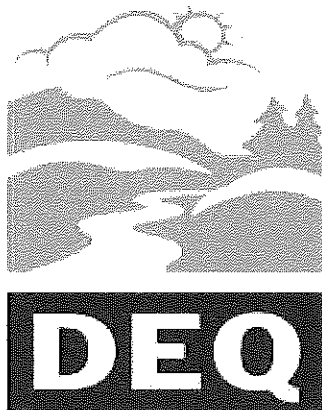


**OREGON  
ENVIRONMENTAL QUALITY  
COMMISSION MEETING  
MATERIALS 10/03/1997**



**State of Oregon  
Department of  
Environmental  
Quality**

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# A G E N D A

## ENVIRONMENTAL QUALITY COMMISSION MEETING

October 2-3, 1997  
La Grande, Oregon



**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.



***Thursday, October 2, 1997***  
***Region V Building, Large Conference Room***  
***3012 Island Ave***  
***La Grande, Oregon***

- 2:00 - 3:30 p.m.    Work Session: Umatilla Chemical Depot Permit Modification**
- 3:30 - 4:30 p.m.    The Commission will be Accepting Comments from the Public on the Umatilla Chemical Depot Permit Modification**
- 4:30 - 6:30 p.m.    The Commission will have an Open House with Local Officials**



The Commission will tour the Grand Ronde before the meeting

**Friday, October 3, 1997**  
**Region V Building, Large Conference Room**  
**3012 Island Ave**  
**La Grande, Oregon**

**Meeting will Begin at 9:30 a.m.**

**A. Approval of Minutes**

**B. ~~Approval of Tax Credits~~—There will be no tax credits at this meeting**

**C. †Rule Adoption: Modification of the Mixing Zone Rule**

**D. Action Item: Petition by JELD-WEN, INC for Declaratory Ruling Concerning Availability of Sewer as Defined in OAR 340-71-160(5)(f)**

**E. †Rule Adoption: Establish Total Daily Loads (TMDLs) for the Grande Ronde River and Catherine Creek to Meet Water Quality Standards Including Establishment of In-Stream Criteria**

**F. Commissioners' Reports**

**G. 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 will have lunch at 12:00 noon. No Commission business will be discussed.

The Commission has set aside November 20-21, 1997, for their next meeting. The location has not been established.

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.

September 26, 1997

## MEMORANDUM

**DATE:** October 2, 1997

**TO:** Environmental Quality Commission

**FROM:** Sue Oliver  
DEQ, Hermiston



**SUBJECT:** Umatilla Chemical Disposal Facility (UMCDF) Permit Modification  
October 2, 1997, Worksession Topic

The attached documents have been prepared to assist you in reviewing the background information for today's worksession concerning the Umatilla Chemical Disposal Facility Class 3 Permit Modification (adding Raytheon Demilitarization Company to the permit as a "co-permittee" and "co-operator"). Page 2 is the language from the Oregon Revised Statutes concerning the findings you must make concerning the applicant (Raytheon). Page 3 is the applicable portions of the Oregon Administrative Rules as related to the findings. Pages 4 through 7 contain the proposed Permit Conditions related to adding Raytheon to the permit:

PAGE	MODIFICATION	PERMIT CONDITION
4	A	Administrative Revisions
5	B	Liability Insurance
6	C	Training Plan Revisions
7	D	Signature Authority



## OREGON REVISED STATUTE 466.060 CRITERIA AND FINDINGS

ORS 466.060 states:

*466.060 Criteria to be met by owner and operator before issuance of permit.*

*(1) Before issuing a permit for a facility designed to treat or dispose of hazardous waste or PCB, the permit applicant must demonstrate, and the commission must find, that the owner and operator meet the following criteria:*

*(a) The owner, any parent company of the owner and the operator have adequate financial and technical capability to properly construct and operate the facility; and*

*(b) The compliance history of the owner including any parent company of the owner and the operator in owning and operating other similar facilities, if any, indicates an ability and willingness to operate the proposed facility in compliance with the provisions of ORS 466.005 to 466.385 and 466.890 or any condition imposed on the permittee by the commission.*

