288,000 fish.

The variance requested is from the standard of 110 percent saturation to 115 percent saturation in the forebays of the spilling dam and 120 percent in the tailrace. The petition seeks a "period" average at these levels, *i.e.* a twelve hour average. No maximum saturation level is sought in the petition. The request for 1997, as in previous years, is based on NMFS' *1994-98 Federal Columbia River Power System Biological Opinion* in which spill is a component of salmon recovery.

NMFS has accompanied its waiver request with a physical gas monitoring and biological monitoring program designed to ensure compliance with the waiver and to ensure that harm is not done either to migrating juveniles, or to returning or resident adult fish. Physical monitoring will be conducted through a network of 35 primary dissolved gas monitoring sites, including the forebays and tailraces of all spilling projects. Biological monitoring will be conducted seven sites, including McNary, John Day and Bonneville on the Lower Columbia.

Background

Review of 1996 Actions

Operational Environment

Water Year

The hydrosystem is comprised of a series of headwater reservoirs and downstream electric generating projects. Historically, high flows occurred after the spring melt. The natural hydrograph has been altered so flows are moderated throughout the year to a more even distribution. The ability to regulate flow throughout the year is a function of the storage capacity of headwater reservoirs and the amount of runoff volume that is available. Snowpack and stream flow reflect the precipitation and temperatures that occurred during the snow accumulation seasons. If precipitation during snow accumulation (November through March) is low, then the snowpack and stream flow will also be low and, conversely when high the resulting spring stream flows are high. Temperature affects both the form of the precipitation (rain or snow) as well as the rate of snow accumulation and melt (stream flow).

High levels of precipitation occurred during the fall of 1995 and the winter of 1996. The resulting January –July runoff volume measured for the Columbia River above Grand Coulee Dam was 79.9 million acre-feet (MAF). This volume was 135% of the 30-year average, using 1961-1990 as the base period. For the Columbia River above The Dalles the measured runoff volume was 139.3 MAF (132% of average) and for the Snake River above Lower Granite Dam the runoff volume was 42.4 million acre feet (143% of average).

Uncontrolled Spill

The 1996 spill season commenced with hydrologic, power market, and mechanical conditions that resulted in considerable amounts of spill. Spill was a result of several factors including: 1) flow levels that exceeded the hydraulic capacities of the dams; 2) further limitations in hydraulic capacities of several dams due to unit outage or research activities; and 3) the lack of a power market to purchase the energy produced causing additional spill.

In-season the available options for managing spill were limited. The available options included: distributing spill around the region in proportion to a specified TDG level, and implementing measures to decrease the surplus energy in the hydrosystem such as: shutting down nuclear plants, delivering energy in exchange for spill, displacing thermal projects, selling energy outside the region, developing seasonal exchanges of energy with other utilities, and reducing prices, particularly during light load hours. Even with all these measures in place, the hydrosystem continued to produce uncontrolled spill throughout most of the spring migration, and part of the summer migration.

Spill decreased at the end of March due to a temporary decrease in the levels of flow. This decrease in flows continued through the beginning of April, and then flows increased again such that uncontrolled spill occurred. Throughout April, spill was not specifically requested for fish passage. Spill continued in varying amounts through May and June. Most of the spill during this period was not specifically provided as spill for fish, but was due to other causes. The graphs attached at Appendix A depict the amount of voluntary and involuntary spill that occurred during the waiver period. The data were taken from the table submitted by the National Marine Fisheries Service in their Final Report to the OR-DEQ.

Controlled Spill

Towards the end of June flow decreased to levels that were closer to the hydraulic capacities of the projects. At the end of June, it was recommended that spill from the transportation projects be transferred outside the system in order to start the maximization of transportation at the collector sites as called for by the Biological Opinion. Even with this recommendation in place, there was sufficient flow in the lower Snake River to cause spill greater than hydraulic capacity. Spill was finally ended at the collector projects in the Snake around the second week of July. However, because of continued high flows and limited hydraulic capacity spill continued through the summer at McNary Dam. Once flow decreased the voluntary spill program was implemented and spill was managed so that it did not exceed the total dissolved gas waivers.

Summary

The 1996 water year resulted in spill levels that were far greater than observed in recent past years. On average the goals of the Biological Opinion were met a greater percentage of the time. In summary the following points can be made:

1. Spill during the spring passage season was primarily uncontrolled and resulted from a high volume of natural runoff, lack of a power market, limited hydraulic capacity of hydroelectric plants and flood control operations.

2. The spill management objective during the spring migration was directed toward meeting the total dissolved gas waiver granted by the state water quality agencies. However, conditions precluded achieving that objective most of the time.

3. Summer spill was managed for total dissolved gas standards and the Biological Opinion spill for fish passage targets.

What We Learned

The following is a summary of what was learned during the 1996 fish migratory season.

Monitoring Results

Physical Monitoring

The collection of total dissolved gas supersaturation (TDGS) was the responsibility of the US Army Corps of Engineers (COE) for meeting the requirements of the Oregon Environmental Quality Commission's (EQC's) 1996 waiver of the state's water quality standard for TDGS. Monitoring sites for the collection of these data were located in the forebay and tailwater at each mainstem dam in the lower Snake and Columbia Rivers [Lower Granite (tailwater only), Little Goose, Lower Monumental, Ice Harbor, McNary (one each on the Washington and Oregon sides of the forebay), John Day, The Dalles, and Bonneville]. Additional monitoring sites were located downstream of Dworshak Dam, and at three locations below Bonneville Dam (Warrendale, Skamania, and Camas/Washougal). Data reporting commenced by mid-April in the lower Snake and in late March in the lower Columbia. Monitoring continued at all sites through the end of August.

These data were produced in conformity with the criteria specified in the EQC's ruling that approved the 1996 waiver. Data were collected daily through the Corps of Engineers' Columbia River Operational Hydromet Management System (CROHMS). The Fish Passage Center (FPC)

downloaded and summarized these data daily for use by the states' water quality agencies, fish managers, and others. An automated data program, plus experience gained in working with the information are resulting in improved error checking, better identification of data anomalies, and the production of more reliable, real-time results. Data reported in-season by the FPC during 1996 were in reasonable agreement with the CROHMS final post-season database.

Monitoring at 26 lower Snake and Columbia river sites throughout 1996 revealed that TDGS levels were held at or below the modified state water quality standards at all federal dams, except during periods when the total river flow exceeded the powerhouse plus voluntary spill capacities. Due to uncontrolled spill caused by above-average runoff, total dissolved gas supersaturation (TDGS) levels exceeded waiver criteria during nearly the entire spring. TDGS levels remained in excess of 120% below most lower Snake and Columbia dams through June.

Full implementation of the physical monitoring program by the COE was delayed beyond the scheduled April 1 start date for a variety of reasons [as described in the National Marine Fisheries Service's (NMFS') 1996 Annual Report to the EQC]. For example, between April 1 and August 31, 1996, data were not available from reporting sites on an average of 16 days (with a range of three to 25 days) out of a total of 153 reporting days. Although the accuracy of total dissolved gas saturation (TDGS) information in 1996 was improved over previous years' data, the anadromous fish managers continue to press for improvements in suitability of monitoring locations, equipment reliability, and data reporting.

Biological Monitoring

In 1996 the biological monitoring program, which is the responsibility of NMFS, included an expanded quality assurance and quality control (QA/QC) program to (1) enhance data accuracy, (2) quantify biological observations, and (3) improve the reliability of program results. Other biological data collected on fish condition and survival, which do not provide real-time information and thus are not part of the NMFS' biological monitoring program, are addressed later in this report. Summarized below are key biological monitoring results, which were applied in the real-time management of controlled spill during 1996:

Juvenile salmonids: In general, very few fish were observed with gas bubble disease (GBD) symptoms in 1996. A total of 39,407 juvenile salmonids were examined at dams in the lower Snake and Columbia rivers for gas bubble disease (GBD). Despite abnormally high TDGS levels (in excess of 130%) throughout this migration corridor in 1996, only 1,653 fish (4.2%) were observed with any signs of GBD. Based on GBD classification criteria established by NMFS, only 47 fish (0.1%)of the total fish examined showed severe signs of GBD in 1996. By comparison, in 1995, without any appreciable uncontrolled spill, 16,021 fish were examined, with 208 (1.3%) showing any signs of GBT. There were increased signs of GBT signs, however, in fish collected at locations where gas levels exceeded 130 percent.

Extensive observations conducted at several key locations revealed a very small percentage (<1%) of fish examined showed GBD signs that exceeded the action criteria stated in the NMFS' Gas Bubble Disease Monitoring Program, on only a few occasions, and then only at dams where fish were exposed to the highest TDGS levels (in the 130-141% range) recorded for the season. On a project-specific basis, when TDGS levels exceeded waiver conditions, the Fish Passage Center's (FPC's) Smolt Monitoring Program was successful in detecting increased incidences of GBD above the established action criteria levels.

Resident fish: Over the entire spill season, prevalence of GBD signs in resident fish was relatively low. TDGS levels below 120% tended not to produce GBD signs in feral resident fish at any of the locations sampled. This was corroborated by the Idaho Department of Fish and Game (IDFG), which did not detect any GBD signs in fish present in the Clearwater River during periods of spill discharges from Dworshak Dam. Spill was managed at Dworshak Dam so that gas levels never exceeded 120 percent.

Resident fish species were monitored in 1996 at sites below Bonneville and Ice Harbor dams and above and below Priest Rapids Dam. Below Ice Harbor Dam, where TDGS levels remained exceptionally high due to turbine outages, GBD signs were seen in 11.2% of resident non-salmonids that were examined. Below Bonneville Dam, GBD signs were seen in 2.1% of the non-salmonids. At Priest Rapids Dam GBD signs among non-salmonid resident species ranged from 6.5% above the dam to 7.3% below the dam. In general there was good correlation between TDGS levels and external signs of GBD. At the highest levels of TDGS (136-141%), prevalence peaked at 32%.

Adult salmon: The biological monitoring program was successful in detecting signs of GDB in adult salmon during periods of uncontrolled spill. No signs of GBD were seen in adult salmon when TDGS levels met the action criteria. Adult salmon were examined at Bonneville and Lower Granite dams in 1996. Of 2,026 adult Chinook, sockeye, and steelhead sampled at Bonneville Dam, four fish (0.2%) exhibited GBD signs. Of 2,652 adult Chinook sampled at Lower Granite Dam, four (0.15%) showed GBD signs. All signs of GBD were found during periods of high flows and involuntary spill.

NMFS Report on Compliance

Synopsis of Results

1. Statistical evaluation of the available PIT-tag data to determine week-by-week survival changes.

Survival estimates for PIT-tagged yearling Chinook salmon and steelhead migrating through the Snake River from Lower Granite Dam to Lower Monumental Dam during 1996 were the highest yet observed since PIT-tag survival studies began in 1993. Levels of spill (and levels of TDG) through this stretch of river in 1996 were also generally the highest observed in the last four years. However, the lowest survival estimates for yearling Chinook occurred late in the season when TDG levels at Ice Harbor were highest but, there was a period early in the migration when TDG levels were nearly as high with no evidence of decreased survival for yearling Chinook salmon. A number of factors may contribute to the decreased survival measured for PIT-tagged fish. This study design can not measure the incremental effect of these factors on week-to-week survivorship of PIT-tagged fish.

2. Week-by-week estimates of the quantities of voluntary vs. involuntary spill. The factors causing the spill scenario shall be stated, i.e., hydraulic capacity, turbine outages, lack of power market, etc.

Voluntary or controlled spill occurs at the Snake and Columbia River dams in order to increase fish passage efficiency as required by the 1995 Biological Opinion. Involuntary or uncontrolled spill occurs at times when the inflow at a dam exceeds its hydraulic capacity or when there is insufficient power demand for the energy produced. The majority of the spill occurring at McNary, The Dalles, and Bonneville Dams between May 15, 1996 and July 10, 1996 was involuntary spill (Table 5 of report). A larger percentage of the spill at the John Day Dam for the same time period was voluntary spill.

3. Empirical estimate of survival associated with spill.

There are basically three ways that overall spill survival of a population of fish could be estimated. The first two would be empirical estimates based on the observed survival from a specific spill survival test. The third method would be a theoretical calculation derived from a system passage model using survival information from past and present studies. In the first method, an empirical estimate of survival associated with spill would require that spill be isolated either as a treatment in a multiple release experiment or be turned on and off during successive single release experiments. A second empirical method would involve starting and stopping spill while releasing test groups of fish at the upper end of the hydrosystem. The third method is a non-empirical method using fish passage simulations to estimate spill survival of juvenile salmon. The Simpas model was developed and used by NMFS to simulate fish passage through eight Federal dams on the lower Snake and lower Columbia Rivers. The model uses data from the studies Ledgerwood et al., 1990, Holmes 1952, Muir et al., 1995 and 1996. Model simulations for two hypothetical spill scenarios (110% and 120% TDG limited spill levels) were run and are contained in Figures 1 and 2 of the NMFS report. The Simpas model predicts that smolt survival increases with spills that result in TDG levels of 110 and 120 percent.

4. Incidence of GBD signs in adult and estimates of upstream spawning delays of returning salmonids from increased spill.

Adult salmon were examined for signs of GBD at Bonneville and Lower Granite Dams. A total of 2,026 salmon were examined at Bonneville Dam and four fish had signs of GBD. There were 2,652 adult salmon examined at Lower Granite Dam and four fish had signs of GBD.

Adult spawning delay, like spill survival, can be affected by a wide variety of variables. The fishery agencies and the Corps have over the years developed a set of operating and maintenance criteria designed to minimize adult delay at dams. These criteria which have been under development and modification since the dams were built include spill patterns for all spill flows, daytime spill volume limitations, and adult fishway entrance flow volumes and velocities. These criteria were developed and verified through a variety of observation and assessment methods including ladder counts, run timing past successive dams, and radio tracking studies.

High levels of spill, such as the involuntary spill level experienced in 1996, have been shown to increase adult passage delay at mainstem dams. Associated with this increase in delay is an increase in fallback rate, i.e., fish falling back past dams via the spillways. A daytime spill cap has been imposed on dams with high fallback rates, such as Bonneville dam. The Bonneville Dam daytime maximum spill is set at 75 kcfs even though the 120% TDG limit would be closer to 120 kcfs.

5. Survival estimates of transported vs. untransported fish at collector projects.

Research to evaluate juvenile salmonid fish transportation were conducted at Snake and Columbia River Dams. From 1968 through 1980 twenty-four separate transportation studies were conducted from the three lower Snake River Dams on spring/summer Chinook salmon alone and a like number of studies conducted on steelhead. In addition, from 1978 through 1983 six transportation studies were conducted on fall Chinook salmon at McNary Dam. Two primary methods of transport have been evaluated and used to transport smolts, truck and barge transport. Results of these studies are equivocal depending on life history, type of transport, and research method. However, NMFS began additional transport vs. in-river studies using PIT-tagged fish. Based upon adult returns NMFS will calculate an overall, statistically-bound transport/in-river ratio (T/I), regressed grouped T/I's against in-river variables such as flow and spill, and compare study results to a concurrent in-river smolt survival study.

6. Incidence of GBD signs in resident species collected from below Bonneville Dam and survival and incidence of GBD from net-pens below Bonneville Dam.

Studies were conducted to assess the effects of in-river TDG levels on resident fish. Resident fish were collected from sites downstream of Bonneville Dam and were observed for signs of GBD. From March 15 to August 12, 1996 there were 4,387 non-salmonid fishes examined for signs of GBD with 2.1% exhibiting GBD signs. During this period daily averages for TDG ranged from 112% to 130%.

A portion of non-salmonid fish collected from the river were held downstream of the Bonneville Dam to evaluate survival and changed incidence of GBD signs. Few signs of GBD were observed among fish held in deep cages but high prevalence of GBD were observed in fish held near the surface. From May 13, 1996 through June 28, 1996 the daily average TDG was 120% or above and the average prevalence of GBD signs were 3% for deep-cage tests, 88% for surface cage-tests, and 29% for 0 to 4 meter cage tests. For fish held in 0 to 4 meter cages, when TDG levels increased to 122% or greater in mid-May there was an increase in GBD prevalence with a incidence of 70% to 100% GDB in signs for shallow cages. Peaks of 15% to 55% increased incidence of GBD signs occurred in conjunction with the highest gas levels of >130% . There was only slight increases in incidence of GBD signs (<10%) which occurred in fish held in deep cages. Mortality among captive fish was generally low in deep cages and high in shallow cages.

Assessment of the Independent Scientific Advisory Board (ISAB) Report

The Independent Scientific Advisory Board (ISAB) is the peer review authority convened by the Northwest Power Planning Council to review scientific work in relation to salmon. The ISAB conducted a peer review of the draft NMFS waiver compliance report. Their comments focused on factual accuracy and openness of discussion, offered alternative scientific interpretations of the information, and the applicability of the information reported to the conditions placed on the 1996 waiver.

The ISAB recommended that the EQC and NMFS coordinate more closely in their future endeavors regarding the study and evaluation of spill, TDGS, and their biological effects. This approach would benefit both the determination of needed information and the provision of relevant responses.

The NMFS report was modified in accordance with the ISAB review, and the spill program will be modified in future years in accordance with ISAB recommendations.

Research to Address Critical Uncertainties Identified in NMFS' Biological Monitoring Program, and Research Results:

NMFS established in early 1996 a research plan with a primary goal "...to assess that the biological monitoring program accurately represents the condition of fish throughout the system

and to enhance understanding of the relation between exposure and increased levels of TDGS and mortality." Attainment of this goal was described in three approaches: (1) validate the effectiveness of GBD monitoring, (2) evaluate the relevance of GBD signs, and (3) evaluate the range of TDGS in the migration paths of salmonids. Following are specific objectives that address these approaches, with brief summaries of research results to date:

Objective: **Determine if there is a difference in the incidence and severity of GBD signs between migratory fish in the reservoir and in fish sampled through the Smolt Monitoring Program.**

The Columbia River Inter-Tribal Fish Commission (CRITFC) conducted initial sampling of juvenile salmonids in mainstem reservoir reaches upstream from Bonneville, John Day, McNary, and Lower Monumental dams in 1996. The relatively few fish sampled indicated little difference in GBD signs between reservoir-migrating juveniles and those sampled by the monitoring programs at the dams. The scope of this work will be expanded in 1997 to determine the significance of any differences observed among the two groups.

NMFS is conducting release and recapture studies on hatchery steelhead smolts at Little Goose Dam. Fish were experimentally exposed to elevated TDGS levels and released in the dam forebay. About 39% were recovered in the juvenile bypass system and reexamined for signs of GBD. About 53% of the fish showing signs at release showed none at recapture. The median time duration for migration to and migration through the dam was about 8.5 hours, during which time there was also a progressive loss of signs in netpen-held counterparts. Similar tests in 1997 will attempt to shorten passage time. Steelhead were used for this study due to the lack of availability of listed Chinook and sockeye salmon smolts. Impacts of TDGS exposure on untested species such as Chinook and sockeye cannot be inferred from results of the steelhead research due to previously identified species-specific differences in exposure reactions.

Objective: **Determine the progression of GBD signs as the result of exposure to TDGS and the relation between signs, health, and survival of aquatic species indigenous to the Snake and Columbia Rivers.**

The US Geological Survey's Biological Resources Division (USGS/BRD) is conducting experiments to correlate signs of GBD and mortality levels with TDGS exposure history. Preliminary results indicate there is no single sign which is a good indicator of mortality. Currently, there is not sufficient data for developing predictive mathematical relationships between mortality and incidence of gas bubbles in the gills, lateral line or fins. Gas bubbles in the gills are thought to be the cause of death from GBD. Gas bubbles in the gills do not get progressively worse over time while lateral line and fin gas bubble occlusion worsens over time with exposure to elevated levels of TDG. However, the BRD data indicate that the action criteria

used in the monitoring plan are conservative and should be protective of direct mortality from the TDG levels managed for in the NMFS spill program.

Feral steelhead experimentally exposed to TDGS, by NMFS at Little Goose Dam, were PIT tagged and released into the forebay. Relative survival was evaluated through interrogations at downstream dams. No statistical difference in survival was observed for GBD-challenged steelhead compared to their unchallenged counterparts, either at passage through Little Goose Dam or at passage through the other dams downstream.

A study by Battelle Pacific Northwest Laboratories, to compare behavior of fish in a floating net pen to that of fish in the adjacent river, was confined to gear development in 1996. Several questions remain regarding the ability to sample fish in the net-pen versus feral fish behavior, and the effects of weather conditions harsher than those experienced during the tests.

Objective: **Describe the migratory distribution of juvenile and adult salmonids, particularly with respect to vertical distribution in the reservoir, and relate fish distribution to the distribution of TDGS.**

USGS/BRD and CRITFC are working jointly to determine the migratory distribution of juvenile and adult salmonids, particularly with respect to vertical distribution in the reservoir and to relate this distribution to the distribution of TDGS concentrations. Initial results of exploratory work in 1996 with radio tagged fish revealed individual fish position determinations with a depth confidence interval of 0.3 meter. This research is expected to be fully implemented in 1997.

Objective: **Determine whether or not the protocol and examination techniques used in the TDGS monitoring program optimize the detection of GBD signs demonstrated to affect fish health and survival, while minimizing impacts to individuals and populations.**

Montgomery Watson is seeking to determine whether or not gill examinations could provide a better indication of GBD than the lateral line and non-paired fin location used in the current biological monitoring program. Of the 477 juvenile steelhead examined at McNary and Bonneville dams, only two showed gas emboli in the gills. Twenty four of those 477 fish showed other signs of GBD. The study also found that nearly 41% of the steelhead gills examined contained non-diffusing fat bodies that could easily be confused with gas emboli. The gill examination techniques remain lethal to the test fish. The researcher cautions that gill emboli diffuse rapidly and the incidence of other GBD signs in the test may indicate a need for further investigation of fish closer to the dissolved gas source.

The Dissolved Gas Team is looking at the results of this and other studies to determine whether or not gill filament research is to be incorporated into the biological monitoring program.

Objective: **Determine the physical characteristics of TDGS throughout the hydrosystem under specific spill and flow regimes.**

The US Army Corps of Engineers (COE) is addressing this objective to improve understanding of TDGS levels in the hydropower system. Installation of spillway flow deflectors ("flip lips") has begun at John Day and Ice Harbor dams; a full complement, however, will not be in place at either facility in time for the 1997 migration season. Data are currently being collected to describe the physical characteristics of TDGS under specific spill and flow regimes. Other potential TDGS reduction alternatives are being explored by the COE and its consultants.

Retrospective Analysis

Predicted Outcomes of 1996 Waiver Conditions:

Serious concerns have been repeatedly expressed in recent years that fish survival will decrease significantly as a result of exposure to any kind of spill conditions. Proof of this was analyses that documented apparent survival decreases downstream from Ice Harbor Dam in late May of 1995 which also projected that even greater mortalities would occur due to higher TDGS levels expected during 1996.

Uncontrolled spill during periods of high runoff would compound mortalities resulting from exposure to TDGS levels resulting from the 1996 controlled spill program.

Recommendations were made favoring transportation over in-river migration in order to increase downstream survival during periods of either controlled or uncontrolled spill.

The risk assessment approach used to validate the controlled spill program was criticized as inadequate. The critique cited a model-based approach for predicting outcomes as more appropriate.

The smolt monitoring program was ineffective at detecting GBD in migrating smolts.

TDG would cause delayed adult salmonid passage and increased incidence of GBD in adult salmonids.

Realized Outcomes:

Expanded physical and biological monitoring programs in 1996 did not indicate that a decrease in downstream migrant survival could be attributed to TDGS exposure, even during periods of extremely high uncontrolled spill in the lower Snake River. In fact, an estimated 86% average survival was indicated between Lower Granite and McNary dams in late April when TDGS levels in excess of 130% at Ice Harbor Dam occurred as juvenile passage rates peaked in that reach. Statistical analyses of monitoring results have been inconclusive in terms of assigning mortality to a specific cause. An apparent measured decrease in survival at McNary Dam in late May 1996 could have resulted from factors other than TDGS [i.e. increasing temperature, diseased residualism (in steelhead), mechanical injuries, etc.].

The smolt monitoring program was effective at detecting increased incidence of GBD during times of high levels of TDG. The monitoring program indicated that GBD signs were present in migrating and resident fish during periods of highest spill, primarily mid-May through mid-June. Based on improved observation protocols, mortality specifically caused by GBD was not discernible in 1996.

Ongoing transportation studies have yet to reveal conclusive results in support of transportation that can be used with confidence to address mitigation issues.

Delays in adult passage, and associated mortalities, have been attributed to several causes, among which excessive spill and resulting elevated TDGS levels have been suggested. Adult spawning delay, like spill survival, can be affected by many environmental and human-caused variables. Identification of a specific cause (spill volume, river flow, temperature, turbidity, fish condition, etc.) is nearly impossible. Refined operating and maintenance criteria are being used to minimize adult fish passage delays to the greatest possible extent. Radio tracking is proving to be a reliable means of verifying passage criteria designed to reduce adult delay.

Examinations of nearly 5,000 adult salmon ascending the Columbia and lower Snake rivers during spill periods revealed that only a very few (<0.3%) showed any GBD signs. No adult mortalities were observed in 1996 with GBD signs, (compared to 1967 when both dead and alive adult salmon were observed with GBD signs below John Day Dam after being exposed to levels above 130%. The major contributing cause in that instance was passage delay.)

Predicted versus Realized Outcomes:

Past experiences with high levels of TDG and modeled effects of TDG on fish survival predicted that the NMFS spill program would increase smolt mortality causing a decrease in survivorship for smolts passing past the Snake and Columbia River Dams. Based on monitoring of GBD in

salmonid adults and smolts, net-pen studies, smolts counts at dams and other research there was no direct evidence of decreased survivorship of salmonid smolts due to the NMFS spill program. The increased mortality based on the predicted results from the CRiSP model did not occur based on the biological monitoring results. Results of week to week survivorship analysis using PIT-tagged smolts and the relation to TDG was equivocal due to statistical validity of the technique and the effects of other factors on smolt survival. The Department's own analysis (circa 1995) of increased smolt mortality with exposure to high levels of TDG indicated that there was minimal risk to down stream migrating salmonid smolts for TDG levels of 115% to 120%. This analysis indicated that as an interim measure the risk from the levels of TDG resulting from the NMFS spill program was less than the risk of not spilling water for fish passage.

Physical and biological monitoring (the smolt monitoring program) are used for real-time evaluation of in-river levels of TDG and real-time management of the NMFS spill program. Critical assumptions of the physical and biological monitoring were identified and studies were designed to test these assumptions. Refinements needed to improve current smolt monitoring methods and the understanding of biological signs encountered inseason are being addressed through this research.

D. Outstanding Unknowns:

Information is years away on some aspects of research designed to understand the survival risks of fish exposed to elevated TDGS levels. Some results can be obtained on a real-time basis, **providing** the research is designed to produce reliable, relevant information in the near term. The levels of acceptable risk associated with the present controlled spill program are provisional, subject to reexamination as new findings are revealed.

Risks associated with exposure of adult and juvenile fish and other aquatic organisms to high TDGS levels (>125%) are not well understood.

Extensive research to evaluate transportation have so far failed to produce conclusive results that can be applied with confidence by regional fisheries managers.

Incremental survival cannot be empirically demonstrated.

Authority of the Commission with Respect to the Issue

The authority of the Commission to address this issue is contained in Oregon Administrative Rules - OAR 340-41-205, 445, 485, and 525 (2)(n). A copy of the rule is attached at Appendix A.

At its meeting of February 16, 1995, the Commission modified the Oregon Administrative Rules to enable it to modify the total dissolved gas standard for the Columbia River for the purpose of assisting juvenile in-river salmon migration.

If the Commission is to grant this variance, it is required to make four findings under the rules. These are:

(i) that failure to act would result in greater harm to salmonid stock survival through in-river migration than would occur by increased spill;

(ii) that the modified total dissolved gas criteria associated with the increased spill provides a reasonable balance of the risk of impairment due to elevated total dissolved gas to both resident biological communities and other migrating fish and to migrating adult and juvenile salmonids when compared to other options for in-river migration of salmon;

(iii) that adequate data will exist to determine compliance with the standards; and

(iv) that biological monitoring is occurring to document that the migratory salmonid and resident biological communities are being protected.

The rule also allows the Commission to consider alternative modes of migration at its discretion.

Alternatives and Evaluation

There are four main methods of salmonid migration down the Columbia River. These are transportation, turbine passage, dam by-pass passage, and spill. In practice all four of these modes will be used in 1997 as they have been in the past. None of these passage routes is without risk. While studies on transportation are continuing, preliminary findings of adults straying upon returning to spawning, and temperature concerns at the collector projects pose a risk to fish by this method. Turbine passage has a level of mortality associated with it variously calculated at between 10 and 15 percent. By-pass facilities do not guide all smolts away from the turbines, and there are concerns at temperatures exceeding 68 degrees Fahrenheit in the by-pass structures. Temperatures at these levels are considerably above what is optimal for cold water fisheries. Finally, spill has associated with it the risk of elevated levels of dissolved gas which can result in mortalities from gas bubble disease. Mortalities from spill at the levels requested in the NMFS' request have been calculated at between 2 and 3 percent.

The issue before the Commission is one of balancing risk. To not approve the waiver to the state's dissolved gas standard will result in more fish either going through the turbines or through the by-pass systems. Neither of these alternatives is without risk. In earlier work conducted by the Department, the waiver at the level requested was determined to be a relatively conservative approach which would result in protection of beneficial uses. At the same time, it was determined

that waivers at the level of 125 to 130 percent would pose increased risks to fish. Between 120 and 125 percent, the Department was unsure of the impacts, and elected to recommend that the Commission adopt the more conservative approach, at which the Department believed the risks of elevated dissolved gas were outweighed by the benefits, and that the risks inherent in spill were preferable to the risks inherent in other modes of migration.

The other aspect of this was brought out in the National Research Council's publication, *Upstream: Salmon and Society in the Pacific Northwest*, it was recommended that the risk be spread by facilitating alternative modes of migration. Clearly, spill is a part of this. To require additional transportation, with the uncertainties inherent in it, would be to place all the eggs in one basket.

In relation to the four findings required to be made under the total dissolved gas rule, the following are supported by the petition:

(i) failure to act will result in more salmonid passage via hydroelectric dam turbines. Estimated mortalities from fish passing through turbines is between 10 and 15 percent. Fish passing over spillways as a result of spill experience 2 to 3 percent mortality. The Commission is, therefore able to make the first finding;

(ii) the balance of risk of impairment to fish due to elevated dissolved gas levels needs to be balanced against mortality of turbine passage. Increased incidence of gas bubbles were detected in fish due to involuntary spill in 1996. Dissolved gas levels experienced at Ice Harbor were well above the range within which instream bioassays indicate mortalities will occur, and increased incidences of gas bubbles were detected in fish. Correspondence from Oregon Department of Fish and Wildlife (ODFW) and the Tribes from previous years equated the mortality from turbines with elevated dissolved gas at around 120 percent, although this is considered a conservative estimate. Given the conservative nature of this estimate, the balance of the risk of impairment at the levels sought in the petition is tipped in favor of granting the variance;

(iii) NMFS has submitted a detailed physical monitoring plan. Physical monitoring will be conducted by the Army Corps of Engineers at 35 sites in the mainstem Columbia, lower Snake and lower Clearwater and Kootenai Rivers in the forebays and tailraces of all spilling dams. Hourly data will be posted electronically, as it was last year. Implementation of the physical monitoring plan will ensure that data will exist to determine compliance with the standards for the voluntary spill program;

(iv) NMFS has submitted a detailed biological monitoring plan. Smolt monitoring will continue as it did last year with examination of smolts being undertaken with 10X to 40X dissecting microscopes. Signs of GBD will be sought on non-paired fins, eyes and lateral lines. The smolt monitoring program contains a number of critical uncertainties. Some of these were

tested last year in the research program, and this assessment of the efficacy of the monitoring program continue in 1997. Research will be undertaken in the following areas:

1. determination whether there are differences in the severity of gas bubble signs between migratory fish in the reservoir and fish sampled through the smolt monitoring program;

2. determination of the progression of GBD signs as a result of exposure to elevated levels of dissolved gas, and the relationship between these signs and health and survival of salmonids from the Snake and Columbia Rivers;

3. description of the migratory distribution of fish, particularly with respect to vertical distribution in the reservoir, and the relationship between vertical distribution and gas bubble signs;

4. determination as to whether the protocols and examination techniques used in the biological monitoring program optimize the detection of gas bubble signs while minimizing stress to fish;

5. determination of the physical characteristics of dissolved gas throughout the hydrosystem under specific spill and flow regimes.

With these findings, the Commission is able to approve the variation to the total dissolved gas standard as sought by NMFS.

Alternative Commission Actions

The petition is such that the required findings are able to be made, and the waiver approved. Clearly, any level of action less than approval can also be undertaken by the Commission, including denying the petition or approving it with conditions.

Summary of Public Input Opportunity

Public Comment on the Waiver Request

Following receipt of the petition on January 23, 1997, the Department issued a public notice, advising receipt of the petition and inviting interested parties to submit either oral testimony at a public hearing that was held at 9:00 a.m. on February 21, 1997 in room 3A at DEQ Headquarters, or in writing by 5:00 p.m. on February 21, 1997.

A summary of public comment and written submissions is attached at Appendix B.

In-Season Opportunities for Public Participation

The Dissolved Gas Team (DGT) is a technical committee within the NMFS Executive Committee-Implementation Team structure. It's place in the decision hierarchy is equal to that of the System Configuration Team (SCT) and the Technical Management Team (TMT), all of which report to the Implementation Team (IT). The DGT provides technical support to these committees and works with NMFS in assuring implementation of the dissolved gas monitoring plan and developing research to improve the region's understanding of the effects of dissolved gas.

The DGT meets about once a month, and like all the NMFS committees, is open to the public and allows time for public comment, if any. The Team is co-chaired by the Council and NMFS; official participation is limited to the Corps, BPA, EPA, Bureau of Reclamation, the states, tribes and independent mainstem hydro-operators like Idaho Power and the Mid-Columbia PUD's. All meeting minutes and documents are available to the public through the Northwest Power Planning Council, and the team posts all information, including meeting dates and agendas, on its web-site. It accepts and provides any and all public comments to all Team members.

The Team comes to decision by consensus; when consensus is not reached the issue is elevated to the IT, where there is another opportunity for public comment. The Team has received no complaints over public access. Initially groups such as the Columbia River Alliance attended but have not done so recently. NMFS has been very responsive to DGT recommendations, especially regarding research and adjustments to the monitoring plan.

The public can also provide input into the DGT through the Council. Spill and dissolved gas management, monitoring and research are also part of the Council's Fish & Wildlife Program, and as the Council reviews these items it provides regional feedback through it's role of co-chair of the DGT. The Council has never received comments that it failed to provide an opportunity for public input, and has always made time available to encourage discussion of this issue.

Conclusions

The Department concludes from the above that the variation from the state's dissolved gas standard of 110 percent to a level of 115 percent in the forebay and 120 percent in the tailrace is still a conservative approach to facilitating fish passage via hydroelectric dams. The risks associated with this waiver in terms of adverse impacts to fish due to elevated levels of dissolved gas need to be balanced against the risks inherent in other modes of passage.

There is a monitoring system in place, both for physical and biological monitoring, and that critical assumptions underlying the biological monitoring are being reviewed as part of a continuing research program.

The Department continues to support the waiver request.

Intended Future Actions

The Department will continue its involvement in the Dissolved Gas Team convened by NMFS. The primary purpose of this team is to address dissolved gas issues not dealt with in either of the other two teams (the Technical Management Team and the System Configuration Team), and to evaluate biological standards for dissolved gas and develop a framework for institutional and structural changes to met those biological standards. The committee operates in three phases, as does the Technical Management Team:

1. Pre-Season Planning consisting of development of an annual dissolved gas monitoring and management plan;

2. In-Season management. In this phase, the DGT supplies technical input to the other two committees, and is charged with making in-season decisions that will maximize fish passage consistent with state waivers and other constraints; and

3. Post-Season Review, including responsibility for coordination of monitoring and research data review, report development, and assistance to the SCT in development and prioritization of dissolved gas-related project improvements.