*(2) If requested by the permit applicant, information submitted as confidential under paragraph (a) of subsection (1) of this section shall be maintained confidential and exempt from public disclosure to the extent provided by Oregon law.*

## OREGON ADMINISTRATIVE RULE

**OAR 340-120-010 (g) & (h) state:**

**(g) Owner and Operator Capability.** *The owner, any parent company of the owner and the operator must demonstrate adequate financial and technical capability to properly construct and operate the facility. As evidence of financial capability, the following shall be submitted:*

**(A)** *Financial statements of the owner, any parent company of the owner, and the operator audited by an independent certified public accountant for three years immediately prior to the application;*

**(B)** *The estimated cost of construction and a plan detailing how the construction will be funded; and*

**(C)** *A three year projection, from the date the facility is scheduled to begin operating, of revenues and expenditures related to operating the facility. The projection should have sufficient detail to determine the financial capability of the owner, any parent company of the owner and the operator to properly operate the facility.*

**(h) Compliance History:**

**(A)** *The compliance history in owning and operating other similar facilities, if any, must indicate that the owner, any parent company of the owner and the operator have an ability and willingness to operate the proposed facility in compliance with the provisions of ORS Chapter 466 and any permit conditions that may be issued by the Department or Commission. As evidence of ability and willingness, the following shall be submitted:*

**(i)** *A listing of all responses to past actual violations identified by EPA or the appropriate state regulatory agency within the five years immediately preceding the filing of the request for an Authorization to Proceed at any similar facility owned or operated by the applicant, owner, any parent company of the owner or operator during the period when the actions causing the violations occurred; and*

**(ii)** *Any written correspondence from EPA and the appropriate state regulatory agency which discusses the present compliance status of any similar facility owned or operated by the applicant, owner, any parent company of the owner or operator.*

**(B)** *Upon request of the Department, the applicant shall also provide responses to the past violations identified prior to the five years preceding the filing of an Authorization to Proceed and the specific compliance history for a particular facility owned or operated by the applicant, any parent company of the owner or operator.*

**“MODIFICATION A”  
(ADMINISTRATIVE REVISIONS)**

**Proposed Administrative Permit Revision:**

The Signature, Introduction, and Definition pages would be changed to illustrate that the Owner and Operator is the U.S. Army (as represented by the Umatilla Chemical Depot and U.S. Army Program Manager for Chemical Demilitarization) and to add Raytheon Demilitarization Company as Co-Permittee and Co-Operator.

**Discussion:**

The Permittee and Co-Permittee must be identified in the hazardous waste permit. The Department proposes that the Signature Page, Introduction, and Definitions of the permit incorporate Raytheon Demilitarization Company as Co-Permittee and Co-Operator. Although the U.S. Army has selected Raytheon as the contractor to operate the UMCDF, the Army has the ultimate responsibility and should still be designated as “Permittee, Owner and Operator.”

**“MODIFICATION B”  
(LIABILITY INSURANCE)**

**Proposed Revision to Permit Condition II.M.**

The Permittee shall maintain and keep current the liability policies of comprehensive general liability (CGL), umbrella liability and following form excess liability, architects and engineers professional liability and contractors pollution policy and following form excess liability, first catastrophic excess liability, and second catastrophic insurance. A policy compendium shall be sent to the Department annually which shall include at a minimum, that portion defining “insured” or liability responsibility and/or a review of the necessary insurance policies that illustrates Raytheon Demilitarization/Raytheon Parent Company liability coverage equal to or in excess of the amounts submitted on 7/11/97 to demonstrate compliance. In addition, within 60 days of the effective date of this permit modification, the Co-Permittee shall submit to the Department a written warranty from the Chief Executive Officer or Treasurer of Raytheon, Inc., (parent company) claiming that the Parent Company’s insurance and assets will be used to effectuate the Co-Permittee’s third-party liability insurance policies at the UMCDF, if necessary.

**Discussion:**

ORS 466.105(5) states that the Permittee, if not provided an exemption, must “Maintain sufficient liability insurance or equivalent financial assurance in such amounts as determined by the department to be reasonably necessary to protect the environment and the health, safety and welfare of the people of this state.” The minimum amount required by 40 CFR 264.147 (adopted as Oregon Rule by OAR 340-100-002) is \$1 million per occurrence and \$2 million aggregate.

The Permittee and Applicant have submitted additional information in response to a letter from the Department on August 28, 1997. The Attorney General’s office reviewed the additional information and their comments were summarized in a memorandum from Brett McKnight to the EQC on September 24, 1997.



**“MODIFICATION C”  
(TRAINING PLAN REVISIONS TO INSURE  
CORRECTION OF NON-COMPLIANCE EVENTS)**

**Proposed New Permit Condition II.F.2.**

Within 60 days from this permit condition's effective date, the Permittee and Co-Permittee shall submit to the Department a Class 1 permit modification request, with prior approval of the Department, to modify the Training Plan specified in permit condition II.F.1 to describe how the Permittee and Co-Permittee will develop and implement new training when instances of non-compliance or potential non-compliance are identified within the Chemical Stockpile Disposal Program.

**Discussion:**

From the review of the Army/Raytheon response to the Department's Notice of Deficiency, the Department concluded that new training was very often an important and successful factor in correcting instances of non-compliance at the Johnston Atoll facility. The Department believes a permit condition is warranted to insure such a program is instituted at the UMCDF.

**“MODIFICATION D”  
(AUTHORIZED SIGNATURES)**

**Proposed Revision to Permit Condition I.X.**

All applications, reports or information required by this permit, or otherwise submitted to the Department, shall be signed and certified by the Umatilla Chemical Depot Commander, the Project Manager for the Umatilla Chemical Disposal Facility (representing the Program Manager for Chemical Demilitarization), and the Project Manager for Raytheon Demilitarization, or by a duly authorized representative for these persons, in accordance with 40 CFR 270.11.

**Discussion:**

40 CFR 270.11(b) (adopted as Oregon Rule by OAR 340-100-002) allows for either the principal executive officer or responsible corporate officer, who is identified as a permittee, to duly authorize a representative to submit reports required by the permit. This permit modification would allow for the Permittees to authorize appropriate representatives to submit reports.

Raytheon Company  
Executive Offices  
141 Spring Street  
Lexington, MA 02173  
Tel 617.860.2032

**Raytheon**

Dennis J. Picard  
Chairman and  
Chief Executive Officer

17 October 1996

Major General Robert D. Orton  
Program Manager for Chemical Demilitarization  
Building E4585  
Parish and Hoadley Roads  
Aberdeen Proving Ground, MD 21010-5401

Dear General Orton:

I am taking this opportunity to reinforce my personal commitment to the U.S. Army Chemical Weapons Program. The record performance achieved by the Army/Raytheon team at JACADS today is a result of many years of teamwork as we took on the challenge of taking a first-of-a-kind plant to fully proven operational status. My commitment is to extend that same level of proactive management to our project at Umatilla.

As you are aware, we have established a dedicated organization, the Raytheon Demilitarization Company (RDC), to support chemical demil projects. In adopting this approach, my objective was two-fold. First, I wanted a focal point for our extensive experience and expertise in this critically important area. Secondly, I wanted a seamless organization that can call on the total resources of the Raytheon Company.

RDC will be headed by Mr. Fred Hissong, Jr., who is currently the executive directing our JACADS and Annex G contracts. As the President of RDC, Fred will report directly to Mr. Charles Q. Miller, Chairman and CEO of Raytheon Engineers and Constructors and an Executive Vice President of Raytheon Company. Chuck has been responsible for demilitarization activities at Raytheon since 1989 and will provide his seven years of demilitarization experience to the management of this program.