Department Recommendation

The Department recommends that the Commission grant this petition by adopting the findings contained in the Draft Order attached at Appendix D, subject to implementation of the physical and biological monitoring regime as detailed in the monitoring plan accompanying the National Marine Fisheries Service request dated January 23, 1997, and:

(i) Approve a revised total dissolved gas standard for the Columbia River for the period from midnight on March 13, 1997 to midnight on March 23, 1997, and midnight on April 20, 1997 to midnight on August 31, 1997;

(ii) Approve a total dissolved gas standard for the Columbia River of a daily (12 highest hours) average of 115 percent as measured at established monitors at the forebay of the next dam downstream from the spilling dam during these times;

(iii) Approve a further modification of the total dissolved gas standard for the Columbia River to allow for a daily (12 highest hours) average of 120 percent as measured at established tailrace monitors below the spilling dams during these times;

(iv) Approve a cap on total dissolved gas for the Columbia River during the spill program of 125 percent, based on the highest two hours during the 12 highest hourly measurements per calendar day during these times; and

(v) Require that if *either* 15 percent of the fish examined show signs of gas bubble disease in their non-paired fins, *or* five percent of the fish examined show signs of gas bubble trauma in their non-paired fins where more than 25 percent of the surface area of the fin is occluded by gas bubbles, whichever is the less, the Director will halt the spill program;

(vi) Require NMFS to incorporate the following conditions into its program:

1. NMFS must provide written notice to the Department within 24 hours of any violations of the conditions in the variance as it relates to voluntary spill. Such notice shall include actions proposed to reduce TDG levels or the reason(s) for no action;

2. TDG data and incidence of GBD signs in smolts and adults will be reported to the Department daily. Hourly TDG levels collected from the forebays and downstream locations of McNary, John Day, The Dalles, and Bonneville Dams will be reported to the Department daily. Incidence of GBD signs in smolts collected from McNary, John Day, and Bonneville Dams and adults collected at Bonneville and Lower Granite Dams will be reported the Department daily. Signs of GBD in smolts will be measured by using a variable (10X to 40X) dissecting scope. Unpaired fins, eyes, and lateral line will be examined for the presence of bubbles;

3. that NMFS provide an annual report of the spill program for 1997 as it did last year. This report should be forwarded for public and ISAB review by December 1, 1997, and should arrive at DEQ by January 15, 1998, accompanied by any waiver request for 1998. NMFS should return to the Commission no later than June 30, 1997 with a detailed outline of the report. In particular, the Commission wishes to see progress made toward identifying the benefits of spill on salmonid survival.

4. that biological research be conducted in conjunction with the 1997 spill season to address critical assumptions inherent in the biological monitoring program. This research will address the five objectives detailed in the draft monitoring document that accompanied the waiver request.

Attachments

A. Graphs depicting controlled and Uncontrolled Spill
B. Summary of Public Comment
C. Copy of EQC rule, OAR 340-41-205, 445, 485, and 525(2)(n)
D. Draft Commission Order
E. Dissolved Gas Monitoring Stations Location Map

Reference Documents (available upon request)

National Marine Fisheries Service (1997) *1996 Annual Report to the Oregon Department of Environmental Quality*, January 24, 1997, and addendum dated February 7, 1997.
National Research Council (1995) *Upstream: Salmon and Society in the Pacific Northwest*, National Academy Press, Washington D.C. (Prepublication copy).

Approved:

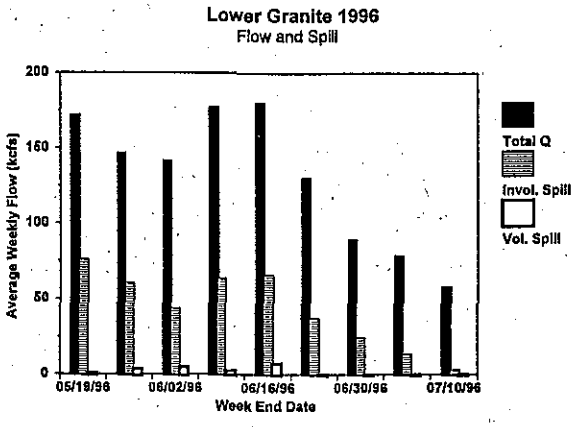
Section: Russell Harding

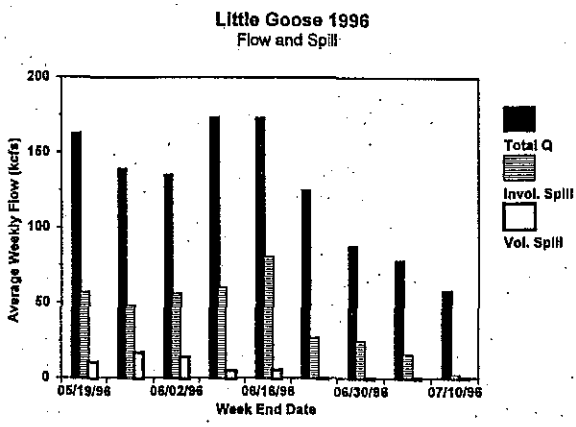
Division: Stephanie Hallock

Report Prepared By: Russell Harding

Phone: (503) 229-5284

Date Prepared: February 24, 1997


Lower Granite 1996
Flow and Spill
Average Weekly Flow (kcfs)
200
150
100
50
0
05/19/96
06/02/96
06/16/96
06/30/96
07/10/96
Week End Date
Total Q
Invol. Spill
Vol. Spill


Little Goose 1996
Flow and Spill
Average Weekly Flow (kcfs)
200
150
100
50
0
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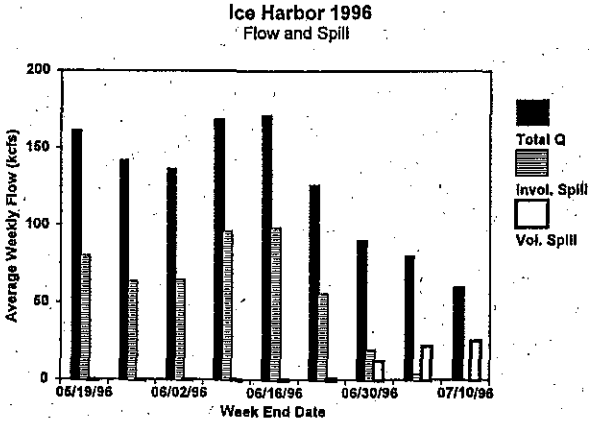
07/10/96
Week End Date
Total Q
Invol. Spill
Vol. Spill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Flow and Spill
Average Weekly Flow (kcfs)
200
150
100
50
0
05/19/96
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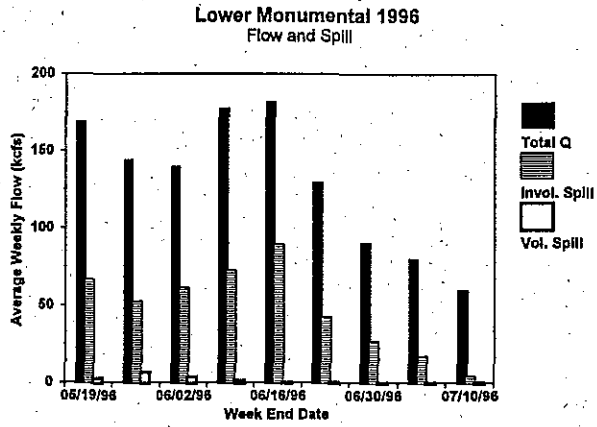
Week End Date
Total Q
Invol. Spill
Vol. Spill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Flow and Spill
Average Weekly Flow (kcfs)
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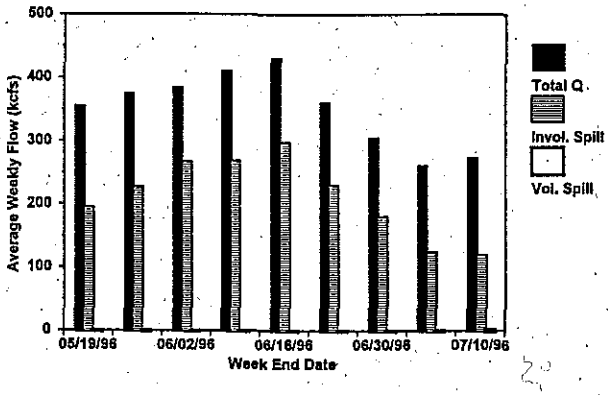
07/10/96
Week End Date
Total Q
Invol. Spill
Vol. Spill


McNary 1996
Flow and Spill
Average Weekly Flow (kcfs)
500
400
300
200
100
0
05/19/96
06/02/96
06/16/96
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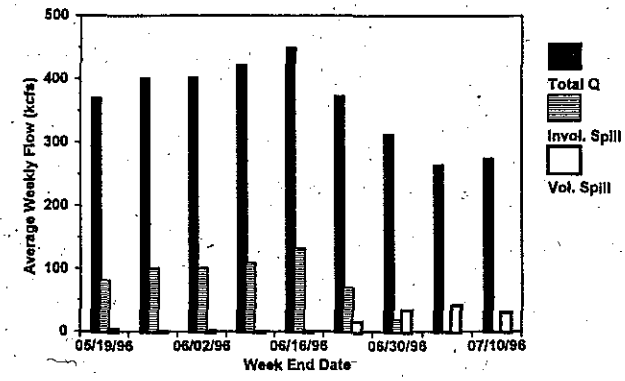
07/10/96
Week End Date
Total Q
Invol. Spill
Vol. Spill


John Day 1996
Flow and Spill
Average Weekly Flow (kcfs)
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400
300
200
100
0
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06/16/96
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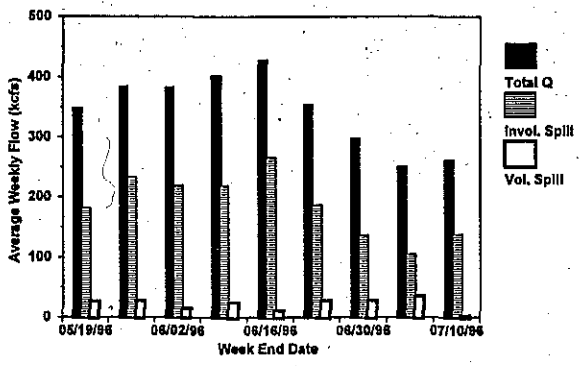
07/10/96
Week End Date
Total Q
Invol. Spill
Vol. Spill


The Dalles 1996
Flow and Spill
Average Weekly Flow (kcfs)
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400
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200
100
0
05/19/96
06/02/96
06/16/96
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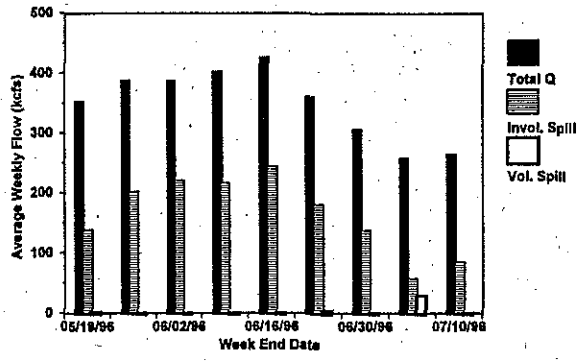
07/10/96
Week End Date
Total Q
Invol. Spill
Vol. Spill


Bonneville 1996
Flow and Spill
Average Weekly Flow (kcfs)
500
400
300
200
100
0
05/19/96
06/02/96
06/16/96
06/30/96
07/10/96
Week End Date
Total Q
Invol. Spill
Vol. Spill

State of Oregon

Department of Environmental Quality Memorandum

Date: February 21, 1997

To: Environmental Quality Commission

From: Lynne Kennedy LK

Subject: Presiding Officer's Report for National Marine Fisheries Service's Total Dissolved Gas Waiver Request

Hearing Date and Time:	February 21, 1997, beginning at 9:00 a.m.
Hearing Location:	Room 3A, DEQ Headquarters, 811 SW Sixth Avenue, Portland, OR 97204
Title of Proposal:	Request for a Waiver to the State's Total Dissolved Gas Standard on the Columbia River

The hearing on the above titled proposal was convened at 9:05 a.m.. People were asked to sign witness registration forms if they wished to present testimony. People were also advised that the hearing was being recorded and of the procedures to be followed.

Five people were in attendance, including Eric Schlorff from the Washington Department of Ecology. Of these, two people signed up to testify.

Summary of Oral Testimony

People were called to testify at 9:08 a.m. in the order in which they signed up. The following is a summary of that testimony.

1. Merritt Tuttle, representing the Northwest Sportfishing Industry Association

   Mr. Tuttle offered strong support for the National Marine Fisheries Service's waiver request. The Association represents hundreds of businesses and thousands of jobs that contribute nearly $3 billion to the Oregon and Washington economies. The Association is dedicated to healthy fisheries resources. Charter operators, guides, manufacturers and "mom and pop" businesses represented by the Association view declining salmon and steelhead runs with concern. The Association supports in-river migration of salmon. Barging of fish has been a failure. Improvements in in-river survival can be obtained through spill at levels to provide for 80 percent fish passage efficiency. Spill doubles the survival rate of instream migrants.

We have an excellent snowpack this year which will provide good in-river conditions during spring and summer. Spill elevates total dissolved gas, but this is monitored, and spill, despite the risks, is still the best method available for passing fish. The Independent Science Group's recent report Return to the River, recommends spill as the primary means of ensuring passage of fish, and that barging be used only on an experimental basis. Gas abatement at dams should be the primary focus.

High flows do not necessarily result in high gas levels. The high gas levels are a function of dam structure, and the responsibility for abating gas at these projects rests with the Army Corps of Engineers. Drawdown at John Day and natural river conditions in the Snake River will result in water quality standards being attained. The Corps should be held accountable to keep turbines operating during the migration season. We already know that there will be turbine outages at Ice Harbor again this year.

2. Bruce Lovelin, Columbia River Alliance

Mr. Lovelin confirmed that he would be supplying written comments, but that he wished the EQC to deny the requested waiver. He adduced several reasons for this, including NMFS's failure to comply procedurally with the waiver conditions from last year. The Commission is, again, being rushed into an important decision. Despite its volume, the NMFS annual report falls far short of the Commission's requirements. No salmon smolts were placed in netpens because they would die.

In 1996 dissolved gas levels could have been reduced at times of voluntary spill, when gas levels were too high. The dam operators could have done more to minimize problems. There is much that could have been done to remain within the 110 percent standard.

Page 48 of the NMFS report documents that 1.6 percent more transported adults were recovered than those in an in-river control group. NMFS knows that the ratio of transported to in-river fish is 7.5:1.0 (Harza Report), based on 1994 data. Scientific data supports transportation, but it is not possible to transport at spilling projects. The CRISP model provides evidence of these effects.

In 1997 river forecasts are predicted to exceed 1996 flows. A rational approach would be not to set aside the water quality standard, but to mitigate the gas levels from high flows. This can be achieved through altered reservoir operations, and spill outside the migration corridor.

To the extent the EQC grants this waiver, it should ensure that transportation is maximized. High gas levels at around 130 percent should trigger some corrective action.

Mr. Lovelin recommended bifurcating the proceedings. He believed the hatchery spill at Bonneville should be denied outright, and also that the ESA spill request should be denied. As a result of last year's spill 0.3 percent of fish survived the spill at Bonneville, which does not provide any measurable increase in returning adults. The Columbia River Alliance is unaware of biological monitoring proposed for the Bonneville spill. The total cost of the Bonneville spill was $2 million. DEQ estimates the cost per fish of spill at between $500 and $1,500, but the Columbia River Alliance believes it is much higher. We are asking the public to pay for non-endangered salmon. Netpens and transportation could improve the survival of Spring Creek hatchery smolts.

Experts on gas bubble disease from the NMFS expert panel which has now been disbanded noted bubble collapse in fish due to degassing of the water in the bypass system. The biological monitoring is seriously flawed. There was a 12-13 percent drop in survival between 1995 and 1996. This was only measured as far as McNary dam. If applied to the whole river, it would be much higher. NMFS shows improved survival from 1995 to 1996, but this was based on a single page spreadsheet model, which was substituted for empirical estimates.

Spill has an adverse impact on returning adults. The EQC has dealt with this for the last four years, and it is time to address this issue in the same way as any other applicant seeking to pollute waters of the state. The Association recommends that the EQC:

1. deny the request, and note that there are no supporting findings and no adequate monitoring;

2. reject the Bonneville spill request;

3. require NMFS to put in place an emergency protocol, such that when dissolved gas is causing obvious mortality, that measures be instituted; and

4. consider all submissions from the Association on this issue from previous years as part of the administrative record.

There was no further testimony and the hearing was closed at 9:30 a.m.

Summary of Written Testimony

1. Judge Steve M. Bogart, Baker County Court

Judge Bogart opposes the variation claiming that there is no evidence that drawdowns aid salmon migration. There is evidence, though that total dissolved gas is harmful to migrating salmonids. Drawdowns do have an adverse impact on resident fish. Drawdowns have a detrimental effect on recreational fishing which in turn negatively impacts tourism and local economies.

2. Marcia L. Anderson, Save Our Wild Salmon

Save Our Wild Salmon (SOWS) urges a the EQC to grant a waiver higher than that requested by NMFS, but supports the NMFS' request. Mortality from spill is less (2 percent) than mortality through turbine passage (10-30 percent). The Independent Scientific Group convened by the Northwest Power Planning Council released a report last spring recommending spill as "the route of hydroelectric passage with the lowest mortality to juvenile emigrants." The benefits from spill outweigh the trauma due to elevated gas levels. SOWS prefers a multi-year variance, since the needs of fish do not change each year.

SOWS also urges the EQC to produce a multi-year plan by which modifications will be made to the dams to allow for fish passage and also to reduce gas levels. This, too, was recommended by the Independent Scientific group. With five turbines out this season and no planned repairs, the Corps is showing indifference to the state's water quality standards. SOWS also attached an operating plan for the Snake and Columbia Rivers and Federal Dams for 1997 salmon and steelhead migration. This plan was compiled by a number of environmentally oriented organizations.

3. Merritt Tuttle, Liz Hamilton, Northwest Sportfishing Association

This submission reflects the oral testimony given by Merritt Tuttle. See above *Summary of Oral Testimony*.

4. Philip G. Millam, Environmental Protection Agency (EPA)

The Environmental Protection Agency supports the granting of the waiver request. EPA believes the relative risks and benefits from granting the proposed variance are being

monitored carefully by NMFS and cooperating agencies. Although there are few certainties, EPA believes the spill program operated by NMFS will benefit salmon recovery efforts.

5. Diane Valentine, Oregon Natural Resources Council

The Oregon Natural Resources Council (ONRC) supports the requested waiver. The Council believes even higher dissolved gas levels are shown to be justified. Gas levels in the range of 125-130 percent are suggested. This would enable more spill with corresponding benefits to fish. The Council would like to see a multi-year waiver granted to remove the annual "struggle" between salmon advocates and aluminum companies, and to give greater stability to the spill program. The Council is concerned about uncontrolled spills that elevate gas levels to very high levels. Last season turbine outages caused too much water to be spilled violating the waiver. The Council encourages the Department to be actively involved in river operations, and to enforce water quality standards.

6. Commissioner Mike Hayward, Wallowa County Court

The maximum limit in a twelve hour period should be 120 percent. A number of factors need to be considered in granting the request including time of exposure, extant barometric pressure, compensation water depth, high temperature, etc. A number of questions need to be addressed prior to and during the spill:

a) what percentage of the run will be used to trigger the spill?
b) how will the dam by dam determination be made to trigger the spill?
c) what percentage of the run will be released by the spill?
d) will real time data be used to monitor the spill?
e) will real time data be used to make decisions during the duration of the spill?

7. Bruce Lovelin, Columbia River Alliance

This submission reflects the oral testimony given by Bruce Lovelin. See above *Summary of Oral Testimony.*

8. Ted Strong, Columbia River InterTribal Fish Commission

The Columbia River InterTribal Fish Commission (CRITFC) submitted lengthy comments on the proposed variance. The Commission's recommendations are:

1. allow a daily average of 120-125 percent TGP as measured in the downstream forebay of each dam. Allow up to 125 percent in the appropriate tailrace stations.

2. allow the variance to extend from March 13, 1997 to September 30, 1997. In 1996 significant numbers of fish remained in the river beyond the August 31, 1996 cessation of the voluntary spill program..

3. incorporate adaptive management into the spill program. In 1996 DEQ recommended cessation of spill if biological or physical monitoring limits were exceeded. By doing this DEQ is condemning salmon to lethal turbine passage or screen passage without any scientific risk assessment. It is not, therefore, protecting the beneficial use.. A better operational approach is to ratchet spill down if physical or biological criteria are exceeded.

4. monitoring over and above NMFS 1997 physical and biological monitoring should be implemented to recognize site specific conditions that impact fish.

5. swings in flow as a result of power peaking over a 24 hour period must be modified to create a more stable flow pattern. High flows through the system through the day result in higher levels of spill and elevated dissolved gas levels.

6. water quality agencies should require private and federal hydropower operators to lower TDG levels through increasing spill efficiency by converting to 24 hour spill, installation of hydroacoustic and other monitoring systems and expedited installation of gas abatement structures.

7. water quality agencies should require private and federal hydropower operators to undertake physical and biological monitoring year long. Dissolved gas levels should be monitored before and after the migration season so that appropriate mitigation and regulatory remedies can be evaluated.

8. water quality agencies along with federal agencies should expedite installation of gas abatement structures at dams. Discussions have been continuing, but DEQ has been reluctant to be a participant. DEQ should become fully engaged in this activity.

9. water quality agencies should require hydropower operators to utilize power in excess of grid demands so that turbines can be operated during high levels of flow to reduce elevated TDG levels.

(B) The Commission may modify the total dissolved gas criteria in the Columbia River for the purpose of allowing increased spill for salmonid migration. The Commission must find that:

(i) Failure to act would result in greater harm to salmonid stock survival through in-river migration than would occur by increased spill;

(ii) The modified total dissolved gas criteria associated with the increased spill provides a reasonable balance of the risk of impairment due to elevated total dissolved gas to both resident biological communities and other migrating fish and to migrating adult and juvenile salmonids when compared to other options for in-river migration of salmon;

(iii) Adequate data will exist to determine compliance with the standards; and

(iv) Biological monitoring is occurring to document that the migratory salmonid and resident biological communities are being protected.

(C) The Commission will give public notice and notify all known interested parties and will make provision for opportunity to be heard and comment on the evidence presented by others, except that the Director may modify the total dissolved gas criteria for emergencies for a period not exceeding 48 hours;

(D) The Commission may, at its discretion, consider alternative modes of migration.

APPENDIX D.

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION

In the matter of the National Marine Fisheries Service's request to spill water to assist out-migrating Snake and Columbia River salmon smolts	((((	DRAFT ORDER

WHEREAS the Department of Environmental Quality received a request from the National Marine Fisheries Service dated January 23, 1997, to adjust the Total Dissolved Gas Standard as necessary to spill over dams on the Columbia River to assist out-migrating Snake and Columbia River salmon smolts, at the following times:

1. the period from midnight on March 13 to midnight on March 23, 1997; and

2. the period from midnight on April 10 to midnight on August 31, 1997.

WHEREAS the public was notified of the request on February 3, 1997, and given the opportunity to provide testimony at 9:00 a.m. on February 21, 1997, and the opportunity to provide written comments until 5:00 p.m. on February 21, 1997.

WHEREAS the Environmental Quality Commission met on February 28, 1997 and considered the request, justification and public comment.

THEREFORE the Environmental Quality Commission orders as follows:

1. Acting under OAR 340-41-205(2)(n)(B), the Commission finds:

   (i) failure to act will result in more salmonid passage via hydroelectric dam turbines. Estimated mortalities from fish passing through turbines is between 10 and 15 percent. Fish passing over spillways as a result of spill experience 2 to 3 percent mortality;

   (ii) the balance of risk of impairment to fish due to elevated dissolved gas levels needs to be balanced against mortality of turbine passage. Increased incidence of gas bubbles were detected in fish due to involuntary spill in 1996. Dissolved gas levels experienced at Ice Harbor were well above the range within which instream bioassays indicate mortalities will occur, and increased incidences of gas bubbles were detected in fish. Correspondence from Oregon Department of Fish and Wildlife (ODFW) and the Tribes from previous years equated the mortality from turbines with elevated dissolved gas at around 120 percent, although this is considered a

conservative estimate. Given the conservative nature of this estimate, the balance of the risk of impairment at the levels sought in the petition is tipped in favor of granting the variance;

(iii) NMFS has submitted a detailed physical monitoring plan. Physical monitoring will be conducted by the Army Corps of Engineers at 35 sites in the mainstem Columbia, lower Snake and lower Clearwater and Kootenai Rivers in the forebays and tailraces of all spilling dams. Hourly data will be posted electronically, as it was last year. Implementation of the physical monitoring plan will ensure that data will exist to determine compliance with the standards for the voluntary spill program;

(iv) NMFS has submitted a detailed biological monitoring plan. Smolt monitoring will continue as it did last year with examination of smolts being undertaken with 10X to 40X dissecting microscopes. Signs of GBD will be sought on non-paired fins, eyes and lateral lines. The smolt monitoring program contains a number of critical uncertainties. Some of these were tested last year in the research program, and this assessment of the efficacy of the monitoring program continue in 1997. Research will be undertaken in the following areas:

1. determination whether there are differences in the severity of gas bubble signs between migratory fish in the reservoir and fish sampled through the smolt monitoring program;

2. determination of the progression of GBD signs as a result of exposure to elevated levels of dissolved gas, and the relationship between these signs and health and survival of salmonids from the Snake and Columbia Rivers;

3. description of the migratory distribution of fish, particularly with respect to vertical distribution in the reservoir, and the relationship between vertical distribution and gas bubble signs;

4. determination as to whether the protocols and examination techniques used in the biological monitoring program optimize the detection of gas bubble signs while minimizing stress to fish;

5. determination of the physical characteristics of dissolved gas throughout the hydrosystem under specific spill and flow regimes.

2. The Environmental Quality Commission approves a modification to the Total Dissolved Gas standard for spill over the Columbia River dams subject to the following conditions:

(i) implementation of the physical and biological monitoring regime as detailed in the monitoring plan accompanying the National Marine Fisheries Service request dated January 23, 1997, and:

(ii) a revised total dissolved gas standard for the Columbia River for the period from midnight on March 13, 1997 to midnight on March 23, 1997, and midnight on April 20, 1997 to midnight on August 31, 1997;

(iii) a total dissolved gas standard for the Columbia River of a daily (12 highest hours) average of 115 percent as measured at established monitors at the forebay of the next dam downstream from the spilling dam during these times;

(iv) a further modification of the total dissolved gas standard for the Columbia River to allow for a daily (12 highest hours) average of 120 percent as measured at established tailrace monitors below the spilling dams during these times;

(v) a cap on total dissolved gas for the Columbia River during the spill program of 125 percent, based on the highest two hours during the 12 highest hourly measurements per calendar day during these times; and

(vi) that if *either* 15 percent of the fish examined show signs of gas bubble disease in their non-paired fins, *or* five percent of the fish examined show signs of gas bubble trauma in their non-paired fins where more than 25 percent of the surface area of the fin is occluded by gas bubbles, whichever is the less, the Director will halt the spill program;

(vii) NMFS will incorporate the following conditions into its program:

1. NMFS must provide written notice to the Department within 24 hours of any violations of the conditions in the variance as it relates to voluntary spill. Such notice shall include actions proposed to reduce TDG levels or the reason(s) for no action;

2. TDG data and incidence of GBD signs in smolts and adults will be reported to the Department daily. Hourly TDG levels collected from the forebays and downstream locations of McNary, John Day, The Dalles, and Bonneville Dams will be reported to the Department daily. Incidence of GBD signs in smolts collected from McNary, John Day, and Bonneville Dams and adults collected at Bonneville and Lower Granite Dams will be reported the Department daily. Signs of GBD in smolts will be measured by using a variable (10X to 40X) dissecting scope. Unpaired fins, eyes, and lateral line will be examined for the presence of bubbles;

3. that NMFS provide an annual report of the spill program for 1997 as it did last year. This report should be forwarded for public and ISAB review by December 1, 1997, and should arrive at DEQ by January 15, 1998, accompanied by any waiver request for 1998. NMFS should return to the Commission no later than June 30, 1997 with a detailed outline of the report. In particular, the Commission wishes to see progress made toward identifying the benefits of spill on salmonid survival.

4. that biological research be conducted in conjunction with the 1997 spill season to address critical assumptions inherent in the biological monitoring program. This research will address the five objectives detailed in the draft monitoring document that accompanied the waiver request.

Dated: _____ ON BEHALF OF THE COMMISSION

_____

Director

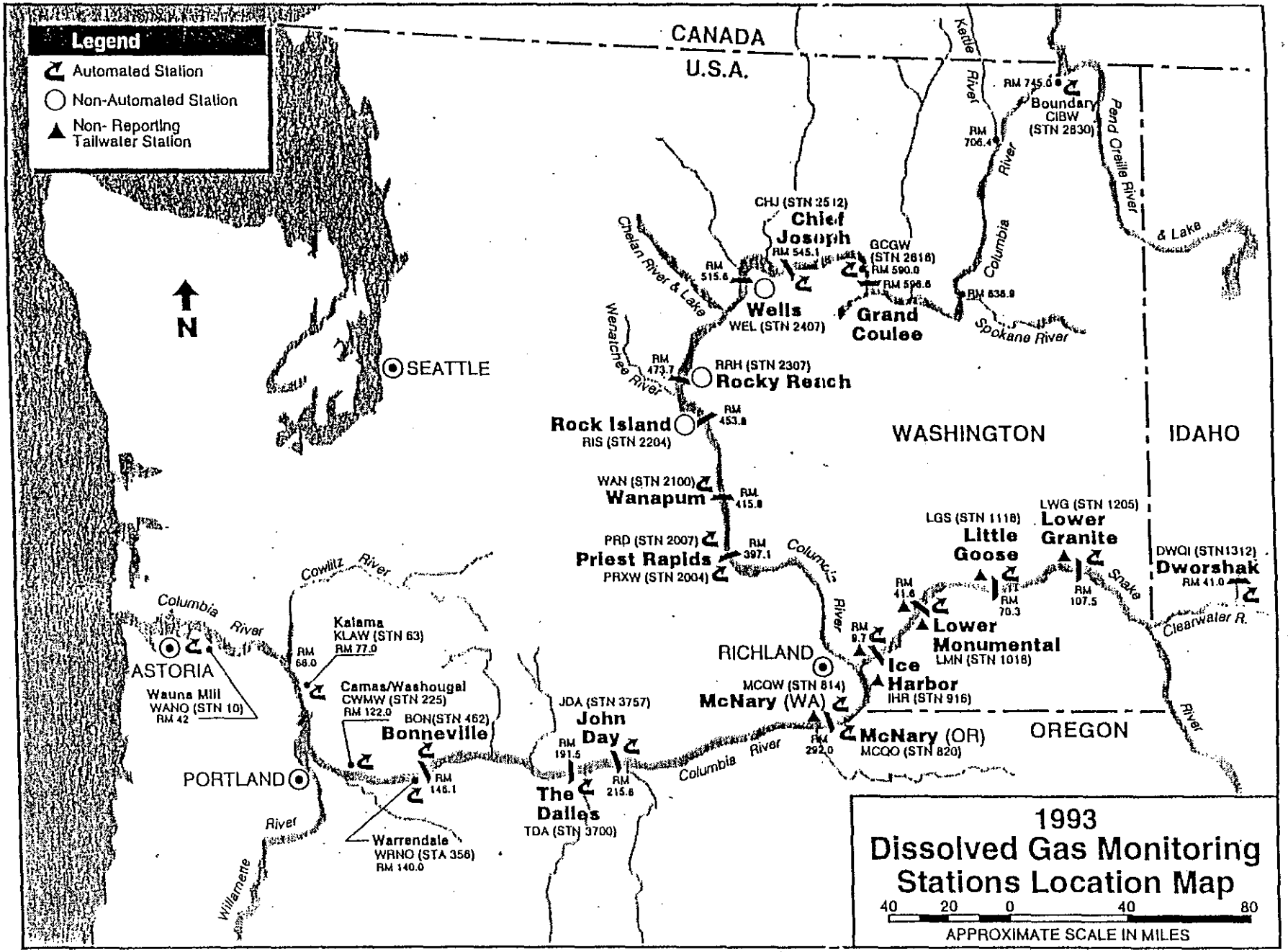


Figure 1. Locations of Dissolved Gas Monitoring Stations.

State of Oregon

Department of Environmental Quality Memorandum

Date: February 7, 1997

To: Environmental Quality Commission

From: Langdon Marsh, Director

Subject: Agenda Item J, Implementation of Environmental Equity Advisory Committee Recommendations, EQC Meeting: February 28, 1997

Statement of Purpose

Environmental Equity or Justice is the fair treatment and meaningful involvement of people of all colors, national origins, cultures, income levels, age, gender and educational level, in the development, implementation and enforcement of environmental laws, regulations and policies. Environmental equity began as a grassroots movement in the early 1980s, in an attempt to increase awareness of the disproportionate impacts of environmental hazards on minority and low income communities.

In 1994, then Governor Roberts' Policy Advisor on Natural Resources and the Environment asked the Department to take the lead on a project to identify and address issues of disproportionate environmental impacts on low income and minority populations in Oregon. This staff report focuses on the Department's work on implementing the recommendations from that project.

Background

In the late 1970s and early 1980s, grassroots activists were the first to raise awareness of what is now termed "environmental equity" or "justice". In 1983, an investigation was conducted by the U.S. General Accounting Office regarding the socioeconomic and racial composition of communities surrounding several hazardous waste landfills in the South. Based on this study, in 1987, the United Church of Christ Commission for Racial Justice conducted a national survey and released *Toxic Wastes and Race in the United States.* The report found race to be linked to the location of toxic waste sites, more so than income.

On February 11, 1994, President Clinton signed an executive order regarding environmental justice. The order requires that all federal agencies incorporate environmental justice into their missions and develop environmental justice strategies. The strategies must consider whether laws and regulations adversely affect the poor or people of color. Insurance of greater public participation and improvement of research regarding patterns of resource use must also be included. Every state is currently working on addressing these issues also.

In 1993, then Governor Roberts directed the Department to determine how the state laws, rules

and policies may contribute to disproportionate environmental impacts on low income and minority populations. The Department, in conjunction with the Oregon Health Division, appointed a 12 member advisory committee to assist in determining environmental equity issues and to make recommendations on how the state could address these issues.

Through interviews conducted by staff, more than twenty potential environmental equity issues were identified. The advisory committee grouped these issues into six topic areas:

- Public participation and communication procedures
- Exposure to water pollution
- Farmworker exposure to pesticides
- Exposure to household pollutants
- Siting of facilities
- Cleanup of contaminated sites

From January to July 1994, the committee held monthly public meetings to discuss the six topic areas of concern. Each of these meetings included an opportunity for public comment on any of the issues. After consideration of the public comment on each area of concern and hearing testimony from agency staff, the advisory committee issued recommendations for addressing the issues. Furthermore, the committee recommended the appointment of an Environmental Equity Advisory Board for overseeing the implementation of the committee's recommendations.

An Executive Order was signed by former Governor Roberts, shortly before leaving office, directing the implementation of the recommendations including the appointment of the Environmental Equity Advisory Board. Due to changes in the Governor's office, the executive order was not acted on in 1995 as expected. Governor Kitzhaber, in February 1996, revised the approach for implementation of the recommendations, by directing the agencies to incorporate the recommendations into their own agency administrative procedures. Implementation was anticipated prior to March 1997.

Issues and Implementation Process

The Environmental Equity Citizen Advisory Committee Report, dated October 1994, recognized six topic areas, five of which have application to the Department. Outlined below within each topic area are recommendations for addressing issues and the Department's implementation of the recommendations, including examples of success.

1. Agency Communication and Participation Procedures - Minority and low income populations often feel excluded from the process, both by lack of communication on the part of the agency and lack of inclusion in the actual decision making process.

-Ensure development and targeting of all agency outreach and education efforts to reach low income and minority interests.