I assure you that this new organizational entity is ready for the Umatilla project challenge. I am proud of the lead role that Raytheon has played in the Army's initiative

to neutralize our Nation's agent stockpile, working with the Army to destroy over two million pounds of agent to date without a single serious chemical incident. In part, the success the Army has achieved at JACADS reflects the Raytheon commitment to excellence, innovation and effective management.

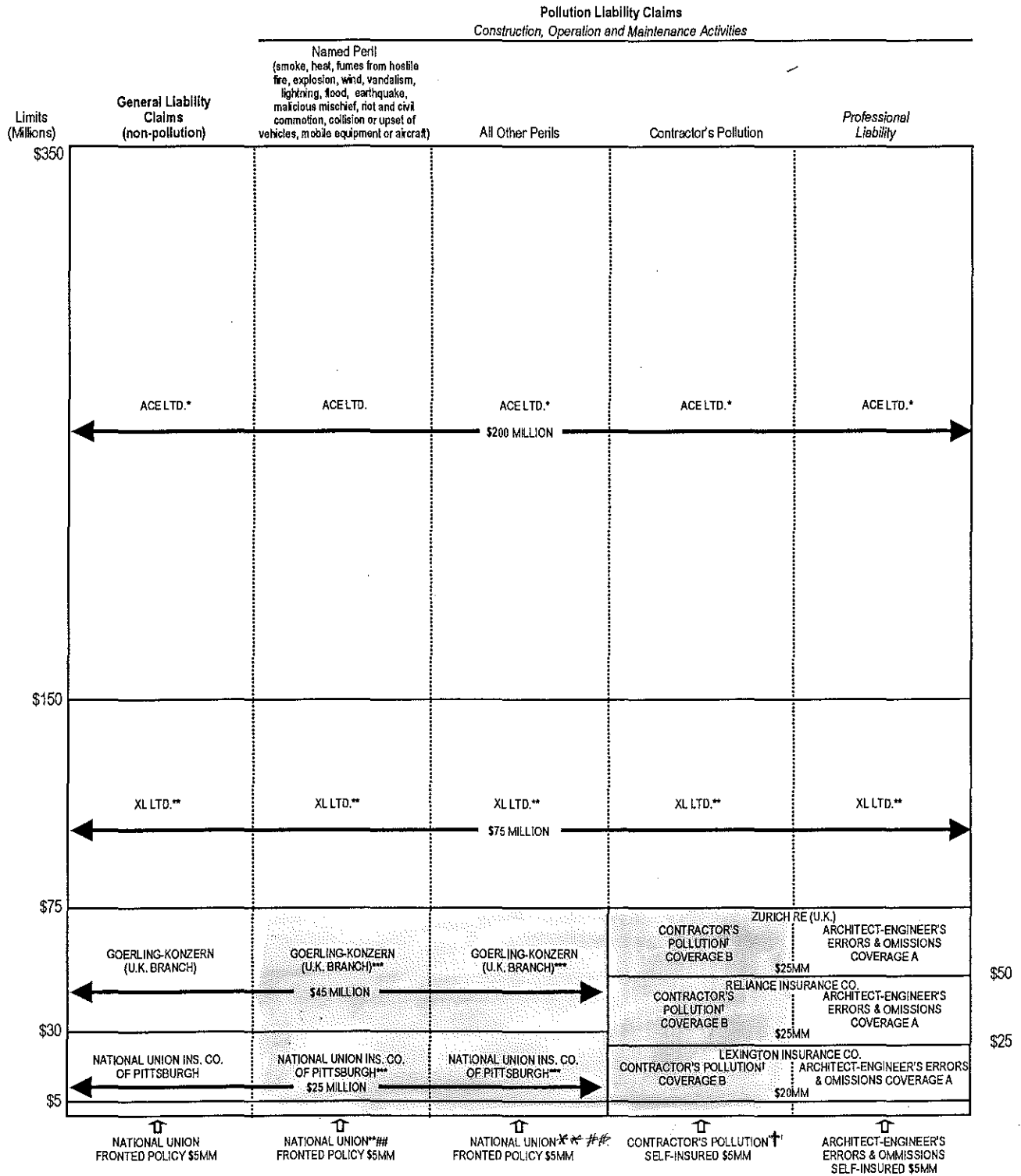
This letter is my personal assurance to you that the resources of Raytheon Company are fully prepared and committed to support the Umatilla contract.

Sincerely,

A handwritten signature in black ink, reading "Dennis J. Picard". The signature is written in a cursive style with a large, sweeping initial "D".

Dennis J. Picard  
Chairman and Chief Executive Officer

### Chart No. 3 Raytheon Company Liability Insurance Program Demilitarization Projects



- \* Policy requires the onset of pollution to be known within 7 days by the insured and reported to the insurer within 40 days
- \*\* Policy requires the onset of pollution to be known within 20 days by the insured and reported to the insurer within 80 days
- \*\*\* No coverage for pollution at a hazardous waste disposal site or for removal, treatment, etc., of pollutants at a site owned, rented or occupied by the insured
- \*\*\*\* Pollution excluded unless caused by a hostile fire
- † No coverage unless pollution arises out of insured's construction operations. Operating a facility is not a construction operation

FACSIMILE HEADER

U. S. ARMY  
HEADQUARTERS, INDUSTRIAL OPERATIONS COMMAND  
ATTN: AMSIO-ACE-S  
ROCK ISLAND, ILLINOIS 61299-6000

Date: 28 Oct 97

No. Of Pages (including header): 3 pages

To: Ms. Sue Oliver  
Dept. Of Environmental Quality  
State of Oregon  
Phone: 541-567-8297  
FAX: 541-567-4741

From: Ms. Leslee A. LaMere  
Phone: 309-782-3469  
FAX: 309-782-3804

WESTING HOUSE INDEMNIFICATION  
(ALABAMA FACILITY)



SECRETARY OF THE ARMY  
WASHINGTON

August 6, 1996



MEMORANDUM OF DECISION

SUBJECT: Authority Under Public Law 85-804 to Include an  
Indemnification Clause in Contract DAAA09-96-C-0018

In accordance with Federal Acquisition Regulation (FAR) 50.403-1, Westinghouse Electric Corporation has requested that, pursuant to authority provided in Public Law 85-804, the Army include an indemnification clause in its contract DAAA09-96-C-0018 for the construction, systemization, operations, maintenance and decommission of the Anniston Chemical Demilitarization Facility (ANCDF).

Under this contract, Westinghouse is responsible for all facets of the process to destroy the lethal chemical agents and munitions stockpiled at the Anniston Army Depot. Upon review of the functions and responsibilities that Westinghouse will have, I find that execution of such will subject the contractor to certain unusually hazardous risks which are defined in Attachment A, Definition of Unusually Hazardous Risks.

I have considered the availability, cost and terms of private insurance to cover these risks, as well as the viability of self-insurance, and have concluded that adequate insurance to cover the unusually hazardous risks is not reasonably available.

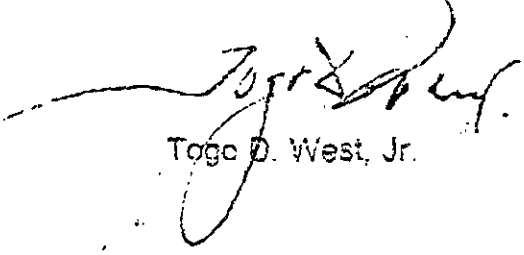
It is not possible to determine the actual or estimated cost to the Government as a result of the use of an indemnification clause since the liability of the Government, if any, will depend upon the occurrence of an incident related to the performance of the contract.

I find that the use of an indemnification clause in this contract will facilitate the national defense.