•As the "DEQ Guidelines for Public Notice and Public Involvement" states: "It is vital that DEQ constantly communicate with the pubic about pollution problems, causes and solutions. The public must have an understanding of the problem before any regulatory programs can be implemented." To ensure that affected persons are informed of proposed agency decisions, the Department currently includes minority media in press releases.
•The 1995 Legislature enacted the dry cleaner program Dry cleaners pay fees that fund cleanups of contaminated dry cleaner sites. The industry comprises approximately 350 dry cleaners, about half of which are Korean owned or operated. English is often the second language. Educational outreach has been the focus of the program with the development of fact sheets on waste management and minimization. These sheets have been translated into Korean and distributed using a mailing list provided by the Oregon Korean Dry Cleaning Association. Required annual reports, applications for cleanup funds and fact sheets explaining the application process, have also been translated. Staff business cards are available in both English and Korean. Staff members have also attended the business association meetings and, through translators, answered questions.
•The Vehicle Inspection Program is currently working on translating their public service announcements into Spanish for airing on local Spanish stations and programs.

-Ensure representation of minority and low income interests on advisory committees.

•The Department is committed to ensuring citizen involvement in all decision making. Generally this involves the appointment of an advisory committee. The Department's guidance on the formation of advisory committees stresses the importance of identifying all potentially impacted parties and including them in the process.
•To ensure that minority and low-income interests are represented on the Department's advisory committees, a list of those involved in the Environmental Equity Advisory Committee along with those persons who expressed interest in that process, has been forwarded to the Division Administrators for use in forming any advisory committees in the future. Individuals from the Environmental Equity Advisory Committee have served on several other Department advisory committees.
•The Department is currently working on the formation of an advisory committee to address low income issues related to the increased vehicle inspection fees.

-Ensure that permit writers identify and address low income and minority issues in the permitting process.

•In 1988, the Commission adopted a policy on public participation in the permitting process to insure adequate public involvement. Notice of the proposed permit action is mailed to those who have requested notice of permits. Efforts are also made to identify potentially affected or interested parties. When permitting staff is attempting to determine who potentially affected parties are, they should consider whether population density, cumulative exposure or varying use of resources causes a potential for a disproportionate risk to certain communities and whether that community is sufficiently involved in the decision-making process. Once the affected parties are

identified, an effort should be made to involve and inform that community beyond traditional forms of outreach. The Department's policy will be revised to ensure that staff look for possible effects on minority and low income communities as necessary.

•Air Quality permitting staff have made special arrangements to inform local neighborhood groups in the Portland area. Staff have attended meetings to inform the groups of what permit actions will be occurring in the near future that affect their neighborhood. Notice is also sent to these groups whenever an action will affect the neighborhood.

•The Department, during the Umatilla Army Depot decision, worked to include both Native American and Hispanic interests in the process. The citizen's advisory committee which was appointed by then Governor Roberts, included a member of the Confederated Tribes of the Umatilla Indian Reservation and a Hispanic representative. The Department translated fact sheets into Spanish and did outreach through the local Catholic churches.

•The Department also attempted to address tribal concerns in the risk assessment. Staff held a risk assessment open house at the reservation and met with tribal staff to see if there was an analysis process that could be used that would address their unique lifestyle.

-Schedule agency meetings in facilities that meet ADA requirements.

•The Department currently requires that all public meetings follow the ADA public meeting requirements. Staff must conduct all public meetings in an accessible location unless they have been unable to locate a suitable location. All public notices include a footnote stating that accommodations for physical disabilities are available including alternative formats such as Braille.

2. Exposure to Water Pollution - Water pollution exposure may be greater for low income and minority groups due to dietary, cultural and recreational practices.

-Ensure that water quality policy is consistent statewide.

•The perception that water is "cleaner" in the western part of the state is probably based on several historical influences including the prior 303d listings and the sources of pollution. The eastern part of the state is predominated by non-point sources while the western part of the state has a higher number of point sources. Under the Clean Water Act, point sources have been heavily regulated in the past, while non-point sources have not. Both of these influences have changed dramatically in recent times. The 303d listing which includes 870 listings (as opposed to 50 in prior listings) includes streams across the state. With the development of non-point source TMDL's and the Governor's Healthy Streams Partnership, the appearance of unequal treatment across the state will decline.

-Coordinate water quality data collection with other agencies.

•Currently the Department does coordinate data collection with numerous federal, state and local agencies. These include BoR, USGS, ODF&W, OHD and ODoA, amongst others. Under the Governor's proposed Healthy Streams Partnership, the cross agency effort with other state agencies will greatly increase. The Department will soon be placing the lab sampling procedures and analytical protocols on the Department's Internet pages to provide more accessibility.

-Ensure that risk assessment includes adequate data on levels of fish consumption by various ethnic groups. Ensure that communication and outreach efforts are directed to these groups as well.

•The advisory committee expressed concerns that groups who eat more fish than the general population have a higher risk of exposure to water pollution. This issue was of particular concern for those ethnic groups who use the Columbia Slough and Native Americans who live in the Columbia River basin. Development of risk assessment related to fish consumption and issuance of advisories is the responsibility of the Oregon Health Division. In developing advisories, the Health Division does address various populations based on quantity of fish consumed. Most of the data is based on edible portions of the fish and usually does not include other body parts that might be consumed, due to high analytical costs.

•Northwest Region has started the TMDL process for the Columbia Slough. The Slough is a long neglected waterbody that has serious water quality problems. Of particular concern, is the consumption of fish contaminated with PCB's, DDE, and other organic pollutants by ethnic groups. The Department is working cooperatively with various governmental agencies to undertake fish consumption surveys to determine the amount of fishing, consumption and cooking methods employed by various groups. Outreach efforts have been aimed at neighborhood groups within the slough's boundaries. As a result of these efforts, local citizens have developed a watershed council that includes local neighborhood groups, citizens, industries and local governments. This watershed council has been instrumental in providing a forum for presenting information and guiding clean-up efforts.

-Identify ways to lessen potential water pollution from residential wells in rural areas, especially for low income and minority communities.

•Department staff, along with staff from OHD, are working on obtaining an EPA grant under the Safe Drinking Water Act. The grant will be used to fund several technical positions including a Community Outreach Coordinator. Only public water systems (those which are connected to four or more households) are required to be tested for contamination. The outreach position will focus on outreach to individuals and other small systems that are not considered a public water system.

3. Exposure to Household Pollutants - Minority and low income groups may be more vulnerable than other populations to lead, radon and asbestos in the home. This would be due to where they live and the level of awareness of such hazards.

-Ensure that educational and outreach efforts regarding household hazardous waste and pollutants are directed to minorities and low incomes interests.

•The Department is responsible for the education and outreach regarding asbestos only. Oregon Health Division is responsible for education regarding household lead and radon.

•The Department developed "A Homeowners Guide: Asbestos in the Home," a 16 page booklet with information and program contacts. This booklet has been published in both English and Spanish. Distribution was accomplished through: real estate offices throughout the state; 242

hardware stores throughout the state including True Value, Coast to Coast, Home Base and Builders Square; 274 libraries throughout the state; 440 lending institutions throughout the state. 1200 guides were distributed at the Portland Home Show and the African American Chamber of Commerce distributed 200 booklets.

•A two page fact sheet was also published in English, Spanish, Vietnamese and Russian. Distribution was accomplished of the English and Spanish sheets through the Oregon Health Division's Office of Multicultural Health, county health departments and minority health centers. Russian and Vietnamese sheets were distributed through the International Refugee Center, Lutheran Family Services, Asian Family Center, Sponsors Organized to Assist Refugees (SOAR), Mittleman Jewish Community Center Russian Family Program, Vietnamese churches, restaurants and businesses. In the Klamath Falls area, Spanish, Russian and Vietnamese guides were distributed by SOCO Development Corporation.

•News releases announcing the availability of the guide and fact sheet was sent to all Oregon newspapers and radio and television stations, including a public service announcement in Spanish which was sent to 18 Spanish radio stations and programs throughout the state. Program staff spoke on a call-in program during the Spanish language program on a Portland area radio station.

4. Land Use Siting of Facilities - Concern has been expressed regarding the siting of industrial waste and large permitted facilities in or near areas that are predominately minority or low income population groups. Of particular interest is how local zoning practices may contribute to undue impacts on these groups.

•The Department currently has rules on permitting hazardous waste and PCB storage, treatment and disposal facilities. These rules contain procedures for working with local governments on planning issues, coordination and communication. The Department has addressed the communication issues under *Public Participation and Communication* as outlined above. The Department of Land Conservation and Development is more appropriate to deal with the planning and zoning issues, and will assume lead responsibility for this issue.

5. Cleanup of Contaminated Sites - Concern was focused on the adequacy and availability of information on suspected and confirmed contaminated sites.

•Under the statewide identification program, notice of cleanup action must be published in a local paper along with the Secretary of State Bulletin. Notice must also include an effort to notify interested community organizations and persons. This could include adjacent property owners and neighborhood associations. Any updates to the inventory of facilities that require cleanup action must be published quarterly in the Secretary of State's Bulletin and local newspapers.

•The Department was a partner on the MLK Jr. Boulevard Community Action Committee, which was a part of the Governor's Community Solutions Team effort. The Department held several workshops designed to provide the community with information on asbestos, underground tanks, waste reduction, and contaminated sites, including what is needed to start an environmental

contracting business. Furthermore, the Department did direct outreach to property owners on the Boulevard to help accelerate the cleanup process so the redevelopment of the properties could occur. This outreach included performing an environmental contamination survey of the Boulevard along with a brochure that included what agency resources are available.

Intended Future Actions

This report is merely the beginning of what should be an ongoing effort to prevent environmental equity issues in the future. Insensitivity to diverse cultural backgrounds plays a major role in environmental equity issues and the Department needs to work on mitigating the potential for disproportionate effects on all ethnic groups in the future. To this end, the Environmental Equity Advisory Committee recommended that agencies adopt policies that incorporate environmental justice concerns into the way that the agency does business on a day to day basis.

The Department is committed to ensuring environmental equity in its decisions. The Department has prepared some guiding principles (Attachment A) which will be distributed to staff. By implementing these principles, the Department hopes to encourage a working environment that is aware of and encourages diverse cultures and viewpoints. The Department wishes for the Commission to endorse these principles as the Department's way of ensuring that any injustice in the future be prevented.

Attachments

1. *Institutionalizing Environmental Equity* Principles Statement
2. Memorandum from Paula Burgess, dated February 15, 1996
3. Oregon Environmental Equity Citizen Advisory Committee Report, dated October 1994

Report Prepared By: Susan Greco
Phone: (503) 229-5213

INSTITUTIONALIZING ENVIRONMENTAL EQUITY

Environmental Equity or Justice entails the fair treatment and meaningful involvement of all people regardless of race, age, gender, national origin, education or income level, in the development, implementation and enforcement of environmental laws, regulations and policies. Since the early 1980's, there has been increasing awareness of disproportionate effect of environmental hazards on minority and low-income communities. Across the nation, projects are underway to investigate and address this problem. In Oregon, an advisory committee developed recommendations on how to eliminate disproportionate environmental impacts on low income and minority populations. One recommendation was that agencies adopt policies that incorporate environmental equity into their institutional framework. The following principles will make environmental equity inherent in the way the Department does business.

MAINTAIN DIVERSITY IN THE DEPARTMENT

The Department's staff should be comprised of a broad mix of individuals. A workplace that respects different perspectives will ensure identification of potential problems and will encourage problem solving beyond traditional approaches. By encouraging respect for diversity, the Department will be able to....

ENSURE DETERMINATION OF AFFECTED PUBLIC

Significant environmental effects may be diluted by examination of a large population or area. Staff should be encouraged to vary their analysis of affected population by a variety of factors including population concentration, cumulative exposure to hazards and different patterns of use of resources. Staff should also be encouraged to include human health, economic, and social effects whenever possible. By determining who the potentially affected parties are, the Department will be able to....

DISSEMINATE INFORMATION TO AFFECTED PUBLIC

This goal can be accomplished through careful identification of target audiences and aggressive community outreach beyond tradition forms. This includes improving accessibility of public meetings and documents. By providing affected parties with adequate information, the Department will...

PROVIDE OPPORTUNITIES FOR PARTICIPATION

For each agency action, adequate opportunity for community input should be facilitated to ensure that potentially affected parties are not overlooked and excluded from the process. Local community members or interest groups should be contacted to help develop agency policy. By facilitating community participation, the Department will...

FOSTER COMMUNITY PARTNERSHIPS

Local community members or interest groups can provide a unique perspective on problems that the Department may be unaware exist. Partnerships can serve to educate all affected parties. By fostering collaboration between community members, other agencies, local jurisdictions, and the federal government, the Department will be able to....

PURSUE INNOVATIVE RESPONSES TO PROBLEMS

Creativity and innovation are the Department's goals. Providing technical assistance to the public to enhance understanding of requirements and encourage discussion of a full range of potential creative solutions to the problem, will encourage environmental protection in the most equitable manner.

Roberts

MEMORANDUM

TO: Lang Marsh, DEQ ✓
Bruce Andrews, Agriculture
Dick Benner, LCDC
Michael Skeels, Health Division
Martha Pagel, Water Resources
Rudy Rosen, ODFW

FROM: Paula Burgess Paula
Governor's Assistant for Natural Resources

SUBJECT: Implementation of Executive Order EO-94-25

DATE: February 15, 1996

This memo is to provide agency guidance on Executive Order EO-94-25 which directs certain state agencies to implement recommendations developed by the Environmental Equity Advisory Committee. This Committee oversaw the identification of existing and perceived inequities in the State's administration of its environmental laws. The Advisory Committee did an outstanding job on this project. The Committee's work elevated public awareness of the importance of the issue, solicited public opinion and comment, and developed sound solutions to the issues that were raised. The Executive Order was signed by former Governor Roberts, shortly before leaving office, on January 6, 1995.

Governor Kitzhaber holds a strong commitment to ensure that state environmental law in Oregon is administered such that all citizen interests, in particular those of the low income and minorities, are treated in an equitable manner. The Order stipulates that implementation of the Committee's recommendations be accomplished by March of 1996, and with the assistance of an appointed state advisory board. Due to personnel changes in the Governor's Office, intensive legislative responsibilities, and agency budgetary issues, the Order was not acted on in 1995 as planned. Consequently, Governor Kitzhaber has established a revised approach for implementation that requires individual agencies to be accountable for incorporating the Advisory Committee recommendations into their own agency administrative processes. Agency directors will be expected to report back to the Governor under a revised schedule. At this time, it is anticipated that implementation will be achieved by March, 1997

As a first step, I ask that each agency director review the Environmental Equity Report recommendations and report back to my office by March 15 the following:

- Identification of recommendations that relate to your agency, and discussion of proposed action.
- Any actions that the agency has already taken to implement the Committee's recommendations.
- An outline and schedule of the process that the agency plans to follow to accomplish the task, including citizen and interested party involvement.
- An estimation of needed agency resources for the implementation work.

I encourage you to discuss possible implementation strategies with your Boards and Commissions and with a number of constituents. Once your report has been reviewed and approved by the Governor, your agency will be expected to begin the implementation process.

Enclosed for your review is a copy of the study report. Also enclosed is a response from my office to several citizen inquiries that we have received on the matter. Thank you in advance for your willingness to address this important issue.

JOHN A. KITZHABER
GOVERNOR

February 15, 1996

Melanie Allardale
Breitenbush Hot Springs
P O Box 578
Detroit OR 97342

Dear Ms. Allardale:

Thank you for your letter of inquiry regarding the State's Environmental Equity effort and of the status of Executive Order 94-25. Governor Kitzhaber very much shares your support and interest in implementing the recommendations that evolved from the Advisory Committee's work in identifying equity-related issues in Oregon.

Executive Oregon 94-25 was issued on the last day of Governor Robert's term in office. Due to the transition issues of a new administration and to competing demands of the Legislative Session, it was not possible to carry out the Order in a timely manner. In re-examining the Executive Order and the Committee's recommendations, the Governor has decided to provide implementation directives directly to each affected agency. This approach will allow the agencies to proceed directly with the implementation of recommendations specific to each agency. We expect the effort to be completed by all agencies within a one-year period.

Your name will be provided to each of the agencies involved in implementing the Advisory Committee's recommendations. As these processes begin, you will be notified and will have an opportunity to participate in whatever agency activities are of interest to you.

Sincerely,

Paula Burgess
Governor's Assistant for Natural Resources

PB/sm

c: Langdon Marsh, DEQ
Michael Skeels, Oregon Health Division
Dick Benner, DLCD
Martha Pagel, WRD
Bruce Andrews, DOA
Rudy Rosen, ODFW

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OREGON ENVIRONMENTAL EQUITY CITIZEN ADVISORY COMMITTEE REPORT

A Report to
The Governor

On Ensuring Environmental Equity in Oregon

October 1994

Citizen Advisory Committee Members

The Chair of the Committee was **Victor Merced**, Deputy Administrator for Oregon's Adult and Family Services Division and former Director of the Oregon Council for Hispanic Advancement. While a National Kellogg Fellow, he conducted research on Third World environmental issues.

Richard Brown, co-chair of the Black United Front and a professional photographer long active in environmental issues.

Joe Coburn, a retired educator with the Northwest Regional Education Laboratory and former chair of the Klamath tribe restoration committee.

Richard Craig, Senior Water Resource Technician/Environmental Coordinator for the Confederated Tribes of Warm Springs.

Donalda Dodson, Public Health Manager for the Marion County Health Department and chair of the Salem YWCA's Racial Justice Committee.

Sheila Holden, a district manager for Pacific Power and Light and chair of the Portland Northeast Coalition of Neighborhoods.

Carolyn Landis, Executive Director of Yamhill County's Community Action Agency.

Judy Low, a cultural resource consultant and cultural dynamics instructor at the Public Safety Academy.

Linda Lutz, a vice-president of US Bancorp Mortgage Company in Portland and board member of the Oregon Environmental Council, Portland.

Ellen Mendoza, Regional Director of Clackamas County for Oregon Legal Services and member of the Oregon Natural Resources Council and the Audobon Society.

Kim Moreland, a land use planner who worked primarily on the Albina Community Plan to revitalize inner north and northeast Portland.

Frances Portillo-Denhart, an educational consultant and cultural diversity trainer, Portland.

State Agency Project Participants

Project Staff

Lydia Taylor, Division Administrator, Management Services, Department of Environmental Quality (DEQ)
Roberta Young, Project Manager, DEQ
Maria Menor, Project Assistant/Technical Writer, DEQ
Cathy Neumann, Coordinator for Oregon Health Division (OHD)
Doug Terra, Geographic Information Systems Advisor, DEQ

State Agency Task Group Members

Tom Bispham, DEQ
Mike Downs, DEQ
Ron Hall, OHD
Brooks Koenig, DEQ
John Kowalczyk, DEQ
Monty Morshed, DEQ
Doug Parrow, Water Resources Department (WRD)
Greg Robart, Department of Fish and Wildlife (ODFW)
Jim Sitzman, Department of Land Conservation and Development (DLCD)
Carolyn Young, DEQ
Lorna Youngs, Department of Agriculture (ODA)

The following agency staff also responded to issues and provided background information to the Citizen Advisory Committee:

Margot Barnett, OHD
Bob Baumgartner, DEQ
Jeff Christensen, DEQ
Bob Danko, DEQ
Ken Kauffman, OHD
Chris Kirby, ODA
Neil Mullane, DEQ
Greg Nelson, WRD
Cathy Neumann, OHD
Marilyn Schuster, Occupational Safety and Health Administration
George Toombs, OHD
Dave Wall, DEQ

Acknowledgements

The Environmental Equity Citizen Advisory Committee would like to offer a special thanks to the individuals who provided input to the Committee on the impact of environmental hazards on the state's minority and low income groups. The input of these individuals was instrumental in further educating the Committee on the complex issues related to environmental equity. These individuals include:

State Representative Avel Gordly; **Joe Lane**, Metropolitan Human Rights Commission; **Chris Johnson**, Oregon Childhood Lead Poisoning Prevention Program; **Colin Wood**, La Clinica del Carino; **Nargess Shadbeh**, Oregon Legal Services; **Larry Kleinman**, Pineiros y Campesinos Unidos del Noroeste; **Joan Rothlein**, Center for Research on Occupational and Environmental Toxicology; **Bernie Paul**, Salud Medical Center; **Doug Krahmer**, Oregon Farm Bureau; **Mark Fritsch and John Kelley**, Confederated Tribes of Warm Springs Department of Natural Resources; **Lee Po Cha**, International Refugee Center of Oregon; **Arlene Osbourne**, Lutheran Family Services; **Tina Castanares**, La Familia Sana; **Carmen Campos**, La Familia Sana; **Thom Nelson**, Hood River Grower-Shipper Association; **Joe Peloyo**, La Familia Sana; **Tim Ennis**, Oregon State Office of Rural Health; **Noel Wiggins**, La Familia Sana; **Paul Duong**, Refugee Coordinator, Portland Office of Neighborhood Associations; **Lee Perlman**, Eliot Neighborhood Association, Portland; **Marvietta Redding**, City of Portland Bureau of Environmental Services.

The Committee would also like to acknowledge the help and input that was provided by the additional state agency staff that were involved in the Oregon Environmental Equity Project. A special thanks goes to **Barbara Taylor** and **Ruth Ascher** of the Health Division's Office of Multicultural Health.

Information was also provided by the following organizations and State offices: Metropolitan Human Rights Commission, Urban League of Portland, Columbia River Intertribal Fish Commission, Portland Office of Neighborhood Associations, Commission on Hispanic Affairs, Legislative Commission on Indian Services, Governor's Minority/Women Business Advocate.

Table of Contents

The acronyms used in this report are as follows:

DEQ - Department of Environmental Quality
OHD - Health Division
ODFW - Department of Fish and Wildlife
DLCD - Department of Land Conservation and Development
WRD - Water Resources Department
ODA - Department of Agriculture
OSHA - Occupational Safety and Health Administration
EPA - US Environmental Protection Agency

Executive Summary

Purpose

The Department of Environmental Quality and the Oregon Health Division were the lead agencies for the state's examination of how minority and low income groups may be disproportionately affected adversely by environmental hazards. The purpose of the Environmental Equity Citizen Advisory Committee was to assist in efforts to identify environmental equity issues, examine the environmental concerns of minority and low income populations, and propose an interagency approach to assure equity in all state environmental regulatory decisions. The ultimate goal of the Oregon Environmental Equity Project was for the State to recognize and take appropriate action to ensure that environmental risks are assessed and regulated in a fully equitable manner.

Background

People everywhere are becoming increasingly aware of the effects of environmental regulation on their families, neighborhoods, and communities. In the early 1980s, public concerns developed as to where hazardous waste facilities were being located. Government and private studies indicate that the burden of environmental hazards is not evenly distributed among all segments of the population and often falls disproportionately on minority and low income groups. The Governor's Office directed the Department of Environmental Quality to take the lead in examining how the State's environmental programs may contribute to discriminatory environmental problems. The Health Division provided assistance as well as other state natural resource agencies in their respective issue areas.

Oregon's Issues

Through interviews project staff conducted with interest groups and agency staff, more than twenty potential environmental equity issues were identified and that the Committee grouped into the following six topic issues:

- Natural resource agencies' public participation and communication procedures
- Exposure to water pollution
- Farmworker exposure to pesticides
- Exposure to household pollutants such as lead, radon, asbestos
- Land use siting of facilities
- Cleanup of contaminated sites

From January to July 1994, the Committee held monthly public meetings to discuss the impacts of environmental hazards on the state's minority and low income groups. The Committee addressed one of the six issue areas at each meeting, which included an opportunity for public comment on the environmental equity issues.

Directives to Agencies

The Committee agreed that the information provided to it supported a need for immediate action to ensure equity in the State's environmental programs. The Committee's directives to natural resource agencies are intended to assure that environmental equity ethics are incorporated into the agencies' decision making processes. The Committee also offered recommendations for agencies to implement in order to gain this assurance.

1. AGENCY PUBLIC COMMUNICATION AND PARTICIPATION PROCEDURES

Issue Statement: Minority and low income communities generally lack adequate access to governmental processes and decision-making.

Directive: Agencies are to ensure that minority and low income communities are included in and are aware of public communication and involvement procedures.

2. HUMAN EXPOSURE TO WATER POLLUTION

Issue Statement: Minority and low income groups may be unduly exposed to water pollution due to their dietary, cultural and recreational practices.

Directive: Agencies are to evaluate their policies and actions related to water pollution to assure that they include environmental equity considerations.

3. FARMWORKER EXPOSURE TO PESTICIDES

Issue Statement: Concern expressed over whether agricultural workers and their families (who are largely minority and low income) are provided adequate protection from pesticide exposure.

Directive: Agencies are to incorporate environmental equity ethics into policies and actions related to the regulation of pesticides to assure that farmworkers are adequately protected both on the job and in their living spaces.

4. EXPOSURE TO HOUSEHOLD POLLUTION

Issue Statement: Minority and low income groups are more vulnerable to exposure to household pollutants such as lead, radon and asbestos because of where they live and also because they may be less aware of environmental hazards compared to other segments of the population.

Directive: Agencies are to evaluate their policies and actions related to household pollutants to assure that they protect all groups in the state's population.

5. LAND USE SITING OF FACILITIES

Issue Statement: Concern expressed about the siting of industrial waste and other permitted facilities in or near areas that are largely minority and/or low income.

Directive: State and local agencies are to incorporate environmental equity ethics into their procedures for the siting and review of permitted facilities.

6. CLEANUP OF CONTAMINATED SITES

Issue Statement: Concern expressed regarding the state process for the cleanup of contaminated sites.

Directive: State agencies are to ensure that environmental equity ethics are integral to the cleanup of contaminated sites.

Chapter 1. Introduction

Project Directive

In response to growing concerns about the disproportionate environmental impacts on the state's low income and minority populations, Anne Squier, Policy Advisor to the Governor on Natural Resources and the Environment asked that the Department of Environmental Quality take the lead on an environmental equity project with assistance from the state Health Division and other state natural resource agencies.

What is Environmental Equity?

The issue of fairness and equity in the development and implementation of environmental regulations has resulted in the use of several definitional terms. Environmental equity refers to equal protection from environmental hazards for all people, regardless of race, culture, income, or educational level. Equity signifies fairness in the development, administration, and enforcement of environmental laws so that benefits are enjoyed and risks borne equally by all citizens.

"Environmental justice" is another term used to reflect the linkage to civil rights principles. A third term, "environmental racism," refers specifically to the historical pattern of discrimination against people of color and encompasses any environmental policy that disadvantages people based on their race, color or ethnicity.

The Emergence of Environmental Equity as a National Priority

Nationally, a grass roots environmental movement initially was responsible for increasing awareness about the impacts of environmental hazards on minority and low income groups. In 1982, officials decided to locate a PCB (polychlorinated biphenal) landfill in the predominantly poor and black Warren County, North Carolina. Protests led to an investigation a year later by the U.S. General Accounting Office (GAO) of the socioeconomic and racial composition of communities surrounding four major hazardous waste landfills in the South. The GAO study concluded that blacks were disproportionately represented in three of the four sites studied[1].

The Warren County demonstration and the GAO report led the United Church of Christ Commission on Racial Justice to sponsor a nationwide study in 1987. In the examination of racial and socioeconomic characteristics of residents of communities around commercial hazardous waste facilities, the Commission's study determined race to be a stronger factor than income in predicting the location of hazardous waste siting. In 1990, environmental justice activists, academicians, civil rights leaders, and public health officials attending the Conference on Race and the Incidence of Environmental Hazards held at the University of Michigan formed

[1] U.S. General Accounting Office (GAO). (1983). Siting of Hazardous Waste Landfills and Their Correlation with Racial and Economic Status of Surrounding Communities.

the "Michigan Coalition," which prompted EPA to establish its Environmental Equity Workgroup. In 1992, EPA created its Office of Environmental Equity and issued a final report entitled "Environmental Equity: Reducing Risks For All Communities" [2].

Also in 1992, then Senator Albert Gore introduced in the U.S. Senate the Environmental Justice Act of 1992. Because the 102d Congress did not act on the bill, it was reintroduced in the 103rd Congress in the House of Representatives by Representative John Lewis (D-GA) and in the Senate by Senator Max Baucus (D-MT). The Act would provide the federal government with data on the top 100 "environmental high impact areas" that warrant strict regulatory oversight, technical assistance and health assessments[3].

On February 11, 1994, President Clinton signed an executive order that would establish environmental justice as a national priority. Entitled "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," the order focuses federal attention on the environmental and human health conditions in minority and low-income populations with the goal of achieving environmental equity. The order directs all federal agencies to determine whether their regulations adversely affect the poor or people of color. The order also directs the agencies to ensure that states and other organizations receiving federal funding for environmental projects do not violate federal civil rights law. Finally, federal officials must determine the extent to which environmental racism is a national problem[4].

Several states have recently begun to address environmental equity concerns. Arkansas and Louisiana were the first to enact environmental justice laws. Virginia has passed a legislative resolution on environmental justice. California, Georgia, New York, North Carolina and South Carolina have pending legislation to address environmental inequities. Adopted and proposed laws include providing compensation to host communities, enhancing public notice and participation, improving risk assessment methodologies, creating state equity policy, and increasing public communication and information[5]. In 1993, Texas created an Environmental Equity and Justice Taskforce which was directed to investigate and identify factors contributing to inequitable environmental impacts and to recommend remedial and preventive actions to the Texas Natural Resource Conservation Commission[6].

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2 U.S. ENVIRONMENTAL PROTECTION AGENCY (U.S. EPA). 1992. Environmental Equity: Reducing Risk for all Communities. EPA/230-R-92-008. Washington, D.C.

3 ANDERSON, Y., COULBERSON, S.L., and PHELPS, J. (1993). "'Environmental Justice:' The Central Role of Research in Establishing a Credible Scientific Foundation for Informed Decision Making." Toxicology and Industrial Health 9(5): pp. 685-728.

4 CLINTON, W. (1994). Executive Order 12898 of February 11, 1994. "Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations."

5 HACKER, B. (1994). "State Environmental Justice Legislation." Policy Alternatives on Environment, 11(1): pp. 16-18.

6 The Task Force's report is entitled "Texas Environmental Equity and Justice Task Force Report." The Task Force was established and appointed in 1993 by Chairman Kirk Watson of the Texas Air Control Board and Chairman John Hall of the Texas Water Commission.

Environmental Equity And Oregon

Oregonians have always placed a high value on the quality of their natural environment, which is not only beautiful but significantly varied. Indeed, as Oregon undergoes population growth and economic diversification, it will become increasingly important to improve the management and regulation of the state's finite resources. The high value placed on the environment is reflected not only in the need to preserve the state's natural resources, but also in Oregonians' desire to retain their quality of life. This value is an essential component to the backdrop for the examination of environmental inequities in the state.

The state's demographic makeup is also part of this backdrop. Almost half of Oregon's population is concentrated in one urban area: 43% of the state's residents live in the Portland Metropolitan Area, which continues to dominate population and economic growth[7]. Oregon is also relatively homogeneous, with whites comprising 93% of the state's population, according to 1990 census data. This is further demonstrated by the fact that Portland was found to be the "whitest" of America's 50 largest cities, where minorities represent fewer than one in six residents[8].

Oregonians' strong commitment to environmental quality and their unique demographic makeup set the stage for examining how the state's minority and low income populations may be disproportionately impacted by environmental risks and hazards. Factors such as language or cultural barriers, lack of political empowerment, limited educational opportunity, poor access to health care, and economic disadvantages serve to exacerbate environmental impacts on such communities. These factors translate into a small or absent voice in public decisionmaking. Concerns for the welfare of such communities demonstrate the belief that all Oregonians have a just claim to the quality of life provided by Oregon's special natural environment, livable communities, and responsive political and social institutions.

It is clear that the State needs a better understanding of environmental equity issues in Oregon. In response, the Governor's Office directed the Department of Environmental Quality to determine how the State's environmental programs may contribute to discriminatory environmental problems. The Oregon Health Division provided assistance on the Oregon Environmental Equity Project as well as other state natural resource agencies in their respective issue areas.

Overview of the Citizen Advisory Committee

The Governor's Policy Advisor on Natural Resources and the Environment asked that the state's

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[7] Data based on Population Estimates for Oregon (July 1, 1993), Census and Population Research Center, Portland State University. Includes Columbia, Multnomah, Clackamas, Washington and Yamhill counties.

[8] Schrag, J. (1994). "White Like Us." Willamette Weekly. June 14.

examination of disparate environmental impacts on minority and low income groups include the input of a citizen advisory committee. DEQ Director Fred Hansen appointed the Environmental Equity Citizen Advisory Committee in December 1993.

Committee Charge: The Committee was established to assist the state in accomplishing the following objectives:

- Gather quantitative and qualitative information on environmental equity.
- Enhance public and governmental awareness of environmental equity.
- Identify issues relating to regulatory practices that may pose greater risks to minority or low income populations.
- Propose recommendations on an interagency approach to assure equity in all state environmental regulatory decisions.

Committee Members: Twelve persons were appointed to the Committee. Efforts were made to ensure the Committee was representative geographically, culturally diverse, and that members would have backgrounds that would be helpful in understanding and examining potential issues of environmental inequity in Oregon.

Each member contributed different perspectives to different aspects of the issue. Some members came with an acute understanding of the issue based on their personal experience, while others based their knowledge on literature related to environmental equity. Still others knew about environmental concerns that affected their communities or had related experience through their work. Despite the different perspectives, however, there was a general consensus from the Committee that minority and low income groups do bear a disproportionate burden of the impacts of environmental regulation.

Environmental Equity State Agency Taskgroup

An interagency taskgroup was established by DEQ staff to provide technical assistance and advice to project staff and to the Committee. By creating this taskgroup, it was recognized that efforts to address environmental inequity must involve more than one agency. The state agencies that participated in the taskgroup include: Department of Environmental Quality, Health Division, Department of Land Conservation and Development, Oregon Water Resources Department, Department of Agriculture, and Department of Fish and Wildlife.

How the Committee Gathered Information

The Committee chose to direct outreach efforts to those communities that may be subject to environmental inequities; the primary focus of the Committee's efforts to gather information was to provide a forum for those groups that have not had a voice with regard to their environmental concerns. The conclusions in this report were drawn from the following sources: interviews conducted with interest groups, interested citizens and agency staff, public input to Committee meetings, and research by DEQ staff.

Interviews

In the fall of 1993, informational letters with request notices for telephone interviews were sent to approximately 300 minority, low income and environmental interest groups or individuals in the state. The mailing list was compiled from other public agencies' mailing lists of organizations that provide services to or represent minority and low income groups. The letter was followed by telephone interviews conducted by project staff with 35 statewide interest group representatives statewide and with agency taskgroup members. The objective of the interviews was to assess the range of environmental equity-related concerns from the perspectives of the groups/individuals above as well as from governmental perspectives. The questions were broad and open-ended to allow the interviewee to speak freely about equity issues in the state, and are included in the appendix of this report.

Through these interviews, twenty potential environmental equity issues[9] were identified which the Committee grouped into six issue areas:

- Agency public participation and communication procedures
- Exposure to water pollution
- Farmworker exposure to pesticides
- Exposure to household pollutants such as lead, radon, asbestos
- Land use siting of facilities
- Cleanup of contaminated sites

The issue statements heading each chapter of the report were developed from these areas of focus, and are the areas upon which the Committee members based their work.

Public Meetings

From January to July 1994, the Committee held monthly public meetings to discuss the impacts of environmental hazards on the state's minority and low income groups. The Committee's meeting process focused on the inclusion of and outreach to potentially affected populations. A key objective of the meeting process was to identify the concerns of minority and low income groups relative to environmental policy and decision making.

The public Committee meetings were held in Woodburn, Warm Springs, Hood River and

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[9] A list of these issues is provided in Appendix B of this report.

The public Committee meetings were held in Woodburn, Warm Springs, Hood River and various locations in Portland. The meetings were publicized in advance, and attendees were invited to give testimony. The Committee addressed one of the six issue areas at each meeting; however, the individuals providing public comment were not limited to the equity issue area on the meeting agenda. Also present at the meetings were agency staff members who provided Committee members with background information and data on the featured issue area.

Research Data and Information

Project staff gathered baseline information on the agency authorities, policies and programs related to each issue area. Staff also conducted research into the equity issues related to each issue area which included discussions with community members and service providers and studying literature on environmental equity. A resource list is included in the appendix.

Expectations of Committee's Efforts

Numerous studies have concluded that environmental inequities exist in the United States. The Committee's role was to address existing or potential equity issues in Oregon. It should be recognized that the inequity issue areas addressed by the Committee may not be all-inclusive of the equity-related issues in Oregon, but the Committee's efforts provide a sound beginning. The Committee also acknowledged that socioeconomic factors such as poverty, education, health care and access to basic commercial services are beyond the scope of what can be addressed effectively by the state's natural resource agencies. However, racial discrimination, intentional or unintentional, and insensitivity to issues of environmental equity also play a major role, and participating agencies need to work on mitigating these factors. Indeed, this effort should not be considered the State's final analysis of environmental inequities in Oregon. Rather, the Committee's conclusions and recommendations should serve as a springboard for the state's continuing efforts to address disparate environmental impacts on minority and low-income groups.

Environmental Equity Implementation Strategy

The Environmental Equity Citizen Advisory Committee made the following recommendation in order to assure that the issues described in this report are addressed and the Committee's recommendations are implemented by the appropriate natural resource agencies:

Recommendation 1-1

An Environmental Equity Advisory Board should be created within the state's natural resource agency structure. The Board should be representative of diverse communities and environmental and low-income interests. The Board would be established for the '95-'97 biennium and would oversee the implementation of the Committee's recommendations.

Institutionalizing Environmental Equity

Issue Statement: **Environmental equity should be inherent in the way natural resource agencies do business.**

Directive: **Agencies are to adopt policies that would incorporate environmental equity into their institutional framework and may include the following elements:**

Recommendation 1-2
Mandate diversity in state agency employment practices, since part of the problem is the limited perspectives and absence of diversity among those who develop, implement and enforce environmental policy.

Recommendation 1-3
Require diversity training for agency staff, recognizing that diversity encompasses factors other than color, such as age and gender.

Recommendation 1-4
Require cultural competency training for all staff, with the goal of a working environment that is appreciative of individual differences rather than merely tolerant of them.

Recommendation 1-5
Involve concerned citizens and neighborhoods in a manner which would ensure that diverse viewpoints are included in the environmental decisionmaking process.

Recommendation 1-6
Ensure that efforts to achieve environmental equity are carried out by agency field and regional offices.

Recommendation 1-7
Recognize that equitable environmental policy requires interagency collaboration and cooperation.

Chapter 2. Agency Communication and Participation Procedures

Issue: Minority and low income communities generally lack adequate access to environmentally-related governmental processes and decision-making.

Directive

Agencies are to ensure that minority and low income communities are included in and are aware of public communication and involvement procedures.

Existing Procedures

Each state agency has mechanisms for fostering public communication and participation.
All agencies are mandated by law to provide notice of public hearings to a mailing list of individuals when rules are adopted. Mailing lists are maintained by individual programs and include the regulated communities, governmental agencies, media, and people who have expressed an interest in being informed. Statutes also require direct mailings of information and press releases, which are sent to community publications as well as The Oregonian, the state's largest daily.
State natural resource agencies may also use any of the following mechanisms for public participation: public information meetings, press releases, including those in local and minority publications, citizen advisory committees and workgroups and the development of factsheets and educational materials for public distribution.

Issue Topics and Discussion

"Citizens have a role in determining what is and is not acceptable in their communities. There must always be a way for citizens to have input into decisions that affect where they live."
— State Representative Avel Gordly

That citizens have a right to participate in decisions that affect their lives is a basic principle for risk communication. And yet minority and low income groups may feel completely excluded from the process, or that the issues of greatest concern to them may be dismissed altogether. The following concerns gathered from the Committee's interviews and public meetings indicate that the procedures above may be inadequate for low-income and minority groups.

Topic 1. Educational efforts often do not adequately address the intended audience's primary language, educational level, or cultural implications.
Educational disadvantages also play a major role in limiting access to information and experience required to effectively participate in public processes. Efforts are needed to target diverse

audiences through education and outreach, and issues around primary language must be addressed as well.

Topic 2. The composition of decision-making bodies such as advisory committees, commissions, and study groups is often not representative of minority and low income groups.
Concern was expressed regarding the lack of agency guidelines to assure consideration of minority and low income representation on citizen advisory committees.

> *"Advisory committees are almost universally caucasian, middle to upper class, suburban, and educated...Are we to assume the caucasian, educated, middle to upper class advisory committee will always benevolently look after the interests of the more unfortunate... All the policy making and decisions come from one somewhat public-interested/somewhat self-interested group."*
>
> — DEQ staffperson

Topic 3. Communities need information in order to influence the environmental decision-making process.
Lack of knowledge limits the rate at which low income and minority groups can "get up to speed" on all of the aspects of environmental issues and reduces their effectiveness in proceedings where technical issues play a central role.

Topic 4. Distribution of information on household hazards such as lead, radon and asbestos is usually directed towards homeowners, and rarely towards renters.
The channels through which homeowners may receive information on household hazards such as contractors or stores that sell remodeling materials are not generally accessed by renters, who are often low income.

Building Bridges
Any effective communication process must involve all parties with an interest or stake in the issue at hand. Ironically, the groups, such as the poor and minority groups, who may be at most risk may also be the most difficult to reach. It is imperative, therefore, that Oregon's natural resource agencies devote time and energy to the slow, hard work of making connections with other legitimate and representative groups. Enlisting the help of organizations that have credibility with communities facilitates two-way communication, particularly so with low income and minority communities where people may perceive government to be disinterested in their concerns.

For example, Portland is home to many refugees who come from countries where there are no environmental quality controls or education on the environment. This lack of environmental awareness, coupled with a distrust for government in general may exacerbate these groups' vulnerability to pollution. Suggestions on effective communication mechanisms from individuals who work in the refugee communities include engaging the various refugee organizations as information channels, as well as direct agency contact with community members through

informal discussion groups.

Service organizations could also assist natural resource agencies in efforts to develop lists of individuals who represent minority and low income interests and are interested in serving on citizen advisory committees.

Committee Recommendations

Recommendation 2-1

Identify organizations with established channels for reaching minority and low income communities or that work in the communities of concern, and utilize their communication and outreach endeavors to address environmental issues. Such organizations include but are not limited to:

- Oregon Health Division's Office of Multicultural Health
- Ethnic community organizations
- Community action programs
- Migrant farmworker health clinics (six statewide)
- County health departments
- Migrant Education network
- Oregon Legal Services offices
- Tribal organizations

Recommendation 2-2

Target educational and outreach efforts to diverse audiences: address primary language, education levels, and cultural implications.

Recommendation 2-3

Ensure that agencies work with the public school system to provide students with educational and informational materials on environmental issues.

Recommendation 2-4

Maintain a log of bilingual state employees or community members who can be called upon for assistance in communication with members of diverse communities.

Recommendation 2-5

Require permit applicants to provide contact and information to residents in an affected area.

Recommendation 2-6

Develop a state policy to facilitate public access by low income and minority groups to state agency records regarding environmental regulations.

Recommendation 2-7

Develop an inventory of meeting facilities around the state that meet the American

Disability Act requirements.

Recommendation 2-8

Develop an interagency information referral service for the natural resource agencies to answer environmentally related questions of concerned citizens.

Recommendation 2-9

Direct information on environmental concerns to renters or property occupants, as well as homeowners.

Chapter 3. Exposure to Water Pollution

Issue: Minority and low income groups may be unduly exposed to water pollution due to their dietary, cultural, and recreational practices.

Directive

Agencies are to evaluate their policies and actions related to water pollution to assure that they include environmental equity considerations.

The Committee's meeting on exposure to water pollution focused on the issue of fish consumption as a pathway for exposure for groups who eat more fish than the general population. Other issues raised related to water quality affecting tribal treaty fishing, fish populations and habitat.

"The problems of environmental equity relative to fish consumption are secondary if instream environmental parameters needed for salmonids and other indigenous species are violated and fish populations decline below harvestable levels."

— Confederated Tribes of Warm Springs natural resources staff

The Committee heard concerns about the potential for spiritual deprivation of certain cultures, specifically Native American, due to habitat depletion and the resultant loss of fish species and plants that are essential to native religions.

Issue Topics and Discussion

Topic 1. The risks to Native Americans and other minority groups who consume greater amounts of fish for dietary exposure to toxic chemicals:
Fish is not just a primary food source for tribal members, it is essential to the tribes' cultural, economic and spiritual well-being. The Columbia River Intertribal Fish Commission's (CRITFC) survey of the fish consumption habits of the Umatilla, Nez Perce, Yakima and Warm Springs Tribes of the Columbia River basin suggest that EPA's ambient water quality criteria and state adopted water quality standards for the Columbia River basin based on a consumption rate of 6.5 grams per day may not be sufficient to protect Native Americans living in the basin.

"The rates of tribal members' consumption across sexes, age groups, persons who live on vs. off-reservation, nursing mothers, fishers and non-fishers are from 6 to 11 times higher than the 6.5 grams per day estimate used by U.S. EPA in developing human health based water quality criteria for toxics."

— Columbia River Intertribal Fish Commission

Issues were raised as to whether low income and minority groups, primarily African and Asian Americans, who used Columbia Slough for subsistence and recreational fishing were unduly exposed to water pollution. Awareness of these issues was heightened when Northwest

Environmental Advocates, a local environmental interest group, posted multi-lingual warning signs along this Portland waterway, which is undergoing an investigation of sediment contamination from decades of untreated sewage, industrial waste and agricultural runoff. Fishing in the Columbia Slough is attractive to the city's refugee communities for cultural and economic reasons.

"Catching fish is a very common practice in many Asian countries...Asian people see anything from the sea as safe...If it looks clean, it is clean."

— Sponsors Organized to Assist Refugees (SOAR)

"You have low-income people who are not fishing for recreation or for fun, but for their sustenance...(Their view is) 'If I have nothing else to eat, I'm going to eat (what I catch); and whether I do or I don't, I'm going to die anyway.'"

— International Refugee Center of Oregon (IRCO)

Topic 2. Communication among federal, state, and county agencies with regard to water quality and water quantity issues:
Concern was expressed that many water quality and water quantity problems have existed for a long time and that improved interagency coordination of similar efforts is necessary.

"Coordination with other state and federal agencies on water quality issues is inadequate. (There is) an inadequate amount of sampling sites to enforce state water quality standards. If DEQ cannot increase the sampling sites, it needs to coordinate with Federal, state and county agencies that are currently collecting water quality data. Further, if data from other agencies is not in a form that DEQ can utilize, then DEQ needs to generate collection protocol."

— Confederated Tribes of Warm Springs natural resources staff

Agency staff pointed out that DEQ's statewide sampling program is comprised of 145 permanent sampling stations, which accounts for only 4,500 of the 145,000 miles of streams statewide. Accordingly, DEQ does coordinate data collection with other agencies such as the U.S. Geological Service and the Bureau of Reclamation; however, care must be taken as to how other agencies conduct the sampling and the approach taken before the data can be used.

Witnesses also commented on the need to implement existing Memoranda of Understanding (MOUs) developed by Bureau of Land Management, U.S. Forestry Service, and DEQ to address water-quality limited reaches in Eastern Oregon. Agency staff explained that such agreements are exactly that, which means that DEQ cannot require cooperation since it has no enforcement powers over federal agencies. The Committee discussed the possibility of creating an external entity within the state's natural resources structure to see that such agreements are carried out.

Topic 3. The level of water quality protection in Eastern Oregon versus Western Oregon:
Witnesses expressed concern that the level of priority given to water quality protection of water bodies westside is higher than that given to water bodies in eastern Oregon. For example, witnesses contend that much of the water pollution eastside is from nonpoint sources, yet DEQ's enforcement of state standards does little to correct nonpoint source pollution.

Nonpoint source pollution refers to water contaminants that cannot be traced to a specific point

of origin. Rather, they come from non-specific sources such as agricultural, urban, construction, or forestry runoff. Nonpoint sources of pollution are not regulated through permits, as point sources are; therefore, it is possible for a nonpoint source to violate water quality standards without enforcement action being taken. Agency staff also pointed out, however, that the Forest Practices Act now requires forestry operations to meet DEQ water quality standards, which demonstrates that regulation of nonpoint source pollution is possible.

Topic 4. The sufficiency of water quality enforcement to support fish populations and habitat:
Committee members heard testimony on how inadequate enforcement of current water quality standards such as those for temperature and instream sediment can result in the lack of protection of cold-water indigenous aquatic species and is detrimental to spawning:

"Juvenile spring chinook production in the Middle Fork of the John Day has been greatly limited due to lethal instream temperatures. Further, the loss of spring chinook adults and habitat have occurred in the John Day system due to temperature."

— Confederated Tribes of Warm Springs natural resources staff

Witnesses also pointed out that stream sediment is high in many portions of the John Day, Hood and Crooked subbasins. The decline of fish populations has direct impact on tribal subsistence and ceremonial fishing.

Topic 5. Rural community exposure to water pollution from domestic wells:
Approximately 500,000 rural residents rely on groundwater through domestic wells. Unless they are connected to four or more households, residential wells do not fit the Health Division's public water system criteria and, therefore, are not required to be tested for contamination. Since they are not required to have their systems tested, rural residents who may be impacted from water pollution through their well system may be unknowingly creating problems such as from faulty well construction or well operation and maintenance.

Agency staff described the Home•A•Syst program which is offered by the Oregon State Extension Service and is a voluntary program designed to help rural residents protect, maintain, and improve their groundwater quality.

Concern was also expressed about the appropriate monitoring of sewage and well problems in low-income housing. Concern was particularly directed toward farmworkers and their families who live in on-site housing or reside in low-income housing off-site.

Committee Recommendations

Recommendation 3-1
Improve state efforts to collect data on and provide information to groups who consume greater amounts of fish and other aquatic species than the general population.

Examples of how natural resource agencies can implement this recommendation include:
1. Coordinate data collection efforts to provide population profiles that would help identify

the most sensitive population, and then develop risk assessment and risk management strategies accordingly.

2. Incorporate community-based, culturally sensitive programs to receive public input from and to educate potentially impacted populations.

3. Devise better ways for communicating with illiterate populations and with those who are non-English-speaking.

Recommendation 3-2

Improve coordination by natural resource agencies on water quality and water quantity issues and the availability of data to help ensure consistency of subsequent policy implementation statewide.

Examples of how this recommendation can be implemented include:

1. DEQ would better coordinate with federal, state, and county agencies that are currently collecting water quality data.

2. DEQ would develop water quality measuring protocol if data from other agencies is not in a format the Department can readily use.

3. A citizen involvement mechanism for state and federal natural resource agencies would be formed to help ensure implementation of collective agreements among agencies such as Memoranda of Understanding (MOUs).

Recommendation 3-3

Ensure that the level of water quality protection is consistent statewide.

Examples of how the state can implement this recommendation include:

1. Strengthen the state's nonpoint source program to address agricultural, forestry, and construction practices.

2. Prioritize the implementation of a groundwater management program that includes monitoring, regulation and assessment of the cumulative negative effects of nutrients, pesticides and other contaminants in groundwater.

3. Enforce compliance on temperature and instream sediment standards to better protect fish populations and habitat.

Recommendation 3-4

Continue to keep rural communities informed about potential water pollution exposure from residential wells.

Examples of how the state can implement this recommendation include:

1. Continue to educate rural communities on groundwater quality, with a specific focus on minority and low income groups. These efforts would include public forums on groundwater quality and such topics as well construction and septic systems.

2. Encourage voluntary efforts at monitoring groundwater quality in rural areas.

3. Continue to promote efforts to help homeowners assess potential risks to their own water supply.

4. Require local jurisdictions to aggressively pursue sewage/well problems in low-income housing.

5. Require that inspection of residential wells which are used in conjunction with farmworker housing include monitoring for chemical content as well as for potability.

Chapter 4. Farmworker Exposure to Pesticides

Issue: Concern expressed over whether agricultural workers and their families are provided adequate protection from pesticide exposure.

Directive

Agencies are to incorporate environmental equity ethics into policies and actions related to the regulation of pesticides to assure that farmworkers are adequately protected both on the job and in their living spaces.

Farmworker advocates have long voiced serious concerns about the hazards of pesticide exposures for farmworkers and their families. The meetings at Woodburn and Hood River were held primarily to hear these concerns. Both meetings were well-attended by farmworker advocates, farmworkers, and growers. One witness at Hood River pointed out the need for more meetings of this nature.

"Groups (such as this Committee) can serve as intermediaries and facilitators to help bring concerned parties together where discussion was polarized before."

— La Familia Sana

Worker Protection Standard

January 1, 1995 is the effective date of EPA's new Worker Protection Standard which covers both workers in areas treated with pesticides, and employees who handle (mix, load, apply, etc.) pesticides for use in these areas. The Worker Protection Standard features requirements for such working conditions as training, decontamination, duties related to personal protective equipment, general notification, and emergency assistance.

ODA has the primary responsibility for enforcing the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). Since Oregon OSHA already enforces other worker protection rules, it has entered into a cooperative agreement under which Oregon OSHA will enforce the Worker Protection portion of the EPA rules. The ODA will continue to be responsible for the enforcement of the labeling portion of the rules.[10]

Issue Topics and Discussion

Topic 1. The need for more research and data on the health effects of pesticide exposure: The Committee heard testimony from individuals who personally experienced the health effects of pesticide exposure, such as skin and eye irritations, even though precaution was taken against exposure. The Committee also heard from individuals whose families have been farming for

[10] OR-OSHA. (1993). OR-OSHA Adopts EPA's Worker Protection Standard For Agricultural Pesticides Into Div. 81. Salem, OR

generations and who have not experienced any effects from being exposed to pesticides. Farmworkers, farmworker advocates, health care providers, and growers share a common concern for the lack of research and data on the health risks from pesticide exposure, however. Witnesses spoke to the meager research attention given to this issue.

"It's really easy for people to argue that it's really not the pesticides (that cause problems), and it's really easy to argue that it is the pesticides, but everybody's arguing off the top of their head because there is no real data."

— La Clinica del Carino

"Existing studies are sporadic, incomplete and it is difficult to draw conclusions from them in a convincing way so as to form policy."

— La Familia Sana

Information on pesticide poisonings is particularly important for health care providers, who often fail to recognize cases of poisoning. Witnesses at both meetings pointed out that this is in part the reason for the lack of documented cases of pesticide poisoning. The Oregon Health Science University does offer continuing medical education to healthcare providers who want training on pesticide-related illnesses. The problem, however, lies in the difficulty of structuring training since it is based on what pesticides are used, when and where. Particular areas grow particular crops that require particular combinations of pesticides. In addition, training is for acute exposure only; training on cumulative, chronic exposures is not provided because research data is not available.

A related concern was that the target for education on pesticides must extend beyond health care providers.

"County health personnel and elected officials responsible for county budgets and priorities also need to learn about what is known and not known about pesticide exposure. Farmers also need more information on pesticides, and not from chemical representatives but from a neutral party."

— La Familia Sana

The need for a strong research agenda on the health effects of pesticide exposure is shared by all parties involved. Indeed, information on the risks from pesticide exposure effects should be viewed as a way to bring together the involved groups toward the common goal of good community health.

"If we are able to work from the same set of data and same knowledge base, we will find more common ground for progress."

— La Familia Sana

Topic 2. The relationship between pesticides and the farmworker's housing, employment and welfare:

An overarching issue is the linkage between economic needs and the farmworker's actions or inactions regarding pesticides. When the new worker protection standards go into effect in January 1995, farmers will be required within 24 hours of spraying, to provide notice of the

application both orally and through the posting of signs.[11] Employers are currently required to provide information on pesticide application to their workers and to medical providers upon request. These requirements notwithstanding, farmworker advocates spoke to the reluctance on the part of farmworkers to come forward and ask for or provide information.

"Dealing with pesticides visits difficult choices on farmworkers, with the most difficult choice being taking action on pesticides because jobs, housing and their families' welfare are on the line."

— Pineiros y Campesinos Unidos del Noroeste (PCUN)

"Farmworkers are reluctant to turn a grower in if they don't post (warning signs) or if they don't tell people to get out because they are going to spray, because you'd lose your job, and not only do you lose your job, you lose your home...your home and your job go together."

— La Clinica del Carino

Further, it was pointed out that farmworkers are not unconcerned about or unaware of pesticide exposure. However, many of them are undocumented and are reluctant to make complaints for fear of reprisals. As described by a PCUN representative at the Woodburn meeting, "This perceived threat is a form of control over the undocumented worker."

To address this linkage, then, there must be ways to assure that workers can request information on pesticide application and provide information on pesticide use and misuse without fear of reprisal. While government regulations are supposed to provide this assurance, the Committee discussed additional mechanisms. One way is by anonymous reporting and providing ways to protect the privacy of workers who report pesticide misuse or rule infractions. For example, it was pointed out that the Pesticide Analytical and Response Center (PARC) is an interagency consortium that reviews and addresses incidents of pesticide exposure to humans and wildlife. Viewing PARC as one avenue through which incidents of pesticide exposure are made known, it was suggested that PARC be examined to assure that reports can be made while protecting the identity of the affected individual. It was also pointed out that any examination of PARC would need to factor in abilities and limitations of each member agency regarding anonymous reporting. For example, ODA has limited authority to keep records in an investigation confidential; while OHD and OSHA have specific statutory authority to protect the identity of the individual in certain circumstances.

A collective bargaining agreement between farmers and their employees was offered as another way to provide this assurance. Farmworkers currently do not have bargaining rights in Oregon. A collective bargaining agreement would cover all workplace issues, including pesticides. Such an agreement would not only enforce minimum wage requirements for farmworkers, but could also allow for the release of information regarding pesticide exposure and risk to a third party in order to protect the privacy of the farmworker.

A representative from PCUN, (Northwest Treeplanters and Farmworkers United), described the relationship between farmworkers and growers as an "imbalance of power" and discussed how

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[11] 40 CFR 170.120 Worker Protection Standard: Notice of applications.

collective bargaining would address this imbalance.

"...When farmworkers on the ground have the ability and the power to raise issues and not be retaliated against for raising these issues and can discuss them at the bargaining table between growers and farmers, things will change..."

— PCUN

Topic 3. The effect of re-entry requirements on-site residents:
Many more pesticides have been re-registered over the past few years as "restricted-use" pesticides. Under the upcoming Worker Protection Standard, such pesticides would require "re-entry" times; that is, the period of time that must elapse between the application of a pesticide and re-entry by humans into the treated area[12]. Re-entry periods can last anywhere from 24 to 48 hours. Spraying often affects contiguous on-site housing for farmworkers.

The re-entry provision is designed to protect all parties; however, growers, workers, and farmworker advocates alike expressed concern about the burden this requirement would place on workers and their families:

"Workers are not in the position to go to a motel or to stay with other families or to do other things to remove themselves from the orchard... when re-entry times are enforced, what we'll have are folks living in their cars, living under bridges, living in parks, living on the orchards...it's hard to know what's more dangerous, is it exposure to pesticides or having to live out in the street?"

— La Clinica del Carino

The Committee heard from growers, who are faced with the difficulty of sustaining their business, having to comply with numerous regulations and trying to provide housing for their employees. Growers at the Hood River meeting attested that, faced with the re-entry requirement, farmers will choose to either comply with the requirement or avoid compliance by closing their on-site housing. Either way, this choice presents a no-win situation for their employees:

"If I'm required to deal with more regulations and to expose myself to myriad legislation, I would choose not to do that...I would close my housing rather than expose myself to litigation. But I would not like to have to make that choice..."

— Hood River farmer

Given the choices the upcoming re-entry requirements present to farmers and their workers, support for low-cost housing in communities is critical.

"...Until there is an alternative for them in terms of off-farm housing...the hardships for the people who work for us would be very great..."

— Hood River farmer

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12 40 CFR 170.112 Worker Protection Standard: Entry restrictions.

Topic 4. The adequacy of existing efforts to foster two-way communication with farmworkers:

The new Worker Protection Standards will require that information such as warning signs and brochures be written in Spanish as well as English. The issues around communication for farmworkers are two-fold: how the information is conveyed and by whom the information is conveyed. Witnesses spoke to the need for information in the workers' primary language and at the appropriate literacy level, and that agencies go through channels that farmworkers trust and that are familiar. For example, La Familia Sana is an organization that trains members of the community as lay health promoters. It was pointed out that lay health promoters are excellent educators on health and safety issues because many of them had been farmworkers themselves.

Topic 5. The use of alternatives to traditional pesticide use:
Several witnesses spoke to the need for alternatives to traditional pesticide use in agriculture. Suggestions ranged from reducing the potency of chemicals currently in use to exploring sustainable agriculture, which involves alternatives such as integrated pest management and the use of organic pesticides. Growers at the Hood River meeting pointed out that the success of sustainable agriculture would depend on whether it is economically supported by the marketplace. Not only would stronger consumer demand be necessary, but a potentially greater cost must be offset by a higher rate of return before growers would be willing to convert to alternative methods. Growers suggested that research into technologies geared to more localized rather than broad methods of application be explored.

Committee Recommendations

Recommendation 4-1
Explore innovative methods of providing information to and improving communication with farmworkers and their families on pesticide exposure.

Examples of how the state would implement this recommendation include:

1. The state would enlist the help of radio stations, churches and organizations that have direct contact with farmworkers to facilitate two-way communication.

2. Education efforts must not only target workers' primary language but also their literacy level.

3. The state would disseminate information on pesticide exposure through schools.

Recommendation 4-2
Address the linkage between the economic needs of workers and failure to report or pursue pesticide use infractions.

Examples of how this recommendation would be implemented include the following:

1. The state would provide a forum for discussions on pesticide use in agriculture, which would include input from all parties involved, including farmworkers.

2. Legislation would be developed on collective bargaining rights for farmworkers.

3. The Pesticide Analytical and Response Center (PARC, housed within OHD) would be examined to improve its effectiveness as a mechanism to facilitate reporting of pesticide misuse or exposure while protecting the identity of the affected individual.

Recommendation 4-3
Expand efforts to conduct research on the health effects of pesticide exposure.

Examples of how the state can implement this recommendation include:
1. Develop and implement a strong research agenda on pesticide exposure.

2. Emphasize the importance of ongoing efforts to train and educate health care providers on the identification and treatment of pesticide-related illnesses; increase funding of such efforts.

3. Explore ways to track the medical histories of farmworkers and their families.

Recommendation 4-4
Expand educational efforts on pesticide-related issues to be more inclusive of all parties involved.

Examples of how this recommendation can be implemented include:
1. The educational forum would include farmworkers, health care workers, county health officials, community leaders and farmers; moreover, efforts should be conducted by a third party, rather than by chemical companies.

2. A public interest campaign would be conducted to raise community consciousness regarding farmworker issues, including information on the effects of pesticides on the general public.

Recommendation 4-5
Encourage affordable housing initiatives as opportunities to give farmworkers and families alternatives to living on-site, as well as to facilitate their access to community resources.

Recommendation 4-6
Encourage alternatives to traditional pesticide use.

Examples of how the state can implement this recommendation include:
1. Continue to conduct research to further organic farming practices.

2. Provide a financial incentive for decreased pesticide use.

3. Explore funding for more effective technology, such as for shrouder sprayers.

Chapter 5. Exposure To Household Pollution

Issue: Minority and low income groups may be more vulnerable to exposure to household pollutants such as lead, radon, and asbestos because of where they live and also because they may be less aware of environmental hazards compared to other segments of the population.

Directive

Agencies are to evaluate their policies and actions related to household pollutants to assure that they protect all groups in the state's population.

Issue Topics and Discussion

Agency staff and community service providers who were present at the Committee's meeting on this issue area discussed the following issues:

Topic 1. Lead exposure: All children in inner cities have greater risk for exposure. However, poor and minority children who are already disadvantaged by other factors are particularly vulnerable to lead poisoning.

A number of studies indicate that lead poisoning can cause irreparable damage in children, which is manifested by symptoms such as behavioral problems, lowering of IQ points, and possible increased risk of dropping out of school in later years. Blood lead levels must be reported to the Oregon Health Division at 10 micrograms per deciliter. This level is set by the Centers for Disease Control, which lowered the level from 25 mg/dl in 1991.

The removal of lead from gasoline has been the single greatest contributing factor in lowering blood lead levels in the entire population. The greatest source now is lead-based paint, which children either breath in through dust or ingest from paint chips or through normal hand-to-mouth activity[13]. The risk for lead exposure is exacerbated in homes built before 1978, after which the lead content of paint was drastically reduced, or homes in which recent remodeling or renovation have taken place. Poor and minority children may be unduly exposed to soil contaminated by lead because lower income and minority groups tend to be more heavily concentrated in older urban areas. This also increases the likelihood of introducing lead through interior house dust.

Consumer products such as traditional medicines, cosmetics, and foods are also likely to affect specific ethnic groups. Certain traditional medicines used by southeast Asians have been found to contain very high levels of lead. Other sources of lead exposure include eating out of ceramic pottery or dinnerware from another country, parents who are involved in lead-related occupations or hobbies such as working with stained or leaded glass.

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[13] SCHWARTZ, J., LEVIN, R. (1992). "Lead: Example of the Job Ahead." EPA Journal. March/April. 175N-92-001.

Oregon's Childhood Lead Poisoning Prevention Project (OCLPPP) began in July 1992 with the mission to screen and test for lead in children's blood, determine the extent of childhood lead poisoning in the state, identify and provide help for lead poisoned children, educate the public about lead hazards, and prevent future lead poisoning. OCLPPP activities are underway in Deschutes, Jackson, Marion, and Multnomah counties. Data also includes that of children under Medicaid, who are now required to have their blood levels tested. OHD is gathering data on all childhood blood lead tests done in the state to help public officials map out the best strategy for dealing with childhood lead poisoning in Oregon.

Of the 1700 children who were screened in 1993, 5.4% had elevated blood levels and approximately 20 children needed medical and environmental follow-up. OCLPPP found that Hispanic and African-American children are two to three times more likely to have elevated blood levels. Southeast Asian children do not appear to have high blood levels, and there is some uncertainty as to whether test data exists in quantities sufficient to effectively assess the issue for this population.

A major challenge for OCLPPP and OHD is how to appropriately communicate lead hazards to communities in ways that they can understand and will find useful. Language issues must be addressed, as well as cultural implications, such as the fact that blood lead tests require the drawing of blood, which is forbidden in some cultures. There is also concern for residents of rental homes where the owner does not wish to abate once lead exposure is identified.

OCLPPP's Director discussed efforts by the Project's Housing and Environmental Issues Committee to develop lead legislation for the state. This legislation may include requirements for lead notification, inspector certification and lead abatement activities. Certification legislation is necessary for Oregon to be eligible for U.S. Housing and Urban Development grants. These monies could be used by eligible states to conduct lead-based paint hazard reduction and abatement activities in low income privately owned housing, both owner-occupied and rental, built before 1978.

Topic 2. <u>Asbestos exposure</u>: Concern about efforts to inform managers and residents of public housing as well as low income homeowners of the hazards related asbestos exposure.

Asbestos refers to a group of naturally occurring minerals that separate into strong, very fine fibers. These fibers are heat resistant and extremely durable, qualities which make asbestos useful in construction and industry. In the home, asbestos may or may not pose a health hazard depending on its condition. Only when material is considered friable, that is, easily crumbled or pulverized, can fibers be released and pose a health risk.

Asbestos tends to break down into a dust of microscopic fibers which remain suspended in air for long periods of time and can easily penetrate body tissues after being inhaled or ingested. Because of their durability, these fibers can remain in the body for many years and thereby become the cause of asbestos-related diseases. Because there is no known safe level of asbestos exposure, exposure to friable asbestos should be avoided.

Asbestos can be commonly found in older homes in pipe and furnace insulation materials, asbestos shingles, millboard, floor tiles, ceiling materials and in textured paints and other coating

materials. However, asbestos does not pose a problem unless the material is disturbed somehow. As long as the surface is stable and well-sealed against the release of fibers and is not damaged, the asbestos is considered safe.[14].

The major concern was whether minority and low income communities are adequately informed of the hazards associated with asbestos exposure. Renters do not have as many access points to information on asbestos as homeowners have. Rather, renters usually discover an asbestos problem from a repairperson. However, no laws exist that require contractors to report an asbestos problem if they find one in an apartment complex, though landlords should be required to do so in order to comply with landlord tenant laws. DEQ has worked with the Department of Housing and Community Services in the past to distribute information on asbestos.

DEQ allows owner-occupants of single family dwellings to conduct removal of asbestos, recognizing that not all homeowners can afford to hire an abatement contractor. It was recommended that information on safe removal of asbestos be directed toward low-income homeowners.

Topic 3. <u>Radon exposure</u>: Need for awareness of low-income and minority groups who live in areas with high potential for risk exposure.

Radon gas is a naturally occurring form of radiation exposure that is heavier than air and, as such, is generally found in basements. The most common source of indoor radon is uranium in the soil or rock on which homes are built. In a 1987 EPA ranking of the most significant environmental issues, indoor radon ranked first, tied with worker exposure to chemicals. EPA estimates that about 5,000 to 20,000 lung cancer cases a year may be attributed to radon[15].

As with asbestos, the concern was expressed that the state's efforts to make low income and minority groups aware of the hazards related to radon, and what can be done to mitigate exposure, are not sufficient. OHD's Radiation Control program performs radon investigations and provides information on how to lower radon exposure upon request. However, information materials are directed towards homeowners, whereas low income people tend to rent rather than own their homes. Low income people may be even more vulnerable because rental units at basement level, where radon levels are likely to be highest, are the least expensive.

Witnesses also expressed the need for renters to have information on how they can deal with managers who refuse to test for radon, as well as what renters can do if they test for radon themselves and find elevated levels. Incentives for managers to test for and mitigate radon exposure were also discussed.

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14 U.S. EPA. 1992. Asbestos In the Home: A Homeowner's Guide. Seattle, WA.

15 U.S. EPA. 1988. The Inside Story: A Guide to Indoor Air Quality. EPA/400/1-88/004. Washington, D.C.

Committee Recommendation

Committee Recommendation 5-1

Improve efforts to educate minority and low income groups on the potential hazards related to the household pollutants of lead, radon, and asbestos.

Examples of how the state can implement this recommendation include:

1. Continue to distribute lead poisoning prevention materials through the county health system, a major source of health-related information for lower income groups.

2. Explore culturally sensitive ways to encourage communities to have their children's lead exposure level tested.

3. Encourage efforts by the Oregon Health Division's Housing and Environmental Issues Committee to develop enabling legislation on lead hazards.

4. Gear information on radon exposure toward renters and owners/managers of apartments and public housing as well as homeowners.

5. Continue to promote the testing and mitigation of radon exposure using television, radio and printed media.

6. Enhance efforts to provide homeowners with information on the correct procedures to use so that asbestos removal can be accomplished with the least amount of exposure to the occupants.

7. Explore opportunities for grants to include education for renters and landlords as well as homeowners on asbestos fiber exposure.

8. Coordinate DEQ's and the Department of Housing and Community Services' efforts to distribute information on asbestos exposure.

Chapter 6. Land Use Siting of Facilities

Issue: Concern expressed about the siting of industrial waste and other permitted facilities in or near areas that are largely minority and/or low income.

Directive

State and local agencies are to incorporate environmental equity ethics into their procedures for the siting and review of permitted facilities.

Oregon's Land Use Siting Process

The Department of Land Conservation and Development and DEQ staff briefed the Committee on the authorities related to siting decisions for facilities in Oregon. Cities and counties are responsible for the land use approval and siting of industrial and all other land uses. State law requires each city and county to have a comprehensive plan, which is the controlling document for land use in the area covered by that plan. In turn, these local plans must be consistent with Oregon's statewide planning goals, which are state policies on land use, resource management, economic development, and citizen involvement. DLCD oversees the state's land use program and reviews amendments to and oversees periodic updates of the local land use plans.

DEQ has authorities regarding the pollution or emissions from sources rather than the siting authority itself. DEQ rules require that a local government must act upon a land use compatibility statement before DEQ can process and issue air, water, solid waste disposal, or hazardous waste permits. This process ensures that all issues regarding the appropriateness of the proposed land use are identified and resolved before the permitting process begins. When requested by the local government, DEQ staff provide technical assistance as to the perceived risk of a proposed facility.