-2-

In view of the foregoing and pursuant to the authority vested in me by Public Law 85-804 (50 U.S.C. 1431-1436) and Executive Order 10789, as amended, I hereby authorize the inclusion of the indemnification clause prescribed in FAR 52.250-1, with its Alternate 1, in the contract for ANCDF, provided the clause defines the unusually hazardous risks and includes the limitations on coverage precisely as described in the attached definition. I further authorize its inclusion in subcontracts (at any tier) under this contract, provided the pass-through indemnification is limited to the defined unusually hazardous risks and provided that the Contracting Officer approves each pass-through indemnification in writing.

The contractual document executed pursuant to this authorization shall comply with the requirements of FAR Subparts 50.4 and 28.3, as implemented by Department of Defense and the Department of the Army.



Togo D. West, Jr.

Attachment



ARMY'S

## ENCLOSURE 4

## DEFINITION OF UNUSUALLY HAZARDOUS RISKS

The risks of :

(1) sudden or slow release of, and exposure to, lethal chemical agents during the disposal of stockpiles of chemical munitions, mines or other forms of weapons-related containerization and during facility decommissioning and closure.

(2) explosion, detonation or combustion of explosives, propellants or incendiary materials during the course of disposal of stockpiles of chemical munitions, mines or other forms of weapon-related containerization.

(3) contamination present at or released from the installation prior to the contractor's construction or operation of the chemical demilitarization facility CDF, whether known or unknown by the Government or contractor at such time.

(4) contamination resulting from the activities of third parties when the contractor has no control over such activities or parties.

(5) contamination resulting from the placement of components and materials from decommissioning and placement of wastes and residues from demilitarization, destruction, or closure in accordance with the contract and all applicable laws and regulations.

Provided that the indemnification clause shall in no way indemnify the contractor against local, state or federal civil or criminal fines or penalties levied by local, state or federal tribunals, nor shall this clause indemnify the contractor against the costs of defending, settling or otherwise participating in such civil or criminal actions brought in local, state or federal tribunals.

The term "lethal chemical agents", for purposes of this clause means the chemicals in the attached list and their naturally occurring breakdown products but does not include residues and wastes produced from the demilitarization process except to the extent that these residues and wastes contain, or are deemed by a court or agency of competent jurisdiction to contain chemicals from the attached list.

The term "disposal", for purpose of this clause, includes the reconfiguration, destruction or demilitarization and interim

storage and movement of chemical munitions, mines or other forms of weapons-related containerization, decontamination of equipment and facilities, and the transportation and placement of wastes and residues from destruction of demilitarization.

The term "damage to property" in this clause shall include costs of monitoring, investigation, removal, response and remediation for property (to include groundwater) due to the risks above once certification of closure in accordance with the closure plan has been accepted by the State or the Environmental Protection Agency, and contract performance has been completed and accepted by the Army.

OCT-28-1997 13:05 FROM IOC TOCWF TOJELS,LT TO 815413874741 P.01

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE PAGE OF PAGES  
1 2

2. AMENDMENT/MODIFICATION NO. P00143  
3. EFFECTIVE DATE  
4. REQUISITION/PURCHASE REQ. NO.  
5. PROJECT NO. (if applicable)

6. ISSUED BY 3D, IOC  
ATTN: AMS/O-ACF'S (Mr. J. Feather)  
Rock Island, IL 61299-8000  
7. ADMINISTERED BY (if other than 6)

8. NAME AND ADDRESS OF CONTRACTOR (See above contract, State and ZIP Code)  
3333 Defense Materials Division  
11520 Stark Road  
Tooele, Utah 84074  
9. AMENDMENT OF SOLICITATION NO.  
10. MODIFICATION OF CONTRACT/ORDER NO. DAC87-89-C-0076  
10a. DATED (SEE ITEM 11) 06 SEPT 1989

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is one now as set forth in item 14. The hour and date specified for receipt of offers is  is required,  is not required.  
Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or amendment, by one of the following methods:  
a) By completing forms 8 and 12, and returning copies of the amendment b) By acknowledging receipt of this amendment on each copy of the offer submitted or c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change must be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the closing hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (if needed)  
Not Applicable