Specific to hazardous waste, new treatment and disposal facilities must meet DEQ siting criteria in addition to local land use criteria in order to ensure public health and safety. This law was created in response to opposition to proposals to locate a PCB incinerator outside Arlington, a town in northeast Oregon. DEQ staff pointed out that since the law's creation in 1985, no such facilities have applied to locate anywhere in the state.

Issue Topics and Discussion

At the Committee's July 13 meeting in Portland, Committee members and attendees discussed the following issues:

Topic 1. Local zoning trends that lead to the concentration of industries and resultant pollution in North/Northeast Portland.
Priorities in local zoning such as the granting of grandfather rights to prior uses often results in the location of incompatible uses in the area's lower income and minority residential

neighborhoods. Grandfather clauses allow existing uses, such as commercial and industrial, within an area to continue when zoning for the area is changed. An example of this trend was provided at the Committee's July 13 meeting by a citizen who spoke of a proposal to locate a plating company in a former battery plant in a predominantly minority Northeast Portland neighborhood. This neighborhood had previously been zoned for industrial use, then rezoned residential. Because the battery plant had been operating until very recently, the grandfather rights for industrial use applied to this site, allowing for the location of the plating company in a residential community.

"...Plating companies regularly handle very toxic substances and it is very rare for them to be located adjacent to a residential area, let alone in the middle of one. A lot of sites like these are in predominantly minority communities...the Eliot Neighborhood is a predominantly minority community."

— Eliot Neighborhood Association

The Committee discussed how local governments should develop more aggressive regulations that control the siting of such hazardous material-related uses. An example would be to require that grandfathered rights be revisited when zoning is changed from industrial/commercial to residential use.

Local governments do use neutral standards and criteria to site facilities. These focus on such issues as adverse environmental impact, nuisance issues (noise, odors) and impact on traffic circulation, regardless of community makeup. While these standards should have the effect of making facilities as acceptable to the community as possible, they do not avoid the aggregation of facilities such as landfills and hazardous waste sites in any one community. No affirmative requirements exist to avoid overloading these facilities in any one community. The Committee discussed how local zoning codes should regulate the number of businesses that use hazardous materials so as to reduce the aggregate off-site impact of these facilities. State and local governments should also improve coordination on the siting of such facilities, such as through increased technical assistance from the State to local governments on the environmental regulations that apply to a proposed facility.

Topic 2. The adequacy of current citizen participation mechanisms:
Land use decisions are often a struggle between the need for the facilities and appropriate siting. The concern is that the potentially affected communities, often low-income and minority neighborhoods, may not have input into these decisions. In accordance with Goal 1 of the state's planning program, every city and county has a special committee to monitor and encourage active citizen participation in planning. In addition, all cities and counties have a hearing process that relates to their planning and zoning regulations which allows for public input on these matters. However, these citizen involvement mechanisms are not always adequate. Community groups such as Portland's neighborhood associations are often not given sufficient time to receive and act on land use siting information. Furthermore, the makeup of citizen involvement committees often does not include minority or low income representation.

It was agreed that all local governments need to enhance communication with minority and low income groups with respect to land use decisions that could affect their communities. The Committee discussed the effectiveness of amending the statewide planning goal on citizen

participation (Goal 1) to affirmatively require more active communication with low income and minority groups. LCDC requires local governments to review their comprehensive land use plans every four to six years, at which time these governments would review their citizen involvement apparatus to determine the broadness of its outreach. LCDC can issue enforcement orders in cases where it has been verified that a local government has been violating its own land use plan. Citizens can bring petition to LCDC if a local government persistently violates the citizen involvement provisions of its plan.

Committee Recommendations

Recommendation 6-1
Enhance participation of affected communities in land use siting and review processes.

Examples of how the state and local governments can implement this recommendation include:

1. The statewide planning goal on citizen participation (Goal 1) would be amended to include language that affirms more effective communication with minority and low income groups regarding land use issues.

2. Local governments would provide public notice for the siting and review of solid waste facilities and for facilities that use hazardous materials.

Recommendation 6-2
Ensure equity in community development.

Examples of how the state and local governments can implement this recommendation include:

1. The state and local government zoning agencies would improve coordination and/or oversight on the siting of hazardous material-related uses.

2. Local governments would develop more aggressive regulations that control the siting of businesses that use hazardous materials in residential areas.

3. Local zoning codes would regulate the number of businesses that use hazardous materials allowed in one area in order to reduce the off-site impact of these facilities.

Chapter 7. Cleanup of Contaminated Sites

Issue: Concern expressed regarding the state process for the cleanup of contaminated sites.

Directive

State agencies are to ensure that environmental equity ethics are integral to the cleanup of contaminated sites.

DEQ's Cleanup Program

DEQ identifies, evaluates and determines cleanup procedures for sites that are contaminated with hazardous wastes, petroleum products, and other hazardous substances. DEQ's Site Response section works on the highest priority, most seriously contaminated sites in the state. These are known as complex sites and include multiple releases over a large area to the soil, groundwater, air or surface water. DEQ's Voluntary Cleanup section grew of out of requests by prospective property owners and current property owners for assistance with their own environmental cleanup efforts. Though many of the sites involved are simple sites (that is, small releases of a few substances to the area's soil only), the Voluntary Cleanup section has taken on more complex sites as well.

DEQ also maintains and updates its Environmental Cleanup Site Information System (ECSI), which is a list of sites around the state that are or may be contaminated and may require cleanup. DEQ also keeps a Confirmed Release List which includes all facilities with a confirmed release; and an Inventory, which includes facilities with confirmed release which, in addition, DEQ has determined through a preliminary assessment require further investigation, removal, remedial action, or related long-term environmental or institutional controls.
The facilities in the Inventory are ranked based on the long and short-term threats they pose to public health and the environment. Once the nature and extent of contamination at a site has been determined, DEQ notifies the site's owner/operator and the immediate neighborhood as to the preferred option for remedial action. All public comments must be considered before a decision is made.

Issue Topic and Discussion

Topic 1. The adequacy of information on suspected and confirmed releases statewide that is available to the public:
Staff acknowledged that early, meaningful and direct citizen participation can speed cleanups. At the national level, there has been criticism about EPA's willingness and ability to work with communities regarding cleanup efforts. Studies have shown disparities nationwide between white

and minority communities in the cleanup of Superfund sites[16]. Congress is currently debating the reauthorization of Superfund to include such provisions as the creation of citizen information and access offices and community working groups to provide a stronger community voice in cleanup efforts. Currently, technical assistance grants are available to community groups to deal with Superfund sites. This includes assistance on issues such as how the community is affected and how groups can effect the timeliness of the cleanup or how the remedy is selected.

ECSI and Citizens' Right-to-Know

A key step in the state's environmental cleanup process is to identify the contaminated sites. Understanding this, the Committee was particularly interested in ECSI, since it lists all sites to which the State knows there has been a release of contamination or that the State suspects of being contaminated. Citizens have a right to know about hazardous releases to their environment, either suspected or confirmed; therefore, such information should be shared with the affected communities. Efforts have been made in the past to transmit information to local governments as part of their periodic review of their comprehensive land use plans.

However, staff pointed out that while ECSI is available to the public, the list should be used only as an indicator because only those suspected or confirmed sites known to DEQ are included. Concern was expressed for predominantly low-income and/or minority areas that may or may not be contaminated by past practices, such as the Mississippi/Albina Corridor in Northeast Portland where many petrochemical businesses once operated but has been converted for residential use. Indeed, part of the challenge that cleanup efforts present is to assure that the information the State has is complete and accurate. ECSI may not be representative of all sites because no one is required to report to DEQ the past release of hazardous substances on a particular site. Individuals such as private environmental consultants who are contracted by a prospective or current property owner may have such information but are not currently required to share this information with the State. Keeping DEQ's lists updated would help assure that the State is aware of all sites that may warrant cleanup action.

Committee Recommendation

Recommendation 7-1

The State should improve ongoing efforts to update available information on suspected and confirmed hazardous substance release sites.

Examples of how the State can implement this recommendation include:

1. Require any person to report the release or existence of hazardous substances on a particular site to DEQ.

[16] LAVELLE, M. and COYLE, M. (1992). "Unequal Protection: The Racial Divide in Environmental Law." National Law Journal. September 21, 1992.

Appendices

Appendix A

INTEREST GROUP INTERVIEW QUESTIONS

1. What does the term environmental equity mean to you?

2. Do you believe that environmental inequity exist in Oregon? If so, what problems are you aware of?

3. Are there environmental inequity issues that you are concerned with in your community?

4. Do you believe it is the state's responsibility to identify problems of environmental inequity? If so, what problems do you think are best addressed by the state? If not, who should bear the responsibility of addressing environmental inequity?

5. How would you like to see the state address the issue?

6. Who else should we talk to about this issue?

Appendix B

SUMMARY OF POTENTIAL INEQUITY ISSUES IN OREGON
(from agency and interest group/community organization interviews)

- Public participation mechanisms are not accessible enough to minority and low income populations
- Education and information materials are not tailored to various audiences
- Occupational exposure to pesticides
- Housing for farmworkers and their families
- Contamination of soil surrounding farmworker housing
- Dependence on well-water in rural areas versus commercial water source
- Instream water rights process - priority given to fish over drinking water
- Fish consumption issues from Columbia River Slough and other waterways
- Use of "industrial waterways" for recreation
- Differential enforcement of water quality standards - east versus west portions of state
- Human exposure from out-of-compliance sewage treatment plants in small communities
- Portland combined sewer overflow problem economic impacts
- Inability of tribes to pay solid waste disposal fees
- Development siting - North Portland planned for the disadvantaged and "dirty" industries; how landfills and hazardous waste facilities are sited.
- Proximity of residences to freeways
- Exposure from contaminated sites
- "Dirty" military sites
- Radon exposure
- Lead exposure
- Asbestos exposure

Appendix C

INTEREST GROUP INTERVIEW PARTICIPANTS

Community Action Agency - Yamhill County
Charlie Harris, CASA of Oregon (Newburg)
Coquille Economic Development Corporation (Coos Bay)
Confederated Tribes of Coos, Lower Umpqua and Siuslaw
El Programa Hispano of Catholic Community Services (Gresham)
Ecumenical Ministries of Oregon (Portland)
Environmental Response Network (Portland)
La Familia Sana (Hood River)
La Familia Sana (Nyssa)
Lutheran Family Services-Refugee Services (Portland)
National Association of Minority Contractors (Portland)
North Portland Citizens Committee
North Portland Neighborhood Office
Northwest Environmental Advocates (Portland)
Odor Abatement Committee (Portland)
Oregon Environmental Council (Portland)
Oregonians for Food and Shelter (Salem)
Oregon Chicano Concilio (Portland)
Oregon Trout
OSPIRG (Portland)
River City Environmental Resource Network (Portland)
Salud Medical Center (Woodburn)
Confederated Tribes of Siletz Indians
Sponsors Organized to Assist Refugees (SOAR)
Tchinouk Tribe (Klamath Falls)
United Community Action Network (Portland)
Confederated Tribes of Warm Springs

Appendix D

RESOURCES

ANDERSON, Y., COULBERSON, S.L., and PHELPS, J. (1993). "'Environmental Justice:' The Central Role of Research in Establishing a Credible Scientfic Foundation for Informed Decision Making." Toxicology and Industrial Health 9(5): pp. 685-728.

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BULLARD, R. D. (1994). "Overcoming Racism in Environmental Decisionmaking." Environment. May. pp. 12-20, 39-44.

BULLARD, R.D. (1993). Confronting Environmental Racism: Voices from the Grassroots. Boston, MA.

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CLINTON, W. (1994). Executive Order 12898 of February 11, 1994. "Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations."

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U.S. ENVIRONMENTAL PROTECTION AGENCY (U.S. EPA). 1992. Environmental Equity: Reducing Risk for all Communities. EPA/230-R-92-008. Washington, D.C.

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U.S. EPA. 1988. The Inside Story: A Guide to Indoor Air Quality. EPA/400/1-88/004. Washington, D.C.

U.S. GENERAL ACCOUNTING OFFICE (GAO). (1983). Siting of Hazardous Waste Landfills and Their Correlation with Racial and Economic Status of Surrounding Communities.

WEST, P. (1992). "Health Concerns for Fish-Eating Tribes?" EPA Journal. March/April. 175N-92-001.

WGBH (1993) "Earthkeeping: You Can Fight City Hall: Lessons from the Grassroots." Boston, MA. (1 hour)
Features examples of grassroots environmental justice efforts nationwide.

WNET (1992) "Environmental Racism." The MacNeil/Lehrer News Hour. New York, NY. (This segment 10 minutes)
Discusses efforts to prevent the location of a hazardous waste incinerator near Kettleman City, CA, which is not only mostly Latino but is also already host community to a hazardous waste landfill.

Environmental Quality Commission

☐ Rule Adoption Item
☐ Action Item
☒ Information Item

Agenda Item K
February 28, 1997 Meeting

Title:

Portland/Vancouver Ozone Contingency Plan 1996 Exceedance Analysis

Summary:

The Information Item summarizes the ozone exceedances which took place in the Portland area during the summer of 1996. Two of these exceedances occurred at one site (four exceedances in three years at the same monitoring site is a violation), which triggered a contingency measure in the maintenance plan requiring the Department and the Washington Southwest Air Pollution Control Authority to analyze the meteorological conditions associated with the exceedances to see if the maintenance plan control measures are protective enough. The result of this analysis indicates that these conditions were within the acceptable range planned for under the maintenance plan, and that once the control measures in the plan are implemented (starting in 1999) no further exceedances of the standard are expected.

Department Recommendation:

No new control measures are needed for the Portland/Vancouver ozone maintenance plan. However, current efforts to minimize emissions on Clean Air Action days could be increased by expanding the voluntary curtailment program for gasoline barge loading and putting greater emphasis on public education outreach efforts for the years 1997 and 1998.

Report Author | Division Administrator | Director

Accommodations for disabilities are available upon request by contacting the Public Affairs Office at (503)229-5317(voice)/(503)229-6993(TDD).

State of Oregon
Department of Environmental Quality Memorandum

Date: February 7, 1997

To: Environmental Quality Commission

From: Langdon Marsh, Director

Subject: Agenda Item K, February 28, 1997 EQC Meeting

Information Item: Portland/Vancouver Ozone Contingency Plan
1996 Exceedance Analysis

Statement of Purpose

On July 12, 1996, the Environmental Quality Commission (EQC) adopted the Portland/Vancouver Ozone Maintenance Plan. One of the required elements of the maintenance plan is a contingency plan to address future exceedances of the federal ozone air quality standard.

The contingency plan is triggered if two exceedances of the ozone standard occur at the same monitoring site within three years (four exceedances at the same site over three years is a violation of the standard). The contingency plan requires the Department to analyze the meteorological conditions associated with the exceedances and present its findings and recommendations to the EQC within six months after validation of the exceedances (by March 1997).

During the summer of 1996 the ozone standard was exceeded twice at the Milwaukee monitoring site and once at the Carus site. As a result, the Department, in consultation with the Southwest Air Pollution Control Authority (SWAPCA), has prepared the 1996 Portland/Vancouver Ozone Exceedance Analysis as an informational item for this meeting.

Background

The Portland/Vancouver Interstate Air Quality Maintenance Area (AQMA) has met the federal air quality standard for ozone, and is now requesting the Environmental Protection Agency (EPA) to redesignate the area to attainment status. This redesignation request is accompanied by a ten-year ozone maintenance plan adopted in July 1996 after an extensive public process. This plan contains emission reduction strategies affecting all major categories of ozone precursors, and generally represents the most cost-effective approaches.

Historically, ozone levels in the Portland/Vancouver AQMA have declined significantly since the 1970s, when levels were as high as 50 percent over the ozone standard. This improvement

resulted from the implementation of federal and state emission control strategies which have focused primarily on reducing emissions from motor vehicles, gasoline, and industry.

FIGURE 1: VANCOUVER/PORTLAND OZONE TREND

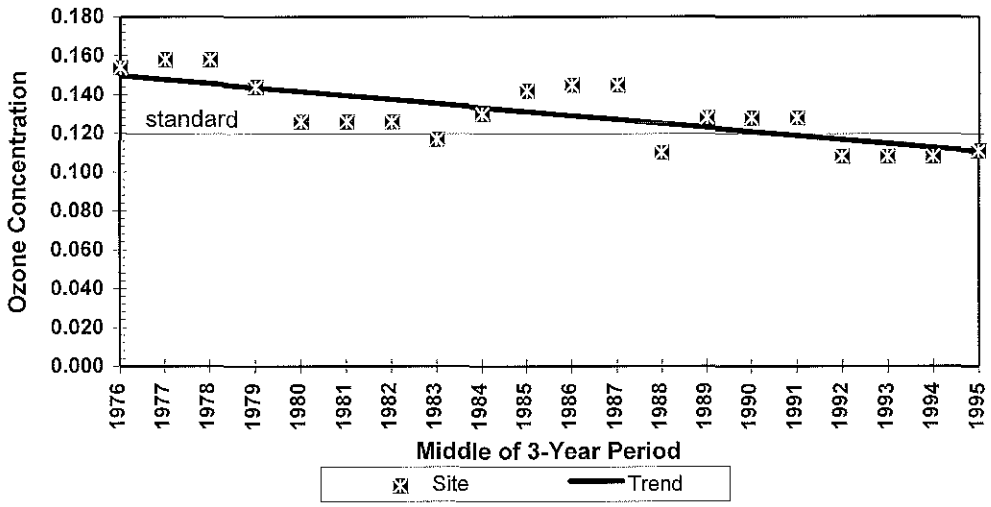


Figure 1 indicates the downward trend in ozone levels since 1976. Each date in this graph represents the middle of a 3-year average, similar to the method for determining compliance with the ozone standard (0.12 ppm). As shown above, the Portland/Vancouver area attained the ozone standard during the 3-year period centered around 1988, but then violated the standard during subsequent 3-year periods until attaining again in the 1991 to 1993 period.

The year-to-year fluctuations in ozone levels as shown in Figure 1, illustrates the influence of weather conditions on ozone formation. Peak ozone levels occur in the Portland/Vancouver AQMA during hot summer days with low wind speeds. Although ozone formation is complex and dependent on a number of factors, high ambient temperatures and ventilation conditions are considered the primary factors triggering ozone episodes or "ozone conducive" days.

The Portland/Vancouver Ozone Maintenance Plan is based on reducing emissions to a level that maintains the ozone standard for a ten-year period, taking into account weather fluctuations. In order to accomplish this goal, the Department analyzed weather fluctuations over the last 20 years, and calculated a maintenance emission level that would ensure that the ozone standard would be met 95 percent of the time, assuming "worst-case" weather fluctuations . Therefore, the emission reduction measures identified in the maintenance plan are based on a 95 percent

confidence level. These control measures are phased-in over time, with most measures fully implemented by 1999 (see Attachment 2).

Of the many ozone control measures contained in the ozone maintenance plan, one of the key elements is the Public Education and Incentive Program and Clean Air Action Day announcements. Summer weather forecasts that indicate the potential for high ozone levels are declared "Clean Air Action Days" by the Department and SWAPCA, and the public is encouraged to participate in various efforts to reduce emissions and avoid exceeding the ozone standard. These include carpooling, taking public transit, and avoiding using gasoline powered lawn equipment. Also during these days, Portland area gas terminals are asked to curtail gasoline barge loading activity between the hours of 2 a.m. to 2 p.m. A more detailed description of this program is provided in Attachment 3.

In addition to the control measures in the plan are commitments to monitor the progress of the emission reductions which occur due to these control measures. Other commitments include conducting a "future study" (with SWAPCA) on the role of volatile organic compounds (VOC) and nitrogen oxides (NOx) in ozone formation in the Portland area. This Ozone Formation Study will incorporate computer modeling to analyze the role that upwind sources may have in influencing ozone formation in the Portland area, as well as re-evaluate the focus of ozone control strategies in reducing both VOC and NOx emissions to determine if one pollutant plays a more active role in ozone formation. In addition, the University of Washington is also conducting a study analyzing the meteorological conditions accompanying high ozone events in the Portland/Vancouver area.

Results of the 1996 Ozone Exceedance Analysis

The Portland/Vancouver Ozone Exceedance Analysis focused on evaluating the meteorological conditions related to the three ozone exceedances (two at one site) in 1996, using the best information available, to determine whether these conditions were within the 95 percent confidence level in the maintenance plan. 1996 meteorological conditions conducive to ozone formation were compared with the weather fluctuations over the last 20 years, similar to the analysis used in the ozone maintenance plan. These meteorological factors were: (1) number of days above 90 degrees F; (2) ventilation index (indicative of air stagnation) on the highest ozone day; (3) wind speed on the highest ozone day; and (4) temperature and ventilation on ozone exceedance days.

A full discussion of this meteorological review is described in Attachment 4. In summary, the meteorological data showed that the summer of 1996, when compared to the last 20 years, had close to the highest number of single days and consecutive days over 90 degrees F. In addition, 1996 ventilation conditions on high ozone days were the worst compared to prior years, and were

contributed to by extremely low wind speeds. These ozone conducive conditions were most apparent on the 1996 exceedance days of July 14, July 26, and August 10, and the days just prior to these exceedances. The meteorological scenario which lead to these ozone exceedances were periods of consecutive +90 degree F days, followed by a significant drop in ventilation on the actual exceedance day, as stagnant weather conditions settled in.

It can be concluded from the analysis that meteorological conditions in 1996 were:

- the predominant cause of the ozone exceedances which occurred;
- about equal to "worst-case" temperature, ventilation, and wind speed conditions over the last 20 years; and
- consistent with the worst-case meteorology used in designing the control measures in the maintenance plan, and therefore within the 95 percent confidence level that assures the Portland area will not violate the ozone standard once control measures are fully implemented beginning in 1999.

In addition to this meteorological evaluation, the Department reviewed ozone-related activities which took place around the 1996 exceedance days to see if any significant contributing sources could be identified. Due to the scope of such a major undertaking and the time constraints in completing this exceedance analysis, the Department was only able to conduct a limited review using best available information. The results of this review showed that there were no major contributions that could be identified from any particular VOC or NOx source, or category of sources.

However, the Department did find that 1996 gasoline barge loading activity may have contributed to the ozone exceedance on August 10, and to a lesser degree to the exceedances on July 14 and July 26 (see Attachment 5). While quantifying the contribution of this barge loading activity is difficult due to the complex nature of ozone formation, there was significant barge loading activity (about 48,000 barrels) which occurred August 9 and likely contributed to the buildup of emissions which created the exceedance the next day. This activity produced an estimated 4 tons of VOC, which are significant daily emissions for a single source if compared to the estimated total of 37 tons per day from all industrial point sources in the Portland area.*

It is important to note that this barge loading activity did not occur during the voluntary curtailment period of 2 a.m. to 2 p.m., but immediately afterwards. This scenario of prior day barge loading

* If the randomness of this activity is considered, as there is the potential for significantly greater future daily emissions than this if several different barge loading operations happen to coincide on the same day.

emissions carrying over to the next day, but not occurring within the voluntary curtailment period, raises some question as to the ability of the 2 a.m. to 2 p.m. curtailment period to protect against potential contributions to ozone exceedances.

Impact of the Proposed Ozone Standard

It should be noted that EPA is currently proposing to replace the existing 1-hour ozone standard of 0.12 parts per million (ppm) with a new 8-hour of 0.08 ppm standard. EPA plans to issue the final ozone standard by June 30, 1997. A preliminary review of historical data recently conducted by the Department showed that if such a standard were presently in place, the Portland/Vancouver area would be out of compliance. However, the Department estimates that the emission reduction strategies contained in the ozone maintenance plan would be sufficient to demonstrate attainment with the proposed standard. Further analysis of the impact of the proposed ozone standard will be made by the Department once the final standard is announced by EPA in June.

Authority of the Commission with Respect to the Issue

The Commission has authority to address this issue under ORS 468.020, 468A.035, and 468A.310(2)

Alternatives and Evaluation

Based on the Department's findings, the Commission can make one or more of the following recommendations:

(1) Develop additional ozone emission reduction measures.

(2) Conduct further studies to determine if additional measures are needed.

(3) Take no action if it is believed no further ozone violations are likely.

The results of the Department's ozone exceedance analysis supports #3 above, as exceptional weather conditions in 1996 were determined to be the predominant cause of the exceedances.

Although no additional control measures are needed, during the interim years of 1997 and 1998 as existing control measures are being implemented, public education outreach efforts could be increased to further minimize emissions on Clean Air Action days to reduce the possibility of exceedances occurring in these two years (see Conclusions below).

Summary of Public Input Opportunity

The contingency plan requires this ozone exceedance analysis to be completed expeditiously (within six months) and presented directly to the EQC. There are no public input provisions associated with this requirement. However, SWAPCA did establish an advisory committee to review this analysis and present its findings/recommendations to the SWAPCA Board of Directors. SWAPCA and this advisory committee is currently working on a report to the SWAPCA Board to be completed by the end of February. The preliminary findings and recommendations from the SWAPCA report are supported by the Department and reflected here in this staff report.

Conclusions

1. While the Department and SWAPCA believe no new control measures are needed, increasing the effectiveness of the Clean Air Action Days during the interim years of 1997 and 1998 would provide a greater level of protection. The following improvements have been identified through discussions between the Department and SWAPCA. Due to the voluntary nature of these efforts, no additional emission reductions were estimated for these improvements.

- Work with Portland area gasoline terminals on expanding the voluntary curtailment period for gas barge loading on Clean Air Action days beyond the 2 a.m. to 2 p.m. time period.
- Through Clean Air Action Day publications, SWAPCA to increase efforts to inform local citizens that ozone is a regional problem, not just a Portland problem, and that their assistance is needed to help reduce emissions.
- DEQ and SWAPCA contact more local businesses on Clean Air Action Days to increase participation in reducing emissions.
- Increase the number of public surveys to evaluate the public attitudes and actions on Clean Air Action days, and modify the public education outreach program if necessary.
- DEQ assist SWAPCA in establishing a lawn mower buy-back program for Clark County similar to the Portland program.
- Work with SWAPCA to identify other possible improvements.

2. Further study will be conducted to better understand the nature of ozone formation in the Portland/Vancouver area, through the DEQ/SWAPCA Ozone Formation Study and the University of Washington Meteorological Study of high ozone events. Upon completion of these studies, DEQ and SWAPCA will assess whether ozone control strategies need to be re-evaluated in light of the information obtained.

Intended Future Actions

Under the contingency plan requirements, should the Commission decide additional control measures are warranted, the Department would have 12 months to develop and present these rules for adoption. Should the Commission decide more study is needed to determine if additional control measures are warranted, the Department would have to establish a timeframe for completion of this study, and presenting its findings to the Commission.

Department Recommendation

The Department recommends that no new additional ozone control measures are needed, and requests the Commission consider whether the improvements identified above should be pursued.

Attachments

The following attachments are included with this Informational Item:

Attachment 1: Contingency Plan Excerpt from the Portland/Vancouver Ozone Maintenance Plan
Attachment 2: List of Maintenance Plan Control Measures and Implementation Dates
Attachment 3: Portland/Vancouver Public Education and Incentive Program
Attachment 4: 1996 Meteorological Factors Conducive to Ozone Formation
Attachment 5: 1996 Gasoline Barge Loading Emission Evaluation

Reference Documents (available upon request)

Draft "Ozone Exceedance Report, Summer 1996", prepared by the Southwest Air Pollution Control Authority, with assistance by the Oregon Department of Environmental Quality. January 29, 1997.

"Maintenance Plan and Redesignation Request for the Portland/Vancouver Interstate Air Quality Maintenance Area (AQMA), State Implementation Plan Revision for Ozone", adopted July 12, 1996. Prepared by Oregon Department of Environmental Quality and the Southwest Air Pollution Control Authority.

Approved:

Section: _____

Division: _____

Report prepared by: Brian Finneran
Phone: 229-6278

Date prepared: February 7, 1997

Attachment 1

Contingency Plan Excerpt from the Portland/Vancouver Ozone Maintenance Plan

If any emissions inventory exceeds the maintenance emission inventory level, or if two exceedances are recorded and validated at the same permanent ozone monitoring site within three years, DEQ in consultation with the SWAPCA, will evaluate and identify the reason for the condition, and based on the results take one or more of the following actions:

1. **Implement additional emission reduction measures**, for example:

    - Reformulated gasoline (after 2005);
    - Regional, full-scale, congestion pricing;
    - Accelerate implementation of a previously adopted Ozone Maintenance Plan strategy; or
    - Other appropriate measure identified in the evaluation.

2. **Conduct further studies** to determine which, if any, additional emission reduction measures are needed. For example, recommended strategies could include:

    - Preparation of more frequent emission inventories or periodic assessments of growth factors to evaluate emission trends;
    - Evaluation of the effect of specified emission sources and/or specified pollutants on maintenance of the ozone standard;
    - Evaluation of the effect of changes in meteorological conditions on maintenance of the ozone standard;
    - Assessment of the monitoring network and, if necessary, installation of additional ambient monitors.

3. **No further action is necessary** because conditions do not suggest that a future violation of the ozone standard is likely. For example, a recommendation of no further action could be warranted if:

    - Excess emission are within the margin of error in emission forecasts;
    - Changes in emission factors causes an apparent increase in emissions;
    - Changes in the definition of volatile organic compounds caused an apparent emission increase;
    - The condition was due to a temporary increase in emissions that has ceased;
    - The situation was due to exceptional meteorological conditions.

This evaluation will be based on the best information available and will be completed expeditiously but no later than 6 months following the implementation of the contingency plan.

DEQ will present the findings to the EQC and then notify the Regional Administrator of the Environmental Protection Agency.

Where rules are necessary to implement the recommendation, DEQ will develop any necessary rules in accordance with 40 CFR Section 51.102 and present them to the EQC no later than 12 months after the completion of the evaluation described above.

Where further studies are necessary to implement the recommendation, DEQ will establish a time frame for completion of the studies. The results of these studies will be presented to the EQC within the time frame established in the recommendation.

Attachment 2

List of Maintenance Plan Control Measures and Implementation Dates

CONTROL STRATEGY	IMPLEMENTATION DATES	
	Start Year[1]	*Completion*[2]
1. Vehicle Inspection and Maintenance Program		
• Improved testing procedure	1997	2006
• Expanded boundary[3]	1997	2006
2. VOC Area Source rules		
• Consumer Products	1996	2006
• Aerosol Spray paints	1996	2006
• Architectural coating (i.e., house paints)	1996	2006
• Autobody paints	1996	2006
3. EPA Non-road Engine rules (i.e., engines in equipment ranging from lawn mowers and golf carts to chainsaws, forklifts and cranes)	1996/2000	2006
• Heavy Duty Diesel Engine rule [4]	1997	2006
• Small Non-road Engine Phase I rule[5]	2001	2006
• Small Non-road Engine Phase II rules[6]	1998/2000	2006
• Outboard/Inboard Marine Engines		
4. Public Education Efforts		
• Lawn & Garden buy back program[7]	1996	2000
• Clean Air Action days (media coverage, retail programs, Smart Park program)	1995	2006
• Teacher workshops/school classroom exercises	1995	2006
• Information booth at County fairs	1990	2006
• Literature mailouts to public	1993	2006
• Production & distribution of interactive video to the public	1995	2006

[1] Each program requires time to become fully effective. Most programs will become fully effective in 1999.

[2] The strategy will continue to be implemented through the Maintenance Plan period and beyond unless DEQ discontinues the program.

[3] The vehicle expansion boundary was expanded to areas outside Portland where a large percentage of the population commute into Portland, thereby contributing to ozone levels.

[4] This rule will regulate exhaust NO_x and smoke standards for large non-road engines with a power output greater than 50 horsepower.

[5] This rule will regulate exhaust emissions of VOC, NO_x, and CO for all new small gasoline engines manufactured after August 1, 1996.

[6] This rule is expected to regulate small gasoline engine exhaust and evaporative emissions, but is currently in negotiation at EPA.

[7] This program will be discontinued in the year 2000 because it is expected that the EPA Non-road Engine rules will have sufficiently phased-in to where this program is no longer needed.

Attachment 3

Portland/Vancouver Public Education and Incentive Program

The Department of Environmental Quality and Southwest Air Pollution Control Authority work together during potential high ozone days to alert the public of potential high ozone conditions and to encourage public participation in reduction measures. These efforts are called Clean Air Action days (CAA days). During these days, the Clark County Transit Authority (C-Tran) offers free ridership, gasoline barge loading facilities are asked to curtail loading activities between the hours of 2 a.m. and 2 p.m., and the public, through newspaper, radio, and television announcements, is encouraged to carpool, take public transit, use products with lower volatile organic compound components, and reduce the use of gasoline powered lawn equipment. The program is designed to help prevent an exceedance of the ozone standard on these potential high ozone days. A more detailed description of some of the CAA day programs are described below.

Smart Park Free Parking for Carpoolers

This program was voluntarily implemented in the beginning of the summer of 1996. The first rendition of the program allowed for any car carrying two or more people to park free at any Portland downtown Smart Park garage during officially declared Clean Air Action days. After the first heat wave from July 11-July 14, 1996, the program was re-evaluated to reduce the amount of fraudulent free parking abuse by downtown shoppers and non-carpoolers. The Smart Park program was modified after July 14, 1996 to include a restriction that would in principal allow only real commuters to benefit by the program. These restrictions only allow for free parking for carpooling drivers who arrive before 9 a.m. and leave after 3 p.m.

Media Coverage

There was a great deal of media coverage in both Vancouver and Portland highlighting the importance of following the Clean Air Action day advisories. In a recent survey conducted for the DEQ, approximately 80 percent of Portland residents had at least heard of Clean Air Action days, compared with only 42 percent in 1992. When a CAA day was to be forecast, primary office protocol at the DEQ was to assume responsibility for DEQ and SWAPCA and to fax the advisories to all newspapers, radio stations, and television stations. Marcia Danab, with DEQ public affairs, personally conducted numerous radio and television interviews for local broadcast. The *Oregonian* newspaper maintained a telephone bulletin board system, "Inside Line" that listed smog advisories and how to cut back on pollution--allowing for additional free educational publicity for Vancouver/Portland residents. The *Columbian* lists a pollution index in its daily weather section.

Retail Participation

Fred Meyer Corporation implemented a program to set up signs at all store locations in Portland announcing CAA days to all shoppers. In-store vocal announcements about CAA days were made to shoppers, and employees wore pins with the message, "We'll all breathe easier, I left my car at home." In addition, over 70 Chevron gas stations in the Vancouver/Portland area displayed Clean Air Action day signs, reminding motorists about the presence of high ozone in the region.

Overall, approximately 140 local businesses in Vancouver and the Portland area signed up to receive fax notification for CAA day advisories. Those businesses also received a packet of information/communication materials to be posted at work sites. Several of these businesses offered incentives such as discount cafeteria prices to entice workers to "eat-in" instead of driving out for lunch.

Local Governments

Aimed at reducing emissions from lawn and garden equipment, Washington County, Clackamas County, and the City of Portland participated in CAA days by curtailing all maintenance work using gasoline powered equipment on local parks and streets.

In addition to the programs listed above, DEQ and Portland General Electric (PGE) also sponsored a lawnmower buyback program to replace gas powered lawn equipment with electric or push mowers, which was moderately successful and will be expanded to include all types of electric mowers with an increases subsidy.

Attachment 4

1996 Meteorological Factors Conducive to Ozone Formation in the Portland/Vancouver Area [1]

1. Temperature

The number of days for Portland/Vancouver above 90°F from 1976 through 1996 is shown in Figure 1. The total number of days above 90°F were graphed as the top line, the number of two consecutive days in a row above 90°F were graphed as the second line, and the number of three consecutive days in a row above 90°F were graphed as the bottom line.

FIGURE 1: NUMBER OF DAYS ABOVE 90°F FOR 1, 2, AND 3 DAYS IN A ROW

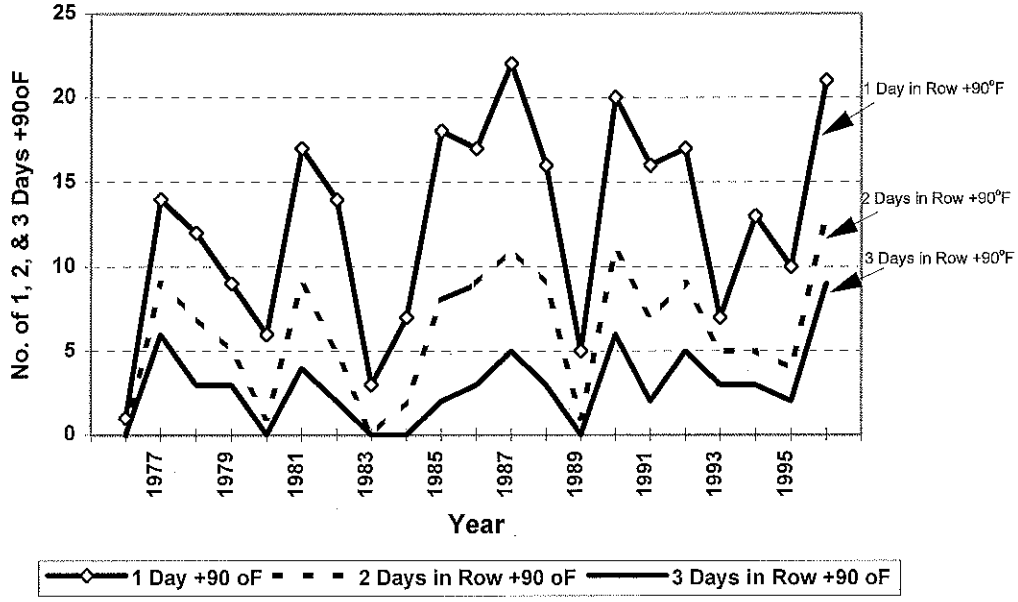


Figure 1 shows:

- the number of single days above 90°F in 1996 was about the same as the 1987 peak, but more than in other years.

- the number of two and three consecutive days above 90°F in 1996 were more than in any other peak since to 1976.

- When compared with the last 20 years:
  * single days above 90°F is approximately 82 percent of the overall distribution

[1] Data is from the Portland Airport and National Weather Service in Salem.

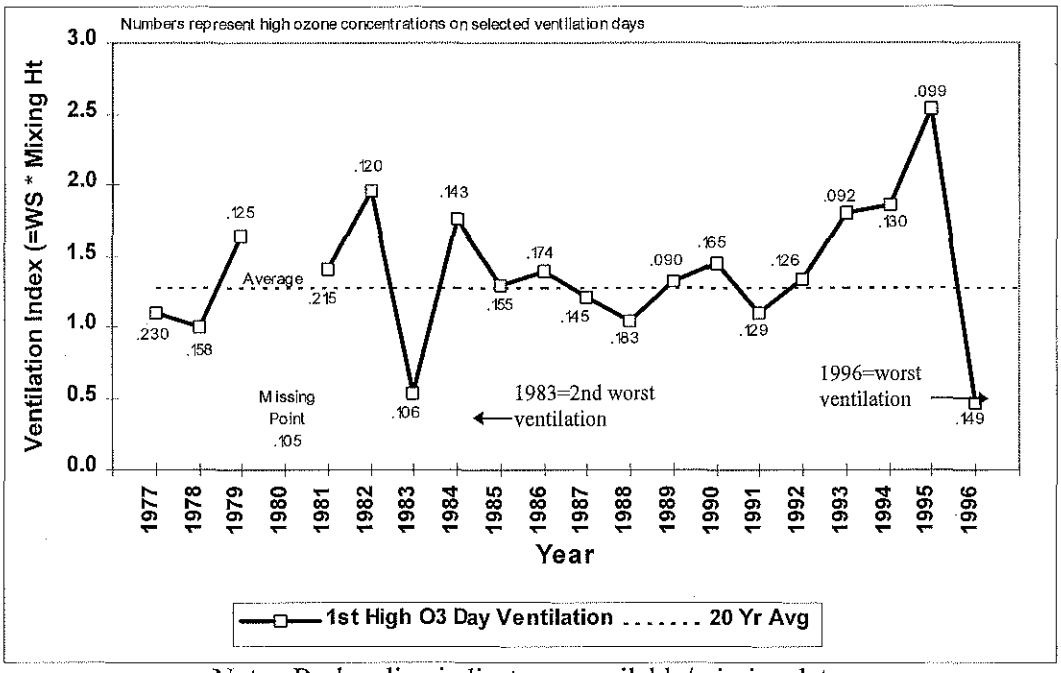
* two consecutive days is approximately 91 percent
* three consecutive days is approximately 98 percent

- These percentages average 90 percent of the overall distribution of above 90°F days for this time period.

2. Ventilation

The ventilation index is determined by multiplying wind speed and mixing height. The ventilation index for days which had the highest ozone values for the years 1977 to 1996 is shown in Figure 2. The numbers on the graph represents the high ozone values for each ventilation point graphed.

FIGURE 2: VENTILATION INDEX ON THE HIGHEST OZONE DAY IN EACH YEAR



Note: Broken line indicates unavailable/missing data.

Figure 2 shows:

- the 1996 ventilation index was the lowest over the past 20 years.

while there is not a strong correlation between low ventilation index and high ozone concentration, a general relationship can be seen.

3. Wind Speed

The wind speed for the highest ozone day in each year is shown in Figure 3.

FIGURE 3: WIND SPEED ON THE HIGHEST OZONE DAY IN EACH YEAR

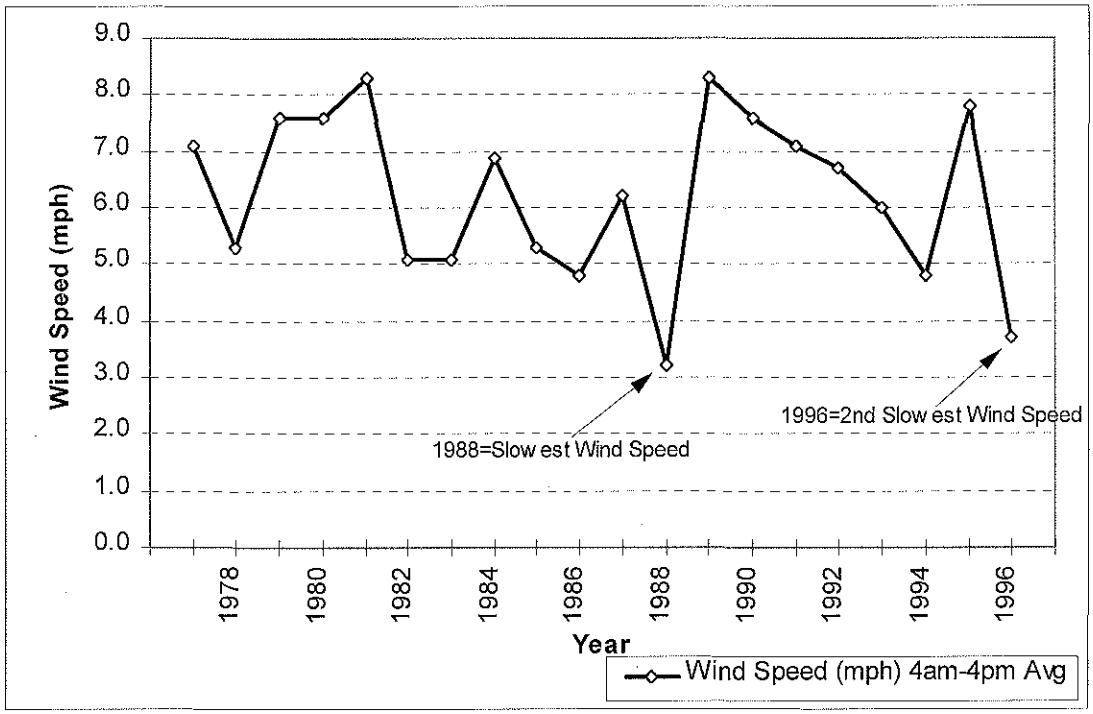


Figure 3 shows:

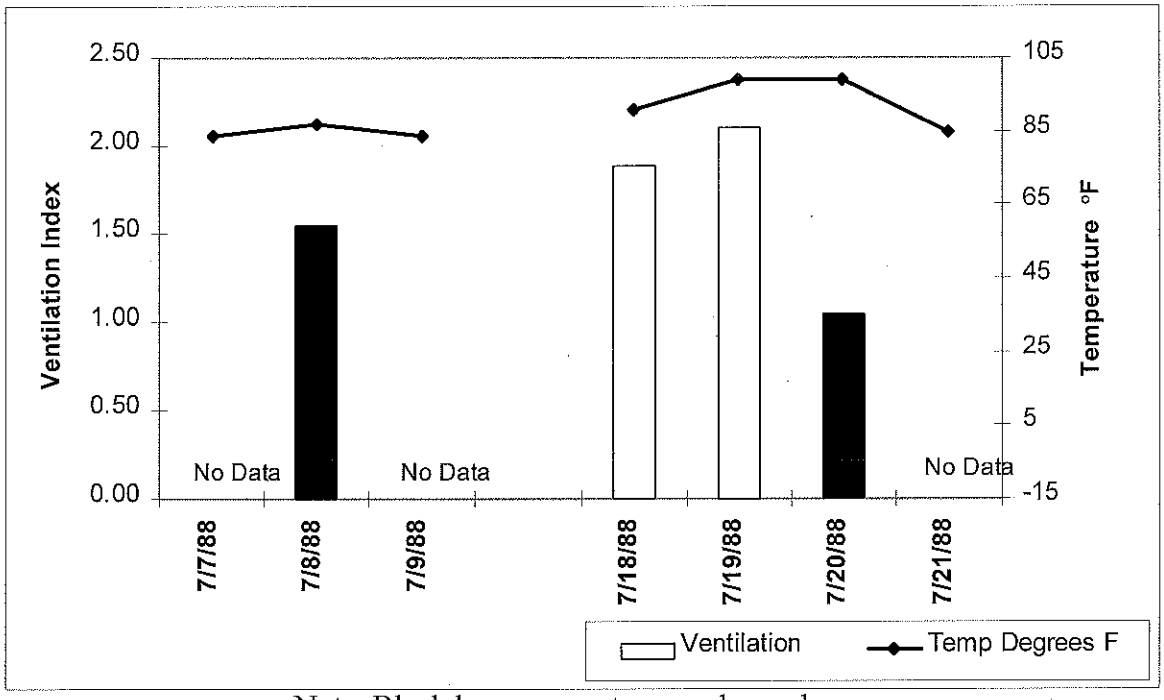
- 1996 had the second lowest wind speed out of the past 20 years.

4. Ventilation, Temperature on Ozone Exceedance Days

The ventilation index, temperature, wind speed and direction were gathered for the exceedance days and days before and after the exceedance days in 1988, 1994, and 1996 to further characterize ozone exceedance days in relation to temperature and ventilation. Wind data used to calculate the ventilation index was obtained from the Portland airport; mixing height information used to calculate the ventilation index was calculated from Salem and Portland meteorological information.

Figures 4, 5, and 6 on the next page show that the ozone exceedances in all three years tends to occur on days with high temperature and low ventilation. The observed scenario is that high temperature conditions exist for a few days, the ventilation index decreases, and then the exceedance occurs. The year 1996 had more days with a low ventilation index and high temperatures than average as discussed above sections.

Figure 4: Temperature and Ventilation Index on 1988 Ozone Exceedance Days



Note: Black bar represents exceedance days.

Figure 5: Temperatures and Ventilation Index on 1994 Ozone Exceedance Days

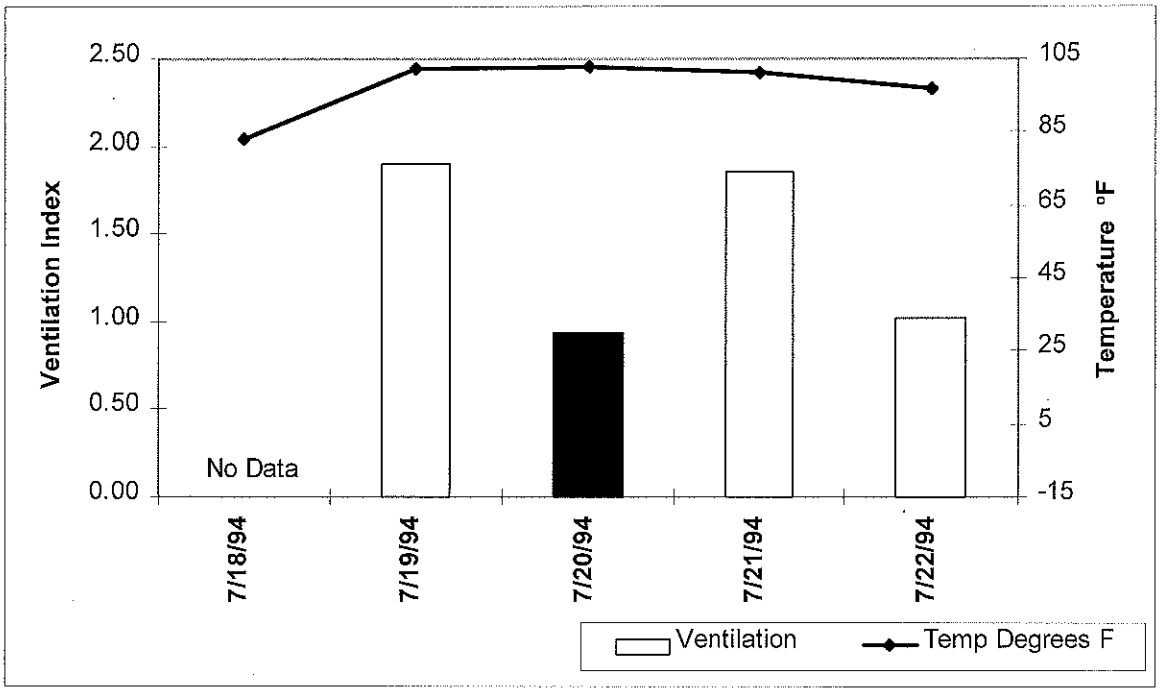
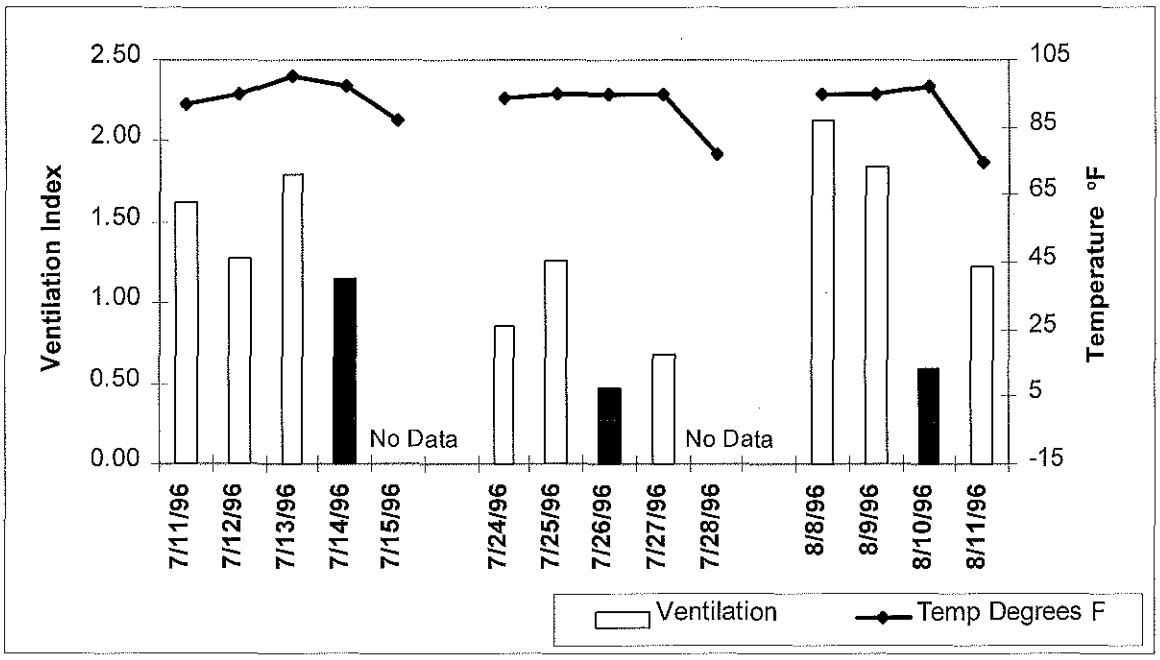


Figure 6: Temperature and Ventilation Index on 1996 Ozone Exceedance Days

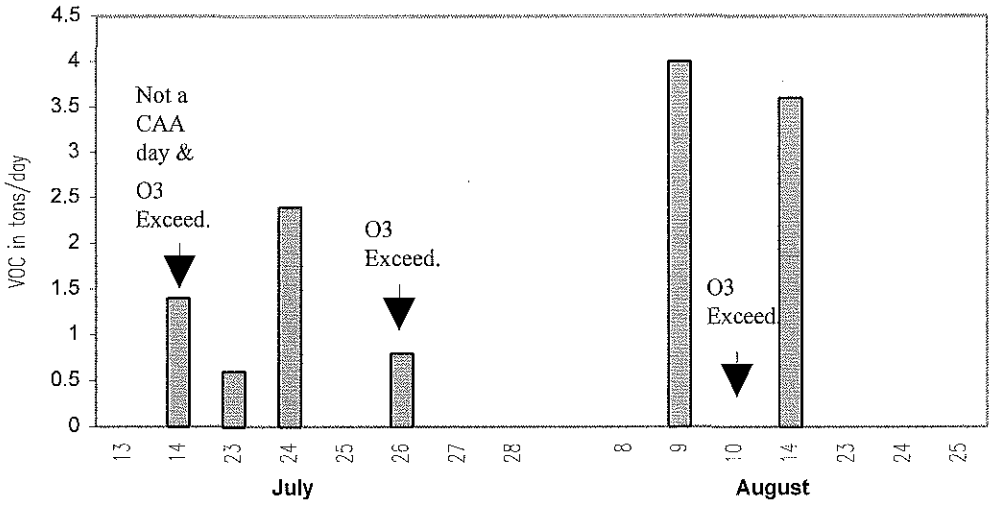


Attachment 5

1996 Gasoline Barge Loading Emission Evaluation

Gasoline barge loading emissions for Portland were calculated for the high ozone days in 1996 as shown below in Figure 1. Overall, gasoline barge loading emissions contribute about 2.5 percent of the total Vancouver/Portland VOC emissions. However, these emissions occur on a relatively few number of days per year, making their potential contribution to high ozone days much higher than other sources emitting year-round. Therefore, in recent years on Clean Air Action days a voluntary curtailment approach has been used requesting area gas terminals curtail gasoline barge loading between the hours of 2 a.m. to 2 p.m. Periodic checks by DEQ have verified that these curtailment requests have been complied with. There are currently no VOC control requirements for this activity.

Figure 1: 1996 Portland Barge Loading Emissions on CAA Days and Ozone Exceedance Days (represents barge loading for Portland 6 gas terminals)



Gasoline barge loading emissions on the CAA days in 1996 is identified in Figure 1. These emissions on CAA days occurred outside of the 2 a.m. to 2 p.m. curtailment period. However, it is worthwhile to note that on August 9th there was significant barge loading activity (about 48,000 barrels) occurring just the day before an ozone exceedance on August 10th. This activity produced approximately 4 tons of VOC, which is a significant daily emission for one source (e.g., if emitted 365 days per year would be nearly 1500 tons). For comparison purposes, all point sources in the Portland area are estimated to emit approximately 37 tons per day of VOC.

It is likely that VOC emissions from barge loading on the 9th added to a buildup of emissions which contributed to ozone levels the following day. To a lesser degree barge loading emissions may have contributed to the ozone exceedance on July 14 and July 26. This raises the question as to whether the curtailment period of 2 a.m. to 2 p.m. is protective enough and should be expanded, particularly considering that the randomness of this activity could potentially cause even greater emissions to occur if major barge loading activity happened to coincide all on the same day.

State of Oregon

Department of Environmental Quality Memorandum

Date: February 12, 1997

To: Environmental Quality Commission

From: Langdon Marsh, Director

Subject: Agenda Item L, February 28, 1997 EQC Meeting

Statement of Purpose

Authorize the transfer of the Field Burning Program to the Department of Agriculture in accordance with Oregon Revised Statute ORS 468A.585 and delegate signature approval of the Interagency Agreement to the Director of the Department of Environmental Quality.

Background

Since 1989, the Department of Environmental Quality and the State Department of Agriculture have been jointly conducting and administrating the field burning and propane flaming smoke management program as authorized by Oregon Revised Statutes 468A.550 through 468A.620 and Oregon Administrative Rules 340, Division 26.

Oregon Revised Statute 468A.610, promulgated in 1991, mandates a systematic reduction in acreage open field burned from 180,000 acres in 1991 to a maximum of 40,000 acres in 1998. The statute also places a 75,000 acre cap on acreage propane flamed. The grower community responded to the mandate by reducing the acreage burned at a faster rate than required by law. Prior to the passage of the statute, growers routinely open field burned in excess of 160,000 acres annually, however, in 1991 growers burned only 101,052 of the 180,000 acres allowed and in 1996 only 76,417 acres were burned of the 100,000 acres allowed. Propane flaming has been reduced from approximately 30,000 acres in 1991 to 4,000 acres in 1996.

Enrolled House Bill 3044 passed by the 68th Oregon Legislative Assembly in 1995 amended Oregon Revised Statute 468A.585, directing the Environmental Quality Commission to enter into a Memorandum of Understanding with the State Department of Agriculture that provides for the State Department of Agriculture to operate all of the field burning program. The amended statutes provide the Department of Agriculture with the authority to impose and collect civil penalties for violations of Oregon Revised Statutes ORS 468A.555 to 468A.620 and Oregon Administrative Rules 340, Division 26 in the same manner as the Environmental Quality Commission and provides the Department of Agriculture with the authority to perform any function of the Environmental Quality Commission relating to the operation and enforcement of the field burning smoke management program.

The Oregon Department of Agriculture and the Department of Environmental Quality have jointly drafted a memorandum of understanding to carry out the mandate of House Bill 3044 and comply with Oregon Revised Statutes 468A.555 to 468A.620. The draft document has been reviewed by the State Attorney General as to form and content and found to be correctly structured. The document, as worded, satisfies and does not compromise any provisions of the Air Quality State Implementation Plan (SIP) filed with the US Environmental Protection Agency.

Authority of the Commission with Respect to the Issue

Oregon Revised Statute 468A.585 provides the Environmental Quality Commission with the authority and directs the Commission to transfer the Field Burning Program to the State Department of Agriculture.

Alternatives and Evaluation

Because House Bill 3044 does not specify a date for transferring the field burning program to the Department of Agriculture, the Department of Environmental Quality could continue operating the enforcement program indefinitely, however, we believe this is not the intent of the Legislature. Because the field burning program is funded by registration and burn permit fees and because the acreage of fields registered and burned continues to decline at a rapid rate, both agencies feel the program should now be consolidated to reduce program operating costs and preserve revenue for researching alternatives to open burning

Summary of Public Input Opportunity

The public had opportunities to address the proposed legislation during several hearings before the 1995 Oregon Legislature's Agriculture and Natural Resources Committee.

Intended Future Actions

NONE

Department Recommendation

It is recommended that the Commission review and approve the memorandum of understanding transferring the program to the State Department of Agriculture on June 16, 1997, and designate the Director of the Department of Environmental Quality to sign the memorandum on the commissions behalf.

Attachments

A. The State Department of Agriculture/Oregon Department of Environmental Quality Interagency Agreement

B. Oregon Revised Statute ORS 468A.555 to 468A.615

C. House Bills 3343 & 3044

Reference Documents (available upon request)

N/A

Approved:

Section:

Division: Gregory A. Green

Report Prepared By: Stephen Crane
Phone: 503-378-8240 ext. 254
Date Prepared: January 22, 1997

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10/13/95

Interagency Agreement

This agreement is between the Oregon Department of Environmental Quality (hereinafter called "DEQ") and the Oregon Department of Agriculture (hereinafter called "ODA"). This agreement is made pursuant to the authority granted in ORS 190.110 and 468A.585. This agreement replaces all previous agreements in their entirety.

Definitions

I. Terms of Agreement

This agreement is effective upon signing by both parties and will end when terminated by one or both of the parties. Twelve months advanced notice of intent to terminate is required unless the parties agree to a shorter period.

II. Statement of Work

A. DEQ will perform the following tasks:

1. Conduct inspections of field burning, propane flaming, and stack and pile burning operations in the Willamette Valley, and pursue, to completion, enforcement actions for violations that occurred on or before June 15, 1997 against those persons found to be in violation of legal requirements governing field burning. (DEQ will take enforcement action in accordance with DEQ's November 2, 1995 Enforcement Guidance unless otherwise agreed by the parties of this agreement).

2. Receive fourth priority agricultural burning complaints for the Willamette Valley from October 1st through June 15th of each year.

3. In consultation with ODA, operate and maintain a nephelometer network to evaluate the effectiveness of the field burning component of the Smoke Management program.

4. Between July 5 and September 30 of each year, DEQ will provide and maintain the air monitoring network (accessible through phone lines to data loggers) for surface wind direction and speed. (Alteration of this network shall be by mutual agreement between DEQ and ODA.)

5. Provide and maintain phoneline access ports to meteorological and nephelometer data from the ambient monitoring networks described in items (2) and (3) above, and assure compatibility of the data.

6. Review ODA evaluations and recommendations on field burning related tax credit applications and make final departmental recommendations for EQC action.

7. Review all proposed rule changes to insure compatibility with EPA/DEQ State Implementation Plan (SIP). All SIP related rule revisions must be approved by DEQ.

8. Pursuant to Oregon Revised Statute ORS 461A.610 and in consultation with the ODA, the Environmental Quality Commission may order temporary emergency cessation of all open field burning, propane flaming, or stack or pile burning in any area of the counties listed in Oregon Revised Statute ORS 468A.595 (2).

B. ODA will perform the following tasks:

1. By June 16, 1997, adopt Administrative Rules for Open Field Burning (including Enforcement and Civil Penalty procedures) and assume the responsibility for enforcement actions relating to field burning violations. (Thereafter, the administrative rules may be amended subject to condition II.A.7. above).

2. Administer and provide the necessary personnel for the daily operation of the Smoke Management Program to include, at a minimum; grower registration, fee collections, acreage allocation, contractual agreements with fire districts, permit agents, and field coordinators, and oversight of these contractual agreements. Develop and provide a daily agricultural burn advisory to the State Fire Marshal during the period June 16 through September 30 of each year, develop and provide a daily burn forecast to growers, permit agents, and fire districts, determine the appropriateness of field burning, propane flaming, stack or pile burning, and fourth priority agricultural burning based upon information relating to daily meteorology, ground and aerial observation, and State Fire Marshall's flame spread index. Broadcast daily decisions on the times, places, and number of fields to be burned, and conduct the administration and regulatory oversight of these activities associated with the Smoke Management Program in accordance with the requirements adopted by the EQC and codified in Divisions 23 and 26 of Oregon's Administrative Rules.

3. From fees collected, ODA will remit to DEQ the amounts listed below. Payments will be made at the beginning of the month preceding each period.

Payment No.	Period	Amount
1.	April	$ 29,426
2.	July	$ 15,000
3.	October	$ 10,000
4.	January	$ 12,330

The above described payments will be revised periodically in accordance with the legislatively adopted budgets. In the event it appears that the revenue is not sufficient to meet the scheduled payment dates, ODA agrees to advise DEQ as soon as possible of the projected shortfall. A shortfall shall be deemed to exist when the amount of general fee revenue is less than the budget for smoke management, enforcement, and monitoring. Said shortfall, exclusive of third party contractual agreements, will be shared between ODA and DEQ in proportion to the respective amounts of their smoke management budgets (currently $66,756 for DEQ; $363,537 for ODA) unless otherwise agreed.

Unanticipated expenses incurred by DEQ will be reported as soon as possible and a remedy will be promptly negotiated by the parties to this agreement.

4. Provide tax credit application information and technical assistance on the application procedures/requirements.

   a. Receive tax credit applications from DEQ and prepare staff review reports for DEQ approval and review.

   b. Conduct inspections of a limited number of facilities, selected by DEQ, prior to completing the application staff review report.

   c. Participate in DEQ's tax credit training activities.

   d. Attend EQC meetings to provide input on applications when requested by DEQ.

5. Ensure open communications of daily burn conditions and program activities with DEQ and Lane Regional Air Pollution Authority.

6. Receive agricultural burning related complaints for the Willamette Valley from June 16 through September 30 of each year.

7. Maintain the computer and modem to access the air quality and meteorological monitoring data system provided by DEQ.

8. Respond to citizen complaints of illegal burning for the duration of the open field burning season.

9. Prepare and publish an end of season field burning report prior to the end of each calendar year. If requested, meet with DEQ to discuss program effectiveness and needed improvements or modifications.

10. Provide a communication system that satisfies the requirement of the field burning program.

C. Joint Responsibilities:

1. Develop and recommend for adoption by the Environmental Quality Commission (EQC) or ODA rulemaking which DEQ and ODA believe to be necessary to protect the health and safety of the public, provide the appropriate level of smoke management, and satisfy the requirements of DEQ's State Implementation Plan.

2. Conduct an annual review of the Smoke Management Program, including daily coordination of burn activities, smoke impacts, complaints, and the air quality monitoring network, and provide recommendations for any needed improvements or modifications.

III. Stipulations:

The provisions in this agreement are intended only to establish the responsibilities of DEQ and ODA. The agreement does not create private rights or defenses for purposes of judicial or administrative proceedings involving the violation of laws governing field burning.

Signatures

By_____ Date:_____

Director or Delegate
Oregon Department of Agriculture

By_____ Date:_____

Director or Delegate
Oregon Department of Environmental Quality

FIELD BURNING AND PROPANE FLAMING

468A.550 Definitions for ORS 468A.555 to 468A.620 and 468A.992. As used in ORS 468A.555 to 468A.620 and 468A.992:

(1) "Smoke management" means the daily control of the conducting of open field burning to such times and places and in such amounts so as to provide for the escape of smoke and particulate matter therefrom into the atmosphere with minimal intrusion into cities and minimal impact on public health and in such a manner that under existing meteorological conditions a maximum number of acres registered can be burned in a minimum number of days without substantial impairment of air quality.

(2) "Smoke management program" means a plan or system for smoke management. A smoke management program shall include, but not be limited to, provisions for:

(a) Annual inventorying and registering, prior to the burning season, of agricultural fields for open field burning;

(b) Preparation and issuance of field burning permits by affected governmental agencies;

(c) Gathering and disseminating regional and sectional meteorological conditions on a daily or hourly basis;

(d) Scheduling times, places and amounts of agricultural fields that may be open burned daily or hourly, based on meteorological conditions during the burning season;

(e) Conducting surveillance and gathering and disseminating information on a daily or more frequent basis;

(f) Effective communications between affected personnel during the burning season; and

(g) Employment of personnel to conduct the program.

[Formerly 468.453]

468A.555 Policy to reduce open field burning. The Legislative Assembly declares it to be the public policy of this state to reduce the practice of open field burning while developing and providing alternative methods of field sanitization and alternative methods of utilizing and marketing crop residues.

[1991 c.920 §3]

468A.560 Applicability of open field burning, propane flaming and stack and pile burning statutes. Except for the fee imposed under ORS 468A.615 (1)(c), the provisions of ORS 468A.550 to 468A.620 and 468A.992 shall apply only to open field burning, propane flaming and stack or pile burning of grass seed or cereal grain crop residues on acreage located in the counties specified in ORS 468A.595 (2).

[1991 c.920 §2]

468A.565 Use of certified alternative thermal field sanitizer. Notwithstanding any provision of ORS 468A.550 to 468A.620 and 468A.992, any acreage sanitized by the use of an alternative thermal field sanitizer certified by the Environmental Quality Commission and the Director of Agriculture shall be exempt from the provisions of ORS 468A.550 to 468A.620 and 468A.992.

[1991 c.920 §5]

468A.570 Classification of atmospheric conditions; marginal day

(1) As used in this section:

(a) "Marginal conditions" means atmospheric conditions such that smoke and particulate matter escape into the upper atmosphere with some difficulty but not

such that limited additional smoke and particulate matter would constitute a danger to the public health and safety.

(b) "Marginal day" means a day on which marginal conditions exist.

(2) For purposes of ORS 476.380 and 478.960, the commission shall classify different types or combinations of atmospheric conditions as marginal conditions and shall specify the extent and types of burning that may be allowed under different combinations of atmospheric conditions. A schedule describing the types and extent of burning to be permitted on each type of marginal day shall be prepared and circulated to all public agencies responsible for providing information and issuing permits under ORS 476.380 and 478.960. The schedule shall give first priority to the burning of perennial grass seed crops used for grass seed production, second priority to annual grass seed crops used for grass seed production, third priority to grain crop burning, and fourth priority to all other burning and shall prescribe duration of periods of time during the day when burning is authorized.

(3) In preparing the schedule under subsection (2) of this section, the commission shall provide for the assignment of fourth priority burning by the State Department of Agriculture in accordance with the memorandum of understanding established pursuant to ORS 468A.585.

(4) In preparing the schedule required under subsection (2) of this section, the commission shall weigh the economic consequences of scheduled burnings and the feasibility of alternative actions, and shall consider weather conditions and other factors necessary to protect the public health and welfare.

(5) None of the functions of the commission under this section or under ORS 476.380 or 478.960, as it relates to agricultural burning, shall be performed by any regional air quality control authority established under ORS 468A.105.

[1991 c.920 §6]

468A.575 Permits for open burning, propane flaming or stack or pile burning

(1) Permits for open burning, propane flaming or stack or pile burning of the residue from perennial grass seed crops, annual grass seed crops and cereal grain crops are required in the counties listed in ORS 468A.595 (2) and shall be issued in accordance with rules adopted by the Environmental Quality Commission and subject to the fee prescribed in ORS 468A.615. The permit described in this section shall be issued in conjunction with permits required under ORS 476.380 or 478.960.

(2) By rule the Environmental Quality Commission may delegate to any county court, board of county commissioners, fire chief of a rural fire protection district or other responsible person the duty to deliver permits to burn acreage if the acreage has been registered under ORS 468A.615 and fees have been paid as required in ORS 468A.615.

[1991 c.920 §7]

468A.580 Permits; inspections; planting restrictions

(1) Permits under ORS 468A.575 for open field burning of cereal grain crops shall be issued in the counties listed in ORS 468A.595 (2) only if the person seeking the permit submits to the issuing authority a signed statement under oath or affirmation that the acreage to be burned will be planted to seed crops other than cereal grains which require flame sanitation for proper cultivation.

(2) The department shall inspect cereal grain crop acreage burned under subsection (1) of this section after planting in the following spring to determine compliance with subsection (1) of this section.

(3) Any person planting contrary to the restrictions of subsection (1) of this section shall be assessed by the department a civil penalty of $25 for each acre planted contrary to the restrictions. Any fines collected by the department under this subsection shall be deposited by the State Treasurer in the Department of Agriculture Service Fund to be used in carrying out the smoke management program in cooperation with the Oregon Seed Council and for administration of this section.

(4) Any person planting seed crops after burning cereal grain crops under subsection (1) of this section may apply to the department for permission to plant contrary to the restrictions of subsection (1) of this section if the seed crop fails to grow. The department may allow planting contrary to the restrictions of subsection (1) of this section if the crop failure occurred by reasons other than the negligence or intentional act of the person planting the crop or one under the control of the person planting the crop.

[1991 c.920 §8]

468A.585 Memorandum of understanding with Department of Agriculture

(1) The Environmental Quality Commission shall enter into a memorandum of understanding with the State Department of Agriculture that provides for the State Department of Agriculture to operate all of the field burning program.

(2) Subject to the terms of the memorandum of understanding required by subsection (1) of this section, the State Department of Agriculture:

(a) May perform any function of the Environmental Quality Commission or the Department of Environmental Quality relating to the operation and enforcement of the field burning smoke management program.

(b) May enter onto and inspect, at any reasonable time, the premises of any person conducting an open field burn to ascertain compliance with a statute, rule, standard or permit condition relating to the field burning smoke management program.

[1991 c.920 §4; 1995 c.358 §3]

468A.590 Duties of Department of Agriculture. Pursuant to the memorandum of understanding established under ORS 468A.585, the State Department of Agriculture:

(1) Shall:

(a) Conduct the smoke management program established by rule by the Environmental Quality Commission as it pertains to open field burning, propane flaming and stack or pile burning.

(b) Aid fire districts and permit agents in carrying out their responsibilities for administering field sanitization programs.

(2) May:

(a) Enter into contracts with public and private agencies to carry out the purposes set forth in subsection (1) of this section;

(b) Obtain patents in the name of the State of Oregon and assign such rights therein as the State Department of Agriculture considers appropriate;

(c) Employ personnel to carry out the duties assigned to it; and

(d) Sell and dispose of all surplus property of the State Department of Agriculture related to smoke management, including but not limited to straw-based products produced or manufactured by the State Department of Agriculture.

[1991 c.920 §9]

468A.595 Commission rules to regulate burning pursuant to ORS 468A.610. In order to regulate open field burning pursuant to ORS 468A.610:

(1) In such areas of the state and for such periods of time as it considers necessary to carry out the policy of ORS 468A.010, the commission by rule may prohibit, restrict or limit classes, types and extent and amount of burning for perennial grass seed crops, annual grass seed crops and grain crops.

(2) In addition to but not in lieu of the provisions of ORS 468A.610 and of any other rule adopted under subsection (1) of this section, the commission shall adopt rules for Multnomah, Washington, Clackamas, Marion, Polk, Yamhill, Linn, Benton and Lane Counties, which provide for a more rapid phased reduction by certain permit areas, depending on particular local air quality conditions and soil characteristics, the extent, type or amount of open field burning of perennial grass seed crops, annual grass seed crops and grain crops and the availability of alternative methods of field sanitation and straw utilization and disposal.

(3) Before promulgating rules pursuant to subsections (1) and (2) of this section, the commission shall consult with Oregon State University and may consult with the Soil Conservation Service, the Agricultural Stabilization Commission, the State Soil and Water Conservation Commission and other interested agencies. The department shall advise the commission in the promulgation of such rules. The commission must review and show on the record the recommendations of the department in promulgating such rules.

(4) No regional air quality control authority shall have authority to regulate burning of perennial grass seed crops, annual grass seed crops and grain crops.

(5) Any amendments to the State Implementation Plan prepared by the state pursuant to the Federal Clean Air Act, as enacted by Congress, December 31, 1970, and as amended by Congress August 7, 1977, and November 15, 1990, and Acts amendatory thereto shall be only of such sufficiency as to gain approval of the amendment by the United States Environmental Protection Agency and shall not include rules promulgated by the commission pursuant to subsection (1) of this section not necessary for attainment of national ambient air quality standards.

[Formerly 468.460]

468A.597 Duty to dispose of straw. Unless otherwise specifically agreed by the parties, after straw is removed from the fields of the grower, the responsibility for the further disposition of the straw, including burning or disposal, shall be upon the person who bales or removes the straw.

[1993 c.414 §2]

468A.600 Standards of practice and performance. The Environmental Quality Commission shall establish standards of practice and performance for open field burning, propane flaming, stack or pile burning and certified alternative methods to open field burning.

[1991 c.920 §10]

468A.605 Duties of Department of Environmental Quality. The Department of Environmental Quality, in coordinating efforts under ORS 468.140, 468.150, 468A.020, 468A.555 to 468A.620 and 468A.992, shall:

(1) Enforce all field burning rules adopted by the Environmental Quality Commission and all related statutes; and

(2) Monitor and prevent unlawful field burning.

[1991 c.920 §11; 1995 c.358 §4]

468A.610 Reduction in acreage to be open burned, propane flamed or stack or pile burned

(1) Except as provided under ORS 468A.620, no person shall open burn or cause to be open burned, propane flamed

or stack or pile burned in the counties specified in ORS 468A.595 (2), perennial or annual grass seed crop or cereal grain crop residue, unless the acreage has been registered under ORS 468A.615 and the permits required by ORS 468A.575, 476.380 and 478.960 have been obtained.

(2) The maximum total registered acreage allowed to be open burned per year pursuant to subsection (1) of this section shall be:

(a) For 1991, 180,000 acres.

(b) For 1992 and 1993, 140,000 acres.

(c) For 1994 and 1995, 120,000 acres.

(d) For 1996 and 1997, 100,000 acres.

(e) For 1998 and thereafter, 40,000 acres.

(3) The maximum total acreage allowed to be propane flamed under subsection (1) of this section shall be:

(a) In 1991 through 1997, 75,000 acres per year; and

(b) In 1998 and thereafter, 37,500 acres per year may be propane flamed.

(4)(a) After January 1, 1998, fields shall be prepared for propane flaming by removing all loose straw or vacuuming or prepared using other techniques approved by rule by the Environmental Quality Commission.

(b) After January 1, 1998, propane equipment shall satisfy best available technology.

(5) Notwithstanding the limitations set forth in subsection (2) of this section, in 1991 and thereafter, a maximum of 25,000 acres of steep terrain and species identified by the Director of Agriculture by rule may be open burned and shall not be included in the maximum total permitted acreage.

(6) Acreage registered to be open burned under this section may be propane flamed at the registrant's discretion without reregistering the acreage.

(7) In the event of the registration of more than the maximum allowable acres for open burning in the counties specified in ORS 468A.595 (2), after 1996, the commission, after consultation with the State Department of Agriculture, by rule or order may assign priority of permits based on soil characteristics, the crop type, terrain or drainage.

(8) Permits shall be issued and burning shall be allowed for the maximum acreage specified in subsection (2) of this section unless:

(a) The daily determination of suitability of meteorological conditions, regional or local air quality conditions or other burning conditions requires that a maximum number of acres not be burned on a given day; or

(b) The commission finds after hearing that other reasonable and economically feasible, environmentally acceptable alternatives to the practice of annual open field burning have been developed.

(9) Upon a finding of extreme danger to public health or safety, the commission may order temporary emergency cessation of all open field burning, propane flaming or stack or pile burning in any area of the counties listed in ORS 468A.595 (2).

(10) The commission shall act on any application for a permit under ORS 468A.575 within 60 days of registration and receipt of the fee required under ORS 468A.615. The commission may order emergency cessation of open field burning at any time. Any other decision required under this section must be made by the commission on or before June 1 of each year.

[1991 c.920 §12; 1995 c.358 §5]

468A.615 Registration of acreage to be burned; fees

(1)(a) On or before April 1 of each year, the grower of a grass seed crop shall register with the county court or board of county commissioners, the fire chief of a rural fire protection district, the designated

representative of the fire chief or other responsible persons the number of acres to be open burned or propane flamed in the remainder of the year. At the time of registration, the Department of Environmental Quality shall collect a nonrefundable fee of $2 per acre registered to be sanitized by open burning or $1 per acre to be sanitized by propane flaming. The department may contract with counties and rural fire protection districts or other responsible persons for the collection of the fees which shall be forwarded to the department. Any person registering after April 1 of each year shall pay an additional fee of $1 per acre registered if the late registration is due to the fault of the late registrant or one under the control of the late registrant. Late registrations must be approved by the department. Copies of the registration form shall be forwarded to the department. The required registration must be made and the fee paid before a permit shall be issued under ORS 468A.575.

(b) Except as provided in paragraph (d) of this subsection, the department shall collect a fee in accordance with paragraph (c) of this subsection for issuing a permit for open burning, propane flaming or stack or pile burning of perennial or annual grass seed crop or cereal grain crop residue under ORS 468A.555 to 468A.620 and 468A.992. The department may contract with counties and rural fire protection districts or other responsible persons for the collection of the fees which shall be forwarded to the department.

(c) The fee required under paragraph (b) of this subsection shall be paid within 10 days after a permit is issued and shall be:

(A) $8 per acre of crop sanitized by open burning in the counties specified in ORS 468A.595 (2);

(B) $4 per acre of perennial or annual grass seed crop sanitized by open burning in any county not specified in ORS 468A.595 (2);

(C) $2 per acre of crop sanitized by propane flaming;

(D) For acreage from which 100 percent of the straw is removed and burned in stacks or piles:

(i) $2 per acre from January 1, 1992, to December 31, 1997;

(ii) $4 per acre in 1998;

(iii) $6 per acre in 1999;

(iv) $8 per acre in 2000; and

(v) $10 per acre in 2001 and thereafter; and

(E) For acreage from which less than 100 percent of the straw is removed and burned in stacks or piles, the same per acre as the fee imposed under subparagraph (D) of this paragraph, but with a reduction in the amount of acreage for which the fee is charged by the same percentage as the reduction in the amount of straw to be burned.

(d) The fee required by paragraph (b) of this subsection shall not be charged for any acreage where efficient burning of stubble is accomplished with equipment certified by the department for field sanitizing purposes or with any other certified alternative method to open field burning, propane flaming or stack or pile burning. The fee required by paragraph (b) of this subsection shall not be charged for any acreage not harvested prior to burning or for any acreage not burned.

(2) All fees collected under this section shall be deposited in the State Treasury to the credit of the Department of Agriculture Service Fund. Such moneys are continuously appropriated to the State Department of Agriculture for the purpose of carrying out the duties and responsibilities carried out by the State Department of Agriculture pursuant to the memorandum of understanding established under ORS 468A.585.

(3) It is the intention of the Legislative Assembly that the programs for smoke management, air quality monitoring and the enforcement of rules under ORS 468A.550 to 468A.620 and 468A.992 be

operated in a manner that maximizes the resources available for the research and development program. Therefore, with regard to the disbursement of funds collected under subsection (1) of this section, the State Department of Agriculture shall act in accordance with the intent of the Legislative Assembly and shall:

(a) Pay an amount to the county or board of county commissioners or the fire chief of the rural fire protection district or other responsible person, for each fire protection district, $1 per acre registered for each of the first 5,000 acres registered for open field burning and propane flaming in the district, 75 cents per acre registered for each of the second 5,000 acres registered in the district and 35 cents per acre registered for all acreage registered in the district in excess of 10,000 acres, to cover the cost of and to be used solely for the purpose of administering the program of registration of acreage to be burned, issuance of permits, keeping of records and other matters directly related to agricultural field burning. For each acre from which straw is removed and burned in stacks or piles, the State Department of Agriculture shall pay to the county or board of county commissioners, or the fire chief of the rural fire protection district or other responsible person, 25 cents per acre.

(b) Designate an amount to be used for the smoke management program. The State Department of Agriculture by contract with the Oregon Seed Council or otherwise shall organize rural fire protection districts and growers, coordinate and provide communications, hire ground support personnel, provide aircraft surveillance and provide such added support services as are necessary.

(c) Retain funds for the operation and maintenance of the Willamette Valley field burning air quality impact monitoring network and to insure adequate enforcement of rules established by the Environmental Quality Commission governing standards of practice for open field burning, propane flaming and stack or pile burning.

(d) Of the remaining funds, designate an amount to be used for additional funding for research and development proposals described in the plan developed pursuant to section 15, chapter 920, Oregon Laws 1991.

[1991 c.920 §13; 1993 c.414 §3; 1995 c.79 §285; 1995 c.358 §6]

468A.620 Experimental field sanitization

(1) Notwithstanding the provisions of ORS 468A.610, for the purpose of improving by demonstration or investigation the environmental or agronomic effects of alternative methods of field sanitization, the commission shall by rule allow experimental field sanitization under the direction of the department for up to 1,000 acres of perennial grass seed crops, annual grass seed crops and grain crops in such areas and for such periods of time as it considers necessary. Experimental field sanitization includes but is not limited to:

(a) Development, demonstration or training personnel in the use of special or unusual field ignition techniques or methodologies.

(b) Setting aside times, days or areas for special studies.

(c) Operation of experimental mobile field sanitizers and improved propane flaming devices.

(d) Improved methods of stack or pile burning.

(2) The commission may allow open burning under this section of acreage for which permits have not been issued under ORS 468A.610 if the commission finds that the experimental burning:

(a) Can, in theory, reduce the adverse effects on air quality or public health from open field burning; and

(b) Is necessary in order to obtain information on air quality, public health or the agronomic effects of an experimental form of field sanitization.

(3) The commission may, by rule, establish fees, registration requirements and other requirements or limitations necessary to carry out the provisions of this section.

[1991 c.920 §14]

Note: Sections 15 and 23, chapter 920, Oregon Laws 1991, provide:

Sec. 15. Department of Agriculture plan for awarding funding for research or development of alternatives to field burning, propane flaming and stack burning. (1) The State Department of Agriculture annually shall develop a plan to award funding for applied research or development of methods, techniques or equipment related to alternatives to the practices of open field burning, propane flaming and stack or pile burning. The funding plan shall include fees made available for such purposes and appropriations from the State of Oregon in the amount of $500,000 for each year from 1992 through 1997. The plan shall include funding for research proposals, including but not limited to:

(a) Utilization and marketing of crop residue, such as straw;

(b) Research on development of alternate crops; and

(c) Research on development of alternate weed, pest and disease controls, including but not limited to genetic research.

(2) The State Department of Agriculture shall submit its annual research plan to the Joint Legislative Committee on Ways and Means, or during the interim between legislative sessions, to the Emergency Board. [1991 c.920 §15; 1995 c.79 §395]

Sec. 23. Section 15 of this Act is repealed January 1, 1998. [1991 c.920 §23]

House Bill 3044

Sponsored by Representative BAUM; Representatives FEDERICI, JOHNSTON, JONES, LOKAN, LUNDQUIST, MANNIX, MARKHAM, MILNE, MONTGOMERY, SNODGRASS, SOWA, STARR, STROBECK, WATT, WELLS, WELSH

SUMMARY

The following summary is not prepared by the sponsors of the measure and is not a part of the body thereof subject to consideration by the Legislative Assembly. It is an editor's brief statement of the essential features of the measure as introduced.

Requires State Department of Agriculture to assume all responsibility for operating open field burning program. Allows department to impose civil penalty for violation.

A BILL FOR AN ACT

Relating to open field burning; creating new provisions; and amending ORS 468A.585, 468A.605 and 468A.610.

Be It Enacted by the People of the State of Oregon:

SECTION 1. Section 2 of this Act is added to and made a part of ORS 468A.555 to 468A.620.

SECTION 2. (1) In addition to any liability or penalty provided by law, the State Department of Agriculture may impose a civil penalty on any person who fails to comply with a provision of ORS 468A.555 to 468A.620 or any rule adopted thereunder, or a permit issued under ORS 468A.555 to 468A.620, relating to open field burning.

(2) The State Department of Agriculture shall impose any civil penalty under this section in the same manner as the Department of Environmental Quality imposes and collects a civil penalty under ORS 468.140 (6).

SECTION 3. ORS 468A.585 is amended to read:

468A.585. [*Before January 1, 1992,*] (1) The Environmental Quality Commission shall enter into a memorandum of understanding with the State Department of Agriculture that provides for the [*operation of*] State Department of Agriculture to operate all [*or part*] of the field burning smoke management program [*by the State Department of Agriculture*].

(2) Subject to the terms of the memorandum of understanding required by subsection (1) of this section, the State Department of Agriculture:

(a) May perform any function of the Environmental Quality Commission or the Department of Environmental Quality relating to the operation and enforcement of the field burning smoke management program.

(b) May enter onto and inspect, at any reasonable time, the premises of any person conducting an open field burn to ascertain compliance with a statute, rule, standard or permit condition relating to the field burning smoke management program.

SECTION 4. ORS 468A.605 is amended to read:

468A.605. The Department of Environmental Quality, in coordinating efforts under ORS 468.140, 468.150, 468A.020 and 468A.555 to 468A.620, shall:

(1) Enforce all field burning rules adopted by the Environmental Quality Commission and all

NOTE: Matter in boldfaced type in an amended section is new; matter [*italic and bracketed*] is existing law to be omitted. New sections are in boldfaced type.

related statutes; and

(2) Monitor and prevent unlawful field burning. [; *and*]

[*(3) Monitor and study the impact of open field burning on air quality in the Willamette Valley.*]

SECTION 5. ORS 468A.610 is amended to read:

468A.610. (1) Except as provided under ORS 468A.620, no person shall open burn or cause to be open burned, propane flamed or stack or pile burned in the counties specified in ORS 468A.595 (2), perennial or annual grass seed crop or cereal grain crop residue, unless the acreage has been registered under ORS 468A.615 and the permits required by ORS 468A.575, 476.380 and 478.960 have been obtained.

(2) The maximum total registered acreage allowed to be open burned per year pursuant to subsection (1) of this section shall be:

(a) For 1991, 180,000 acres.

(b) For 1992 and 1993, 140,000 acres.

(c) For 1994 and 1995, 120,000 acres.

(d) For 1996 and 1997, 100,000 acres.

(e) For 1998 and thereafter, 40,000 acres.

(3) The maximum total acreage allowed to be propane flamed under subsection (1) of this section shall be:

(a) In 1991 through 1997, 75,000 acres per year; and

(b) In 1998 and thereafter, [*if the preparations and standards under subsection (4) of this section are met, and a system of monitoring developed by the department indicates that not more than 20 pounds of particulate matter 10 microns in diameter or less is emitted for each acre propane flamed, 75,000*] 37,500 acres per year may be propane flamed.

(4)(a) After January 1, 1998, fields shall be prepared for propane flaming by removing all loose straw or vacuuming or prepared using other techniques approved by rule by the Environmental Quality Commission.

(b) After January 1, 1998, propane equipment shall satisfy best available technology. [*and result in achieving a standard of:*]

[*(A) Not more than 20 pounds of particulate matter 10 microns in diameter or less being emitted for each acre propane flamed; or*]

[*(B) Another equivalent standard adopted by rule by the commission.*]

(5) Notwithstanding the limitations set forth in subsection (2) of this section, in 1991 and thereafter, a maximum of 25,000 acres of steep terrain and species identified by the Director of Agriculture by rule may be open burned and shall not be included in the maximum total permitted acreage.

(6) Acreage registered to be open burned under this section may be propane flamed at the registrant's discretion without reregistering the acreage.

(7) In the event of the registration of more than the maximum allowable acres for open burning in the counties specified in ORS 468A.595 (2), after 1996, the commission, after consultation with the State Department of Agriculture, by rule or order may assign priority of permits based on soil characteristics, the crop type, terrain or drainage.

(8) Permits shall be issued and burning shall be allowed for the maximum acreage specified in subsection (2) of this section unless:

(a) The daily determination of suitability of meteorological conditions, regional or local air quality conditions or other burning conditions requires that a maximum number of acres not be

burned on a given day; or

(b) The commission finds after hearing that other reasonable and economically feasible, environmentally acceptable alternatives to the practice of annual open field burning have been developed.

(9) Upon a finding of extreme danger to public health or safety, the commission may order temporary emergency cessation of all open field burning, propane flaming or stack or pile burning in any area of the counties listed in ORS 468A.595 (2).

(10) The commission shall act on any application for a permit under ORS 468A.575 within 60 days of registration and receipt of the fee required under ORS 468A.615. The commission may order emergency cessation of open field burning at any time. Any other decision required under this section must be made by the commission on or before June 1 of each year.

Enrolled
House Bill 3343

Sponsored by COMMITTEE ON ENVIRONMENT AND ENERGY

CHAPTER .....

AN ACT

Relating to field burning; creating new provisions; amending ORS 468.460, 468.995, 476.380 and 478.960; repealing ORS 468.450, 468.455, 468.458, 468.465, 468.470, 468.472, 468.474, 468.475, 468.480, 468.490 and 468.495; appropriating money; and declaring an emergency.

Be It Enacted by the People of the State of Oregon:

SECTION 1. Sections 2 to 15 of this Act are added to and made a part of ORS 468.455 to 468.480.

SECTION 2. Except for the fee imposed under section 13 (1)(c) of this 1991 Act, the provisions of ORS 468.450 to 468.495 shall apply only to open field burning, propane flaming and stack or pile burning of grass seed or cereal grain crop residues on acreage located in the counties specified in ORS 468.460 (2).

SECTION 3. The Legislative Assembly declares it to be the public policy of this state to reduce the practice of open field burning while developing and providing alternative methods of field sanitization and alternative methods of utilizing and marketing crop residues.

SECTION 4. Before January 1, 1992, the Environmental Quality Commission shall enter into a memorandum of understanding with the State Department of Agriculture that provides for the operation of all or part of the field burning smoke management program by the State Department of Agriculture.

SECTION 5. Notwithstanding any provision of ORS 468.450 to 468.495, any acreage sanitized by the use of an alternative thermal field sanitizer certified by the Environmental Quality Commission and the Director of Agriculture shall be exempt from the provisions of ORS 468.450 to 468.495.

SECTION 6. (1) As used in this section:

(a) "Marginal conditions" means atmospheric conditions such that smoke and particulate matter escape into the upper atmosphere with some difficulty but not such that limited additional smoke and particulate matter would constitute a danger to the public health and safety.

(b) "Marginal day" means a day on which marginal conditions exist.

(2) For purposes of ORS 476.380 and 478.960, the commission shall classify different types or combinations of atmospheric conditions as marginal conditions and shall specify the extent and types of burning that may be allowed under different combinations of atmospheric conditions. A schedule describing the types and extent of burning to be permitted on each type of marginal day shall be prepared and circulated to all public agencies responsible for providing information and issuing permits under ORS 476.380 and 478.960. The schedule shall give first priority to the burning of perennial grass seed crops used for grass seed production, second priority to annual grass seed crops used for grass seed production, third priority to grain crop burning, and fourth priority to all other burning and shall prescribe duration of periods of time during the day when burning is authorized.

(3) In preparing the schedule under subsection (2) of this section, the commission shall provide for the assignment of fourth priority burning by the State Department of Agriculture in accordance with the memorandum of understanding established pursuant to section 4 of this 1991 Act.

(4) In preparing the schedule required under subsection (2) of this section, the commission shall weigh the economic consequences of scheduled burnings and the feasibility of alternative actions, and shall consider weather conditions and other factors necessary to protect the public health and welfare.

(5) None of the functions of the commission under this section or under ORS 476.380 or 478.960, as it relates to agricultural burning, shall be performed by any regional air quality control authority established under ORS 468.505.

SECTION 7. (1) Permits for open burning, propane flaming or stack or pile burning of the residue from perennial grass seed crops, annual grass seed crops and cereal grain crops are required in the counties listed in ORS 468.460 (2) and shall be issued in accordance with rules adopted by the Environmental Quality Commission and subject to the fee prescribed in section 13 of this 1991 Act. The permit described in this section shall be issued in conjunction with permits required under ORS 476.380 or 478.960.

(2) By rule the Environmental Quality Commission may delegate to any county court, board of county commissioners, fire chief of a rural fire protection district or other responsible person the duty to deliver permits to burn acreage if the acreage has been registered under section 13 of this 1991 Act and fees have been paid as required in section 13 of this 1991 Act.

SECTION 8. (1) Permits under section 7 of this 1991 Act for open field burning of cereal grain crops shall be issued in the counties listed in ORS 468.460 (2) only if the person seeking the permit submits to the issuing authority a signed statement under oath or affirmation that the acreage to be burned will be planted to seed crops other than cereal grains which require flame sanitation for proper cultivation.

(2) The department shall inspect cereal grain crop acreage burned under subsection (1) of this section after planting in the following spring to determine compliance with subsection (1) of this section.

(3) Any person planting contrary to the restrictions of subsection (1) of this section shall be assessed by the department a civil penalty of $25 for each acre planted contrary to the restrictions. Any fines collected by the department under this subsection shall be deposited by the State Treasurer in the Department of Agriculture Service Fund to be used in carrying out the smoke management program in cooperation with the Oregon Seed Council and for administration of this section.

(4) Any person planting seed crops after burning cereal grain crops under subsection (1) of this section may apply to the department for permission to plant contrary to the restrictions of subsection (1) of this section if the seed crop fails to grow. The department may allow planting contrary to the restrictions of subsection (1) of this section if the crop failure occurred by reasons other than the negligence or intentional act of the person planting the crop or one under the control of the person planting the crop.

SECTION 9. Pursuant to the memorandum of understanding established under section 4 of this 1991 Act, the State Department of Agriculture:

(1) Shall:

(a) Conduct the smoke management program established by rule by the Environmental Quality Commission as it pertains to open field burning, propane flaming and stack or pile burning.

(b) Aid fire districts and permit agents in carrying out their responsibilities for administering field sanitization programs.

(2) May:

(a) Enter into contracts with public and private agencies to carry out the purposes set forth in subsection (1) of this section;

(b) Obtain patents in the name of the State of Oregon and assign such rights therein as the State Department of Agriculture considers appropriate;

(c) Employ personnel to carry out the duties assigned to it; and

(d) Sell and dispose of all surplus property of the State Department of Agriculture related to smoke management, including but not limited to straw-based products produced or manufactured by the State Department of Agriculture.

SECTION 10. The Environmental Quality Commission shall establish standards of practice and performance for open field burning, propane flaming, stack or pile burning and certified alternative methods to open field burning.

SECTION 11. The Department of Environmental Quality, in coordinating efforts under ORS 468.140, 468.150, 468.290 and 468.455 to 468.480, shall:

(1) Enforce all field burning rules adopted by the Environmental Quality Commission and all related statutes;

(2) Monitor and prevent unlawful field burning; and

(3) Monitor and study the impact of open field burning on air quality in the Willamette Valley.

SECTION 12. (1) Except as provided under section 14 of this 1991 Act, no person shall open burn or cause to be open burned, propane flamed or stack or pile burned in the counties specified in ORS 468.460 (2), perennial or annual grass seed crop or cereal grain crop residue, unless the acreage has been registered under section 13 of this 1991 Act and the permits required by ORS 476.380, 478.960 and section 7 of this 1991 Act have been obtained.

(2) The maximum total registered acreage allowed to be open burned per year pursuant to subsection (1) of this section shall be:

(a) For 1991, 180,000 acres.

(b) For 1992 and 1993, 140,000 acres.

(c) For 1994 and 1995, 120,000 acres.

(d) For 1996 and 1997, 100,000 acres.

(e) For 1998 and thereafter, 40,000 acres.

(3) The maximum total acreage allowed to be propane flamed under subsection (1) of this section shall be:

(a) In 1991 through 1997, 75,000 acres per year; and

(b) In 1998 and thereafter, if the preparations and standards under subsection (4) of this section are met, and a system of monitoring developed by the department indicates that not more than 20 pounds of particulate matter 10 microns in diameter or less is emitted for each acre propane flamed, 75,000 acres per year may be propane flamed.

(4)(a) After January 1, 1998, fields shall be prepared for propane flaming by removing all loose straw or vacuuming or prepared using other techniques approved by rule by the commission.

(b) After January 1, 1998, propane equipment shall satisfy best available technology and result in achieving a standard of:

(A) Not more than 20 pounds of particulate matter 10 microns in diameter or less being emitted for each acre propane flamed; or

(B) Another equivalent standard adopted by rule by the commission.

(5) Notwithstanding the limitations set forth in subsection (2) of this section, in 1991 and thereafter, a maximum of 25,000 acres of steep terrain and species identified by the Director of Agriculture by rule may be open burned and shall not be included in the maximum total permitted acreage.

(6) Acreage registered to be open burned under this section may be propane flamed at the registrant's discretion without reregistering the acreage.

(7) In the event of the registration of more than the maximum allowable acres for open burning in the counties specified in ORS 468.460 (2), after 1996, the commission, after consultation with the department, by rule or order may assign priority of permits based on soil characteristics, the crop type, terrain or drainage.

(8) Permits shall be issued and burning shall be allowed for the maximum acreage specified in subsection (2) of this section unless:

(a) The daily determination of suitability of meteorological conditions, regional or local air quality conditions or other burning conditions requires that a maximum number of acres not be burned on a given day; or

(b) The commission finds after hearing that other reasonable and economically feasible, environmentally acceptable alternatives to the practice of annual open field burning have been developed.

(9) Upon a finding of extreme danger to public health or safety, the commission may order temporary emergency cessation of all open field burning, propane flaming or stack or pile burning in any area of the counties listed in ORS 468.460 (2).

(10) The commission shall act on any application for a permit under section 7 of this 1991 Act within 60 days of registration and receipt of the fee required under section 13 of this 1991 Act. The commission may order emergency cessation of open field burning at any time. Any other decision required under this section must be made by the commission on or before June 1 of each year.

SECTION 13. (1)(a) On or before April 1 of each year, the grower of a grass seed crop shall register with the county court or board of county commissioners, the fire chief of a rural fire protection district, the designated representative of the fire chief or other responsible persons the number of acres to be open burned, propane flamed or stack or pile burned in the remainder of the year. At the time of registration, the Department of Environmental Quality shall collect a nonrefundable fee of $2 per acre registered to be sanitized by open burning or $1 per acre to be sanitized by propane flaming. The department may contract with counties and rural fire protection districts or other responsible persons for the collection of the fees which shall be forwarded to the department. Any person registering after April 1 of each year shall pay an additional fee of $1 per acre registered if the late registration is due to the fault of the late registrant or one under the control of the late registrant. Late registrations must be approved by the department. Copies of the registration form shall be forwarded to the department. The required registration must be made and the fee paid before a permit shall be issued under section 7 of this 1991 Act.

(b) Except as provided in paragraph (d) of this subsection, the department shall collect a fee in accordance with paragraph (c) of this subsection before issuing a permit for open burning, propane flaming or stack or pile burning of perennial or annual grass seed crop or cereal grain crop residue under ORS 468.455 to 468.480. The department may contract with counties and rural fire protection districts or other responsible persons for the collection of the fees which shall be forwarded to the department.

(c) The fee required under paragraph (b) of this section shall be:

(A) $8 per acre of crop sanitized by open burning in the counties specified in ORS 468.460 (2);

(B) $4 per acre of perennial or annual grass seed crop sanitized by open burning in any county not specified in ORS 468.460 (2);

(C) $2 per acre of crop sanitized by propane flaming; and

(D) For acreage from which straw is removed and burned in stacks or piles:

(i) $2 per acre from January 1, 1992, to December 31, 1997;

(ii) $4 per acre in 1998;

(iii) $6 per acre in 1999;

(iv) $8 per acre in 2000; and

(v) $10 per acre in 2001 and thereafter.

(d) The fee required by paragraph (b) of this subsection shall not be charged for any acreage where efficient burning of stubble is accomplished with equipment certified by the department for field sanitizing purposes or with any other certified alternative method to open field burning, propane flaming or stack or pile burning. The fee required by paragraph (b) of this subsection shall not be charged for any acreage not harvested prior to burning or for any acreage not burned.

(2) All fees collected under this section shall be deposited in the State Treasury to the credit of the Department of Agriculture Service Fund. Such moneys are continuously appropriated to the State Department of Agriculture for the purpose of carrying out the duties and responsibilities

carried out by the State Department of Agriculture pursuant to the memorandum of understanding established under section 4 of this 1991 Act.

(3) It is the intention of the Legislative Assembly that the programs for smoke management, air quality monitoring and the enforcement of rules under ORS 468.450 to 468.495 be operated in a manner that maximizes the resources available for the research and development program. Therefore, with regard to the disbursement of funds collected under subsection (1) of this section, the department shall act in accordance with the intent of the Legislative Assembly and shall:

(a) Pay an amount to the county or board of county commissioners or the fire chief of the rural fire protection district, for each fire protection district $1 per acre registered for each of the first 5,000 acres registered in the district, 75 cents per acre registered for each of the second 5,000 acres registered in the district and 35 cents per acre registered for all acreage registered in the district in excess of 10,000 acres, to cover the cost of and to be used solely for the purpose of administering the program of registration of acreage to be burned, issuance of permits, keeping of records and other matters directly related to agricultural field burning.

(b) Designate an amount to be used for the smoke management program. The department by contract with the Oregon Seed Council or otherwise shall organize rural fire protection districts and growers, coordinate and provide communications, hire ground support personnel, provide aircraft surveillance and provide such added support services as are necessary.

(c) Retain funds for the department for the operation and maintenance of the Willamette Valley field burning air quality impact monitoring network and to insure adequate enforcement of rules established by the Environmental Quality Commission governing standards of practice for open field-burning, propane flaming and stack or pile burning.

(d) Of the remaining funds, designate an amount to be used for additional funding for research and development proposals described in the plan developed pursuant to section 15 of this 1991 Act.

SECTION 14. (1) Notwithstanding the provisions of section 12 of this 1991 Act, for the purpose of improving by demonstration or investigation the environmental or agronomic effects of alternative methods of field sanitization, the commission shall by rule allow experimental field sanitization under the direction of the department for up to 1,000 acres of perennial grass seed crops, annual grass seed crops and grain crops in such areas and for such periods of time as it considers necessary. Experimental field sanitization includes but is not limited to:

(a) Development, demonstration or training personnel in the use of special or unusual field ignition techniques or methodologies.

(b) Setting aside times, days or areas for special studies.

(c) Operation of experimental mobile field sanitizers and improved propane flaming devices.

(d) Improved methods of stack or pile burning.

(2) The commission may allow open burning under this section of acreage for which permits have not been issued under section 12 of this 1991 Act if the commission finds that the experimental burning:

(a) Can, in theory, reduce the adverse effects on air quality or public health from open field burning; and

(b) Is necessary in order to obtain information on air quality, public health or the agronomic effects of an experimental form of field sanitization.

(3) The commission may, by rule, establish fees, registration requirements and other requirements or limitations necessary to carry out the provisions of this section.

SECTION 15. (1) The State Department of Agriculture annually shall develop a plan to award funding for applied research or development of methods, techniques or equipment related to alternatives to the practices of open field burning, propane flaming and stack or pile burning. The funding plan shall include fees made available for such purposes and appropriations from the State of Oregon in the amount of $500,000 for each year from 1992 through 1997. The plan shall include funding for research proposals, including but not be limited to:

(a) Utilization and marketing of crop residue, such as straw;

(b) Research on development of alternate crops; and

(c) Research on development of alternate weed, pest and disease controls, including but not limited to genetic research.

(2) The State Department of Agriculture shall submit its annual research plan to the Joint Legislative Committee on Ways and Means, or during the interim between legislative sessions, to the Emergency Board.

SECTION 16. Notwithstanding any provision of section 12 or 13 of this Act, in 1991, no registration or fee shall be required for propane flaming or stack or pile burning operations.

SECTION 17. Before January 1, 1992, the Environmental Quality Commission shall review rules adopted before the effective date of this Act and amend such rules as necessary to carry out and enforce the smoke management program set forth in sections 2 to 16 of this Act.

SECTION 18. (1) For the biennium beginning July 1, 1991, there is allocated to the Emergency Board, out of the Executive Department Economic Development Fund, the sum of $1,000,000 which may be allocated by the Emergency Board only for the purpose of funding the costs of research projects included in the research plan developed by the State Department of Agriculture under section 15 of this Act.

(2) If all of the moneys referred to in subsection (1) of this section are not allocated by the Emergency Board prior to June 30, 1993, such moneys on that date become available for any other purpose for which the Emergency Board lawfully may allocate funds.

SECTION 19. ORS 468.460 is amended to read:

468.460. In order to regulate open field burning pursuant to [*ORS 468.475*] **section 12 of this 1991 Act:**

(1) In such areas of the state and for such periods of time as it considers necessary to carry out the policy of ORS 468.280, the commission by rule may prohibit, restrict or limit classes, types and extent and amount of burning for perennial grass seed crops, annual grass seed crops and grain crops.

(2) In addition to but not in lieu of the provisions of [*ORS 468.475*] **section 12 of this 1991 Act** and of any other rule adopted under subsection (1) of this section, the commission shall adopt rules for Multnomah, Washington, Clackamas, Marion, Polk, Yamhill, Linn, Benton and Lane Counties, which provide for a more rapid phased reduction by certain permit areas, depending on particular local air quality conditions and soil characteristics, the extent, type or amount of open field burning of perennial grass seed crops, annual grass seed crops and grain crops and the availability of alternative methods of field sanitation and straw utilization and disposal.

(3) Before promulgating rules pursuant to subsections (1) and (2) of this section, the commission shall consult with Oregon State University and may consult with the Soil Conservation Service, the Agricultural Stabilization Commission, the State Soil and Water Conservation Commission and other interested agencies. The department shall advise the commission in the promulgation of such rules. The commission must review and show on the record the recommendations of the department in promulgating such rules.

(4) No regional air quality control authority shall have authority to regulate burning of perennial grass seed crops, annual grass seed crops and grain crops.

(5) Any amendments to the State Implementation Plan prepared by the state pursuant to the Federal Clean Air Act, as enacted by Congress, December 31, 1970, and as amended by Congress August 7, 1977, **and November 15, 1990,** and Acts amendatory thereto shall be only of such sufficiency as to gain approval of the amendment by the United States Environmental Protection Agency and shall not include rules promulgated by the commission pursuant to subsection (1) of this section not necessary for attainment of national ambient air quality standards.

SECTION 20. ORS 468.995 is amended to read:

468.995. (1) Violation of any rule or standard adopted or any order issued by a regional authority relating to air pollution is a Class A misdemeanor.

(2) Unless otherwise provided, each day of violation of any rule, standard or order relating to air pollution constitutes a separate offense.

(3) Violation of [*ORS 468.475*] **section 12 of this 1991 Act** or of any rule adopted pursuant to ORS 468.460 is a Class A misdemeanor. Each day of violation constitutes a separate offense.

(4) Violation of the provisions of ORS 468.605 is a Class A misdemeanor.

SECTION 21. ORS 476.380 is amended to read:

476.380. (1) No person, outside the boundaries of a rural fire protection district or a forest protection district, shall cause or permit to be initiated or maintained on the property of the person, or cause to be initiated or maintained on the property of another any open burning of commercial waste, demolition material, domestic waste, industrial waste, land clearing debris or field burning without first securing a permit from the county court or board of county commissioners.

(2) The county court or board of county commissioners, or its designated representative, shall prescribe conditions for issuance of any permit and shall refuse, revoke or postpone issuance of permits when necessary to prevent danger to life or property or to protect the air resources of this state. The Environmental Quality Commission shall notify the State Fire Marshal of the type of and time for burning to be allowed on each day under schedules adopted pursuant to [*ORS 468.450 and after ORS 468.460 becomes operative, under rules as provided in*] ORS 468.460 **and section 6 of this 1991 Act**. The State Fire Marshal shall cause all county courts and boards of county commissioners or their designated representatives in the affected areas to be notified of the type of and time for burning to be allowed on each day and of any revisions of such conditions during each day. The county court, board or representative shall issue permits only in accordance with schedules of the Environmental Quality Commission adopted pursuant to this section and ORS 468.455 to 468.480, 476.990, 478.960 and 478.990 but may reduce the hours allowed for burning if necessary to prevent danger to life or property from fire. The State Fire Marshal may refuse or postpone permits when necessary in the judgment of the State Fire Marshal to prevent danger to life or property from fire, notwithstanding any determination by the county court or board of county commissioners or its designated officer.

(3) Nothing in this section:

(a) Requires permission for starting a campfire in a manner otherwise lawful.

(b) Relieves a person starting a fire from responsibility for providing adequate protection to prevent injury or damage to the property of another. If such burning results in the escape of fire and injury or damage to the property of another, such escape and damage or injury constitutes prima facie evidence that the burning was not safe.

(c) Relieves a person who has obtained permission to start a fire, or the agent of the person, from legal liability for property damage resulting from the fire.

(d) Permits an act within a city or regional air quality control authority area that otherwise is unlawful pursuant to an ordinance of the city or rule, regulation or order of the regional authority.

(4) The county court or board of county commissioners shall maintain records of all permits and the conditions thereof, if any, that are issued under this section and shall submit at such times, as the Environmental Quality Commission shall require such records or summaries thereof to the commission. The Environmental Quality Commission shall provide forms for the reports required under this subsection.

SECTION 22. ORS 478.960 is amended to read:

478.960. (1) No one, within the boundaries of a district, shall cause or permit to be initiated or maintained on one's own property, or cause to be initiated or maintained on the property of another, any open burning of commercial waste, demolition material, domestic waste, industrial waste, land clearing debris or field burning without first securing permission from the fire chief of the district and complying with the direction of the fire chief. A deputy of a fire chief has the power to perform any act or duty of the fire chief under this section.

(2) The fire chief shall prescribe conditions upon which permission is granted and which are necessary to be observed in setting the fire and preventing it from spreading and endangering life or property or endangering the air resources of this state. The Environmental Quality Commission shall notify the State Fire Marshal of the type of and time for burning to be allowed on each day under schedules adopted pursuant to [*ORS 468.450 and after ORS 468.460 becomes operative under*

rules as provided in] ORS 468.460 **and section 6 of this 1991 Act.** The State Fire Marshal shall cause all fire chiefs and their deputies in the affected area to be notified of the type and time for burning to be allowed on each day with updating messages each day as required. A fire chief or deputy shall grant permission only in accordance with the schedule of the Environmental Quality Commission but may reduce hours to be allowed for burning if necessary to prevent danger to life or property from fire. The State Fire Marshal may refuse, revoke or postpone permission when necessary in the judgment of the State Fire Marshal to prevent danger to life or property from fire, notwithstanding any determination by the fire chief.

(3) Nothing in this section relieves a person starting a fire from responsibility for providing adequate protection to prevent injury or damage to the person or property of another. If such burning results in the escape of fire and injury or damage to the person or property of another, such escape and damage or injury constitutes prima facie evidence that the burning was not safe.

(4) Within a district, no person shall, during the closed season, operate any equipment in forest harvesting or agricultural operations powered by an internal combustion engine on or within one-eighth of a mile of forest land unless each piece of equipment is provided with a fire extinguisher of sufficient size and capacity and with such other tools and fire-fighting equipment as may be reasonably required by the fire chief of the district.

(5) No person shall dispose of any building or building wreckage within a district by fire without having first secured permission therefor from the fire chief. No person shall refuse to comply with any reasonable requirements of the fire chief as to the safeguarding of such fire from spreading.

(6) This section is not intended to limit the authority of a district to adopt a fire prevention code as provided in ORS 478.910 to 478.940 or to issue permits when the burning is done by mechanical burners fired by liquid petroleum gas.

(7) The fire chief shall maintain records of all permits and the conditions thereof, if any, that are issued for field burning under this section and shall submit at such times, as the Environmental Quality Commission shall require such records or summaries thereof to the commission. The Environmental Quality Commission shall provide forms for the reports required under this subsection.

(8) Notwithstanding any other provision of this section, a permit is required for field burning authorized pursuant to ORS 468.450 to 468.495.

SECTION 23. Section 15 of this Act is repealed January 1, 1998.

SECTION 24. ORS 468.450, 468.455, 468.458, 468.465, 468.470, 468.472, 468.474, 468.475, 468.480, 468.490 and 468.495 are repealed.

SECTION 25. This Act being necessary for the immediate preservation of the public peace, health and safety, an emergency is declared to exist, and this Act takes effect on July 1, 1991.

State of Oregon
Department of Environmental Quality

Memorandum

Date: February 28, 1997

To: Environmental Quality Commissioners

From: Langdon Marsh

Subject: Director's Report

Legislative Update

Water quality, salmon restoration and the Vehicle Inspection Program rank among the most visible legislative activities involving DEQ to date. We've provided briefings and testimony in several hearings ranging from agency overviews to specific program discussions. Although not directly involved with legislation, the 303(d) list and particularly the temperature standard has gotten a lot of attention. The 19 DEQ positions within the governor's Healthy Streams package have also attracted scrutiny, and there are more than a few alternatives under discussion by various interests in Salem.

Legislative leadership now gives verbal support to the Oregon Plan for coastal salmon restoration, and announced partial funding proposals on Wednesday. The governor's proposed beverage tax has little support. Both Will Stelle of the National Marine Fisheries Service and Chuck Findley of Region 10 EPA testified to joint legislative committees two weeks ago and emphasized the need for reliable funding for the plan.

Privatization of the Vehicle Inspection Program has also attracted legislative interest, but there have been no actual bills submitted to date. I will be talking to the Oregonian editorial board about this and other high-interest issues next Tuesday.

Some DEQ-related bills are making their way through the process. HB 2177, our bill to waive fees for on-site systems in a declared state of emergency has passed the House and is in the Senate Committee on Livability.

SB 187 to exempt golf carts and some off road vehicles from the vehicle test has passed the Senate and has received a hearing in the House Committee on Environment and Energy. The Committee wants an analysis of the contribution of golf carts on the road to air pollution before voting on the bill.

Representative Josi introduced a bill to eliminate the requirement for surety bonds for sub surface systems like trailer parks. We have no objection to the bill. It passed the Environment and Energy Committee and is on its way to the floor for a vote.

Representative Repine has introduced a bill to transfer the clean up responsibilities for home heating oil from the Oil Heat Commission to DEQ. There is also a lot of interest in underground storage tanks and funding for stations in small communities.

Forum Planned to Address Temperature Standard Issue
We will be conducting an EdNet broadcast panel discussion/Q&A session on the temperature standard March 13. The broadcast will originate from Salem and be received at a dozen sites around the state. People will be able to view the panel discussion and ask questions. I've attached an announcement with more details mailed to about 1,300 people this week. In a related action, a federal judge has once again put the pressure on Idaho and EPA to move quickly on water quality/303(d) issues.

EPA Action On Maintenance Plan Expected Soon
The EPA Region 10 has indicated they expect to take action on the Portland/Vancouver region Ozone Maintenance Plan on April 30, 1997. Approval at that time will effectively reclassify this region to "attainment" status for this pollutant. The 30-day public comment period on the plan will be announced next week. Adverse comments could possibly delay the EPA process.

This process has not been an easy one. After we formally submitted the plan to EPA, inconsistencies between state and federal rules threatened to delay final approval. However DEQ and EPA staff have been able to resolve all of these issues and it is beginning to look as if this long task if finally at an end. Although the department does anticipate some type of formal ceremony marking this event and recognizing all who have contributed, I would like to point out that this occasion could very well have been delayed without the cooperation and creative thinking of Region 10 air quality staff. They have truly been partners in this process.

Hearing Planned for Hyundai Certification Changes
After extensive review, DEQ will take a set of proposed wording changes to Hyundai America's 401 Certification out to public hearing March 19 in Eugene.The company initially requested changes to the November, 1995, certification last fall, claiming that language in the 401 set unattainable water quality standards. In all, Hyundai asked for 17 different changes to existing conditions. We propose to change five and add a new condition. I believe these changes will clarify our intent to protect water quality at the highest possible level during construction and operation of the computer chip manufacturing plant.

OCS Court Action
The state by and through DEQ has a pending civil action for injunctive relief, penalties and response costs against OCS in Coos County Circuit Court. You may recall OCS is the facility in Coos County that has for many years ignored DEQ orders to clean up waste oil and sludge ponds created in connection with its waste oil collection and septage pumping business.
The AG's office is in the process of amending our complaint to add an additional claim under the solid waste law ORS 459 which provides that the EQC can bring an action to enforce or restrain violations of that law .The complaint will therefore be by and through DEQ/EQC.

Technically AG views DEQ/EQC as one legal entity for purposes of litigation of this sort. However, we know the EQC wants to, and should be, advised when it is made a party to litigation. This doesn't require any formal EQC action.

You are invited to participate in a water quality temperature forum

Since adopting the new water quality temperature standard in January 1996, the Department has received many calls and letters expressing concern with the standard. Along with these concerns are views that the standard is arbitrary, unachievable, and was derived by DEQ without consultation with anyone. We have also received comments that question the scientific basis of the standard.

In an attempt to address these issues, and to encourage a public discussion on the standard, the Department proposes holding a temperature forum using the state's Ed-Net system. The forum will be held as follows:

Date: March 13, 1997
Time: 7:00 p.m. to 9:30 p.m.
Place: the forum will be held at the following locations:

City	Member Name	Room/Bldg
Pendleton	Blue Mtn. Community College	Morrow Hall, Room 2
Burns	Burns High School	Conference Room
Bend	Central Ore. Community College	Boyle Educ. Ctr. Rm
La Grande	Eastern Ore. State College	Inlaw 103
John Day	Grant Union High School	Library
Eugene	Lane County ESD	Room 2
Klamath Falls	Merle West Medical Ctr.	Com. Health Ed. Ctr.
Medford	Rogue Valley Medical Ctr.	Lecture 1
Coos Bay	SW Ore. Community College	Tioga 103
Gold Beach	South Coast ESD (South Ctr)	Board Room
Baker City	St. Elizabeth Comm. College	Room 113
Roseburg	Umpqua Community College	Conference Room

We encourage you to attend and to participate in the forum. We will begin with brief presentations from a panel comprising DEQ and OSU staff and faculty and representatives of the Policy Advisory Committee that deliberated on the standard. The forum will then be opened up for your questions. The moderator, Carolyn Young from DEQ, will direct questions to panel members for brief reply.

We will have staff at each of the Ed-Net sites to ensure that anyone who has a question has the opportunity to ask it, and receive a response, and also to have available informational materials.

Enclosed is a brief question and answer fact sheet on the temperature standard. We encourage you to read this prior to the forum, so you can be familiar with the standard. We look forward to receiving your questions at the forum, and to addressing your issues on the standard.

If you need any further information prior to the forum, please do not hesitate to contact Debra Sturdevant at (503) 229-6691. We look forward to seeing you, and hearing from you in the upcoming water quality temperature forum. We intend to hold more of these if there is sufficient interest.

Sincerely,

Langdon Marsh
Director

The Idaho Statesman
Tuesday, February 25, 1997 50¢

EPA to take over state water quality program

Statesman file photo
All Idaho rivers must be safe for fish and swimmers, a federal judge said in a ruling announced Monday.

Idaho taking too long to comply with Clean Water Act, judge says

By Rocky Barker
The Idaho Statesman

A judge has ordered the federal government to take over Idaho's water quality program to ensure that people can fish and swim in all 106,000 miles of the state's waterways.

U.S. District Judge William L. Dwyer ruled that the U.S. Environmental Protection Agency has given the state too long to comply with the federal Clean Water Act.

In a decision announced Monday, Dwyer gave the EPA 60 days to rewrite Idaho's water quality standards so they protect fish and recreation in all rivers and lakes.

The decision could give the state less wiggle room to adjust to the concerns of industry, farmers and loggers.

"This means Idaho will have tougher standards quicker, especially on waters with bull trout and other native fish," said Mike Medberry, state issues director of the Idaho Conservation League.

This is Dwyer's second major ruling forcing Idahoans to clean up rivers and lakes. In a 1996 lawsuit, he ordered the state to clean up 962 river segments in five years.

See Rivers/Back Page

Rivers/From Page 1A

In his decision, Dwyer took issue with the EPA's decision to withdraw a June 1996 letter rejecting Idaho's water quality standards.

That letter pointed out six parts of the state plan that failed to meet federal law.

In the most far-reaching deficiency, EPA found that 92 percent of Idaho's rivers and lakes are only protected for recreation — not for aquatic species. On the other hand, many streams specifically designated to protect fish aren't required to meet standards for swimming or other forms of recreation.

The two standards are often different.

Rules to protect aquatic species might address such factors as water temperature and chemistry. Those written to protect recreation would address human health concerns.

Here are some of the other deficiencies EPA found in the state plan:

■ Temperature ranges are inadequate to protect cold water species like bull trout, Kootenai River sturgeon and Snake River snails.

■ The state exempts private waters from state standards, contrary to federal law.

■ State rules for protecting the "mixing zone," an area where a polluted stream enters a clean one, aren't tough enough.

Instead of forcing the state to rewrite the rules in 90 days, as required by the Clean Water Act, EPA allowed the state to begin a negotiated rule-making process.

Those negotiations are not expected to be completed until November, and the rules would still need legislative approval next year.

"This ruling shows the EPA and the state are in collusion to stall clean-up of our tragically trashed trout streams," said Ron Mitchell, executive director of the Idaho Sporting Congress, which joined the Idaho Conservation League in filing the suit.

Spokespeople for both Gov. Phil Batt and the Division of Environmental Quality were studying the agreement late Monday.

"They're trying to figure out what it means," said Shirley Mix, DEQ information officer.

The Clean Water Act requires all rivers and streams to be managed so that they are "fishable and swimmable." Idaho's water quality standards to prevent water pollution must meet these minimum federal standards.

"The stakes are really high," said Bob Jacobson, EPA spokesman in Seattle. "There are a lot of people here who will have to look at this decision before we know what we're going to do."

Legislative Review Draft

Oregon Coastal Salmon Restoration Initiative

Executive Summary

February 24, 1997

This restoration plan has been developed to supplement the first draft of the Oregon Coastal Salmon Restoration Plan, which was released for public and scientific peer review in August 1996. Through a series of eight community briefings held throughout western Oregon, public input was gathered to improve the plan. In November 1996, a group of respected scientists was asked to review the plan and suggest improvements. Over the last six months, the many agency staff working on the Coastal Salmon Restoration Initiative have been meeting with staff of the National Marine Fisheries Service and other key partners to improve and strengthen the plan. This draft is the result of those efforts.

This draft will be presented in Legislative hearings in late February 1997. A final draft of Oregon's Coastal Salmon Restoration Plan will be submitted to the National Marine Fisheries Service on March 12, 1997. This plan will be useful in NMFS's decision on potential listings of coastal coho salmon under the federal Endangered Species Act. This decision is expected on April 25, 1997.

The plan is still a draft. It will change and improve based on constructive suggestions from the public and partners, and particularly based on suggestions of the Oregon Legislature. Over the long term, it will continue to change as we implement the plan and gather results from monitoring.

Overview

Oregon's conservation plan, including both protection and restoration elements, is designed to restore salmon to a sustainable level at which they can once again be a part of people's lives. The emphasis is on coho salmon in coastal river basins. However, it is a model that will expand to include all salmon and trout throughout the state. Although the plan is focused on salmon, it will conserve and restore functional elements of natural systems that support not only fish but also wildlife and communities.

In contrast to many endangered species plans which rely primarily on regulatory approaches, this plan represents a new way of restoring natural systems ...the "Oregon Approach." This approach meshes scientifically sound actions with local watershed level public support. It relies on teamwork among the various levels of government and is dependent on monitoring and accountability for results. Strong enforcement of existing laws and regulations are a foundation upon which voluntary and cooperative actions can be built. We believe that this is the only approach—one which will generate the support and commitment across all sectors, from landowners and industry to government agencies—to restore the salmon and their natural systems.

Oregon's Conservation Plan

- Coordinated agency programs
- Community based action
- Monitoring
- Appropriate corrective measures

The measures and budget portions of this plan include both salmon habitat and water quality actions. Efforts to improve water quality are inextricably linked to salmon restoration and will also help meet the requirements of the Clean Water Act. Improved salmon habitat will lead to better water quality from our watersheds. This plan will require an unprecedented level of cooperation and coordination among local, state and federal partners. It represents the commitment of all Oregonians to the fish, the watersheds, and our children.

The table of contents for the plan supplement follows this summary (Pg. 10). This document outlines some of the more significant improvements to the plan.

Historical Review of Restoration

The section on the history of salmon restoration efforts highlights that this is not a new problem. Government has launched many meetings, commissions, initiatives and reviews of the salmon problem over the last 100 years. However, most of these have been unsuccessful due to inadequate scientific foundation, inaccurate target projections, lack of integrated decision making, lack of monitoring and accountability, and/or lack of sustained political priority. History has offered us an opportunity to demonstrate that the CSRI can overcome these challenges to success.

Conceptual Foundation

In order to overcome the historical tendency for unfounded optimism for technical solutions, the CSRI is based on three basic principles:

1. Restoration of salmon must address natural and cultural systems,
2. Salmon require complex and interconnected habitats which are created, altered and maintained by natural physical processes, and
3. Life history diversity, genetic diversity, and metapopulation organization (patterns of populations) are ways salmon adapt to their complex and interconnected habitats.

These principles are similar to those underlying the restoration efforts for salmon on the Columbia River System.

Independent Science Team

Offers:

- *Independent audit*
- *Accountability*

An independent team of 4-5 scientific experts will be established to help the CSRI partners base restoration efforts on the most sound science available. The team will provide an independent audit each year on the strengths and weaknesses of the CSRI. They will particularly focus on the adaptive process of compiling new information and results into a review of goals, objectives, strategies and approaches. Accountability was one of the strongest points raised by NMFS, the public and peer reviewers. The science team will help hold the plan accountable to its goals.

New Information: *Expectations for Production & Probability of Persistence*

A life cycle model of coho populations has been improved based on actual habitat capacity. This model suggests that total production, proportion of habitat utilized and spawner needs vary dramatically based on cycles of ocean survival. When long cycles of low ocean survival occur due to weather patterns, the coho populations contract into pockets of the best

freshwater habitat. Fewer spawners are needed to seed these pockets, and the production expectations should be reduced. When ocean patterns change and survival improves, coho are able to replace themselves and will expand into more marginal freshwater habitat. More spawners are needed to seed this habitat and expectations for total production increase.

This work suggests that production might vary from 168,000 to 430,000 coho during periods of low and moderate ocean survival respectively. Spawning goals for adjusting harvest rates have been updated based on this improved model.

Linked to:

Monitoring
Enforcement

The model has also been used to estimate the probability of persistence under various assumptions. The model shows that populations with the poorest freshwater habitat, such as the Tillamook Bay system will experience higher risk of extinction if population numbers fall below 300, if habitat quality declines significantly and/or if ocean productivity declines further from current rates. Populations from basins with better freshwater habitat, such as the Yaquina system, show low probability of extinction at current or improved ocean conditions even if habitat declined in quality. The Rogue populations have not yet been modeled.

Habitat improvement is important in order to increase production of coho for any level of ocean survival and to help ensure persistence if ocean conditions drop below current levels. Improved habitat and greater numbers of coho in the populations will also help ensure persistence if our assumptions about how coho survive in underseeded streams prove too optimistic.

Monitoring

Provides:

- *Continued improvements*
- *Adaptive management*

There is almost unanimous response from NMFS, the public and peer reviewers on the critical role of monitoring to assure accountability, adaptive learning and credibility. Over 60 different groups, including tribes, agency staff and watershed councils, have been working with stakeholders and staff in a series of scoping meetings to develop the next iteration of the monitoring plan.

The current plan describes 15 distinct tasks from monitoring ha`qpQt quality/quantity, to fish abundance and even estimating ocean productivity levels. The monitoring plan includes provisions for more intensive monitoring in some core production and index areas. Other parts of the monitoring plan will cover a broader geographic scope. Monitoring results will be summarized by the team, including state/federal agency staff and interested groups, annually for Oregon's report to the people and the federal government on the progress of restoration efforts.

Voluntary public participation in the monitoring program is a key element to the success of these efforts. The training for the monitoring program will provide great educational benefits. Participants such as landowners, educators, children and conservation groups will be more interested in the results of CSRI if they have participated in the monitoring.

Education and Outreach

Establishes:

- *Tone for future decisions by lawmakers and citizens*
- *Public "ownership" of stewardship efforts*

CSRI outreach efforts are focused on educating the public about natural resource issues. This includes creating ownership of the plan through stewardship activities and facilitating new partnerships at the local level. The value of education to protection and restoration efforts cannot be measured by data collection and monitoring—but is measured by the number of citizens who come forward to volunteer their time to help implement the plan and build stewardship for the future. The outreach and education section of the plan has moved from informing the public, to facilitating the development of education tools for private and public citizens to use to help implement the plan.

The Outreach Team has developed a compendium of salmon/watershed education programs, services and activities resulting from a survey of educators (individuals, groups, agencies and organizations) conducted in January 1997. The survey also identified needs, barriers, successes and failures to improve outreach efforts and develop strategies for education activities. This survey, together with an OSU survey of coastal residents and leaders, provides valuable insight about the willingness of Oregonians to be involved in salmon restoration and how to improve this involvement.

The Outreach Team partnered with Oregon State University Extension Service and seven state agencies to host a Salmon and Watershed Education Workshop in February 1997. Approximately 200 leaders came together to review the compendium and survey results. Participants also identified ways to effectively deliver existing education programs to key audiences, and focus on new education opportunities including: establishing a clearinghouse for salmon and watershed education materials, finding ways to broadly distribute existing model curriculum, developing how-to training materials, creating incentive programs for involvement, facilitating local communication networks and seeking more secure funding for education.

Watershed Councils

Ties into:

Soil and Water Conservation Districts

The section on watershed councils has been rewritten from the August 1996 draft. Oregon now has over 60 watershed councils working with local Soil and Water Conservation Districts and landowners. The revised draft highlights the key role for these partners in identifying basin assessments, understanding limiting factors and involving landowners. Watershed Councils are developing action plans and monitoring programs at the local level.

The Southwest Oregon Salmon Restoration Initiative document is an excellent example of a collaborative effort of state and federal agencies working with nine watershed councils. This work was coordinated by the Rogue Valley Council of Governments and is included in the plan.

In order for watershed councils to continue restoration efforts, they have many ongoing needs These include: long term funding for coordinators, adequate technical support, cost share grants and incentives for landowners. In addition, action plans need to be more holistic/comprehensive, and some watershed councils need broader landowner and stakeholder support.

Key measures

- More trees in riparian areas
- Habitat conservation plans
- Water quality management
- Improved enforcement
- Improved fish passage
- More fish screens
- Better hatchery management
- Improved physical habitat

State Agency Measures and Workplans

State Agency measures represent commitments by various agencies and their stakeholders. The workplans show how agencies are already implementing measures with their current staff and budgets. Specific assignments, due dates and products to be produced are listed.

The entire list of state agency measures was reformatted for this draft by categories of "Factors for Decline." This allows the reader to understand how the measures relate to specific objectives designed to address one of the eleven major factors which have caused the decline of salmon. The factors for decline include: loss/degradation of riparian areas, channel morphology, substrate changes in streams, loss of instream roughness (structure), fish passage impediments, loss of estuarine rearing habitat, loss of wetlands, water quality degradation/sedimentation, changes in flow, elimination of habitat and direct take of salmonids such as fishing mortality or predation.

The agencies and their stakeholders have listed over 200 measures and actions to address these factors and to achieve the objectives in order to restore salmon and watersheds. In most cases, we've listed specific numerical objectives and timelines for achievement. We understand that in some cases, numerical objectives are not available or need to be developed at the watershed or regional level to be most applicable. In these cases the agencies will work with stakeholders, watershed council/SWCD and NMFS staff to develop the appropriate objective and achievement schedule. A key factor is that the monitoring plan needs to be able to track these objectives and schedules by watershed, region and coastwide as appropriate.

Some of the most significant measures include:

- **Trees:** increased numbers of conifers left in riparian areas on state and private land, beyond the requirements of the Forest Practices Act.
- **Habitat conservation:** plans developed for the Elliott State Forest and in development for the Tillamook/Clatsop State Forest.
- **Road issues:** commitment to evaluate road sedimentation risks and to correct problems on state and private forest roads that may threaten salmon streams.
- **Water quality management:** SB1010 will be used by the Department of Agriculture to work with landowners to develop water quality management plans. These water quality management plans will be used to develop best management practices to meet water quality standards in agricultural areas.
- **Water quantity:** variety of tools to maintain and enhance streamflows such as better enforcement of illegal water diversions, as well as water conservation programs, instream water rights, off stream storage, and water right transfer and leases will be used to meet the flow needs of fish, while still respecting senior water rights.
- **Fill and removal:** laws enforced more strongly in salmon production areas, particularly in core production areas.

The measures, workplans and proposed budget packages have been developed cooperatively across agency boundaries. This was necessary to prevent duplication and promote interagency partnering. Some measures may appear redundant or even duplicative—but they are in fact focused on the resource mandated by the agencies mission e.g. ODFW=fish, DEQ=water quality.

- **Fish passage:** will be restored where man-made barriers are blocking access to historic range. Culverts and push-up dams are priority focus areas.
- **Fish screens:** will be needed on irrigation diversions which are impacting coastal salmon. ODFW has a program in progress. Accelerated funding and implementation will be required.
- **Fishery management:** spawning escapement needs will require very restrictive management of fisheries in order to rebuild population numbers. Marking hatchery fish to provide for selective fisheries and to identify strays on spawning grounds will be accomplished. Strict limits on strays are in place.
- **Hatchery production:** will be reduced and new broodstocks will be developed to ensure compatibility with natural stocks.
- **Water quality:** DEQ will intensify it's work with the Departments of Agriculture and Forestry to en sure water quality standards are met. Water quality standards will continually be updated through the triennial review process. Monitoring programs will be strengthened.
- **Habitat:** private forest and agricultural landowners will continue and intensify efforts to restore habitat structure and off channel habitat through watershed council, SWCD and industry sponsored initiatives.

Many of the objectives have been developed using the habitat survey database. A reasonable baseline already exists to track habitat and water quality status for coastal basins. Maintaining and expanding this effort is a key part of the monitoring program and will provide accountability and feedback on the results of these measures.

Federal Measures & Workplans

Provides:

- *Technical support*
- *Education*
- *Studies effects of protected predators on salmon*

Federal agencies have included measures and workplans in this draft to support the CSRI. The aquatic conservation strategy associated with the Northwest Forest Plan should dramatically improve fish habitat, watershed stability and water quality over time. This is one of the major anchors of the CSRI restoration strategy. Additionally, federal agencies will provide support for monitoring, watershed council activities and technical efforts such as watershed assessment and for education. Federal Agencies will work with Oregon to determine the effect of federally protected predators on salmon and what measures might address identified problems.

Local Government Measures: Cities, Counties and Ports

The Association of Oregon Counties, League of Oregon Cities, Oregon Public Ports Association and the Oregon Coastal Zone Management Association are partners in the CSRI. The counties and cities have summarized their measures in terms of biological benefit to fish. While only a small fraction of coho streams are currently in urban development areas, local government can have a profound impact in the future as residential growth expands based on local land use plans, and water sources are developed to facilitate this growth.

Examples:

- *Port of Brookings*
- *Port of Garibaldi*
- *Southwest Salmon Restoration Initiative*
- *Umpqua Basin Fisheries Restoration Initiative*

Over 50 individual projects are listed in this report by the counties and cities. The Rogue and Umpqua Basins are among the places where local governments can have the most impact on salmon. The involvement and commitment of the local governments in the Rogue Basin are demonstrated by the salmon restoration plan submitted by the Rogue Valley Council of Governments. Douglas County was highlighted in the report as setting an excellent example of commitment to salmon as exemplified by the Umpqua Basin Fisheries Restoration Initiative (UBFRI) which was established by the county in 1992.

The Oregon Public Ports Association has also summarized their measures and provided important specific examples. The ports of Brookings and Garibaldi are examples of "salmon friendly" ports, whose projects go beyond dredging, pollution control at marinas and general land use input. These ports are sponsoring habitat restoration, fish passage projects, and regional coordination between local governments.

Enforcement

Feedback from the public, peer reviewers and NMFS also reinforced the critical role of enforcement in the CSRI. Building on the foundation of current law and regulation with voluntary and cooperative efforts, necessarily implies the commitment to enforce the current baseline effectively. The enforcement section of the supplement focuses on three major new initiatives.

Accomplishes:

- *Improves compliance with existing laws*
- *Avoids need for new regulation*
- *Prioritizes actions by potential benefit to fish*

First, we recognize that voluntary compliance with environmental laws requires the right balance of education, enforcement action and compliance monitoring. The Fish and Wildlife Division of the Oregon State Police has always supported habitat protection and environmental law enforcement in addition to enforcing hunting and fishing laws. Because of reductions in hunting and fishing fee dollars, 13 officers were unfunded for the 1997-99 biennium. General fund dollars were added to the division budget in the Governor's recommended budget with direction to shift workload priorities to support the CSRI. Some of these officers may be relocated to ensure effective enforcement support of the CSRI.

In addition to state police support, state natural resource agencies are committed to effective enforcement and education of their habitat protection regulations. Each agency will be responsible for demonstrating the compliance level for key laws and regulations. Examples include the Department of Forestry, which will statistically monitor the compliance rate for forest operations relating to the rules of the Forest Practices Act. Since the OSP has been monitoring compliance with fish and wildlife laws for years, they will be able to provide valuable assistance to agencies in designing these programs.

The OSP have been setting regional workload priorities in consultation with regional fish and wildlife biologists for years. This program is known as the Cooperative Law Enforcement Program and has been nationally recognized for leadership. This approach will be expanded to the Cooperative Interagency Enforcement Plan which will identify enforcement priorities for the

agencies involved in CSRI. Using this information, the OSP and agency field staff can support one another and develop enforcement workplans which reflect the regional priorities.

These programs will be monitored and compliance rates evaluated as part of the CSRI monitoring plan.

Funding

Essential to:

- *Phase II measures*
- *Watershed councils*
- *Offset by volunteer efforts*

Funding will clearly be one of the most critical tests of commitment for the CSRI. The public, the peer reviewers and NMFS have reiterated that without substantial new funding and a long-term commitment, the CSRI has little chance of recovering the salmon and watersheds to sustainable, economically viable levels. More than any other item, funding serves as the litmus test of commitment.

The Oregon Legislature is currently reviewing a proposal called the "Natural Resources Investment Package" which dedicates $30,140,387 in the 1997-99 biennium to salmon recovery and the healthy streams partnership (statewide water quality initiative). The Natural Resources Investment Package allocates roughly $20 million to cost share grants to landowners, Soil and Water Conservation Districts, watershed councils and others for watershed and salmon projects. Roughly $10 million is allocated to state agency staff to assist with water quality management plans, salmon restoration projects and monitoring. This amount would support 19 positions in the Department of Agriculture, 19 positions in the Department of Environmental Quality, 14 positions in the Department of Fish and Wildlife, 6 positions in the Department of Forestry , 4 positions in the Water Resources Department, and 1 position in the Department of Land Conservation and Development.

In addition to the Natural Resources Investment Package, state natural resource agencies were budgeted at current service levels of general fund, when many other agencies were required to take a 10% cut in the Governor's recommended budget. This reflects that all the natural resources agencies in total, only use about 1% of the general fund. A further general fund cut would seriously undermine the measures that agencies are currently implementing. A number of agencies have included policy option packages in the Governor's recommended budget to assist in implementing the CSRI plan.

Federal Funding

Federal agencies are already making substantial investments in salmon and watershed restoration. The Bureau of Land Management and the US Forest Service are involved in funding and implementing the Northwest Forest Plan, which is a cornerstone of the CSRI. Programs such as "Hire the Fishermen" and "Jobs in the Woods" are providing key support to watershed councils, SWCDs and other watershed restoration programs. Possible assistance from the Natural Resources Conservation Service through the

Appraisal of the Conservation Plan

Oregon concludes that the OSCRI plan is sufficient to prevent extinction and to achieve recovery of anadromous salmonids (especially coho) in coastal river basins especially in the northern ESU. This judgment is based on eight major points:

1. **Recovery**
   Several sources of information suggest that although coastal coho populations are not currently at desired levels, they remain sufficiently resilient to recover.
2. **Factors**
   Major factors for decline are being actively addressed by existing programs.
3. **Priorities**
   The conservation plan includes rationale and information to facilitate prioritization of conservation and restoration efforts.
4. **Timelines**
   Explicit objectives and timelines are stated in the conservation plan.
5. **Monitoring**
   A comprehensive monitoring program is in place.
6. **Certainty**
   The plan provides a high level of certainty that identified measures and actions will be implemented.
7. **Integration**
   The plan is founded on an active and ongoing integration and coordination of all government agencies and stakeholders.
8. **Evaluation**
   The plan includes an explicit process of evaluating whether sufficient progress is being made, overcoming institutional barriers and making future changes to the manner in which the plan is implemented.

Farm Bill and possible flood restoration funds might provide assistance.

Federal funding is needed to support the monitoring programs for federal lands, and to support federal participation with watershed councils and SWCDs. Federal funds are also needed to support research on the impact of federally protected predators on salmon.

The NMFS has supported the operation of "For the Sake of the Salmon," an organization which supports salmon and watershed restoration on a regional level.

Governor Kitzhaber will be accompanied by Senate President Adams and House Speaker Lundquist on a trip to Washington DC in the week of February 24 to visit with federal officials and federal legislators to discuss the CSRI and the potential ESA listing of coho salmon and to pursue funding support.

Summary

Oregon faces unprecedented natural resource management challenges. These challenges include restoring native fish populations and improving water quality in our rivers and streams. How we choose to meet these challenges will determine if we as Oregonians continue to control our own destiny or if we turn control over to the federal government. The CSRI represents a portion of the "Oregon Approach" which focuses on results through new and innovative ideas that rely on grassroots involvement. This draft of the CSRI plan is part of the continuing evolution of the Oregon Approach to collaborative problem solving. This initiative represents Oregon's spirit of natural resource citizenship, coupled with local involvement and government partnerships.

Draft Revision of the OCSRI Conservation Plan
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