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14

14. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Check one) THE CHANGES SET FORTH IN ITEM 12 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 14a.  
15. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as change in source office information (see (a)) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 48.130(b).  
16. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:  
2. FAR 52.243-2, Changes-Over Reimbursement Alternative II  
3. OTHER (Specify type of modification and authority)

17. IMPORTANT: Contractor  is not,  is required to sign this document and return copies to the issuing office.

18. DESCRIPTION OF AMENDMENT/MODIFICATION (Reference to FAR rules, including contract/order no., and other major items)  
This modification describes the division of operational responsibility between the United States Department of the Army, Tooele Army Depot - South (Facility owner); The Program Manager for Chemical Demilitarization (Facility co-operator); and the Systems Contractor, 3333 DMI (Facility co-operator).

(Continued on Page 2)

Except as provided herein, all terms and conditions of this document referenced in item 9a or FAR, as hereinafter changed, modified, amended and in full force and effect.

19a. NAME AND TITLE OF SIGNER (Type or print)  
J. Marshall Thompson, Controller/Asst. Treas. Contracting Officer  
19b. NAME AND TITLE OF CONTRACTING OFFICE (Type or print)  
19c. CONTRACTING OFFICE  
19d. DATE SIGNED (SEE ITEM 11) June 14, 1989  
19e. DATE SIGNED 4 Jan 96

EG&G INDEMNIFICATION AND ASSOCIATED CONTRACT MODIFICATION

OCT-28-1997 13:07 FROM 100, TOCDF T00LEJUT TO 815415674741 P.02

## MODIFICATION OF CONTRACT

Contract No. DACW87-89-C-0076

Modification 000143

Page 2 of 2

Pursuant to the Utah Solid and Hazardous Waste Act, 19-6-101, et. seq., Utah Code Annotated, 1983, as amended, and the regulation promulgated thereunder by the Utah Solid and Hazardous Wastes Control Board, codified in the Utah Administrative Code R305 (R315), and pursuant to the Solid Waste Disposal Act (42 U.S.C. 3251 et. seq.), as amended by the Resource Conservation and Recovery Act of 1976 (42 U.S.C. 6901 et. seq.) and the Hazardous and Solid Waste Amendments of 1984, a permit will be issued to the United States Department of the Army, Tooele Army Depot - south (facility owner); The Program Manager for Chemical Demilitarization (facility co-operator); and the Systems Contractor, EG&G Defense Material, Inc. (EG&G) (facility co-operator); hereinafter jointly called Co-Permittees, to operate a hazardous waste treatment and storage facility.

In order to ensure the proper execution of this permit, the Co-Permittees agree to the following:

a. The Army, as Owner and Co-Permittee, acknowledges its responsibility for hazardous waste management activities at the CSDP Facility, including sole responsibility for funding, policy, capital expenditures, design, programmatic and scheduling decisions, and general oversight of contractor activities.

b. EG&G as Co-Permittee, acknowledges its responsibility for hazardous waste management activities at the CSDP Facility for day to day management within its direct management control and authority (including waste analysis and handling, monitoring, record keeping and related hazardous waste activities) as governed by law and the decisions and direction of the Army.

c. Reporting and information requirements: The Army will serve as the information and reporting contact with the state of Utah. The Army will be responsible for submitting all required reports to the state. The Army will certify the accuracy and adequacy of final documentation and the accuracy of documentation provided by the Army to develop required documentation. EG&G will certify the accuracy and adequacy of the preparation of the final documents based on documentation and direction provided by the Army.

d. The Commander, Tooele Army Depot - south as CSDP Facility Owner and the PMCD, as CSDP Facility Operator, are exclusively responsible to seek federal funding, to include appropriations from the U.S. Congress, in order to take corrective action, to comply with all permit requirements, and to achieve the compliance schedule.

e. Upon the termination of Contract No. DACW87-89-C-0076 between the U.S. Army and EG&G, the Army will file the necessary permit modification and take other appropriate action to remove EG&G from the permit as a Co-Permittee, Facility Co-Operator.

OCT-28-1997 13:25

FROM 100-7001F TOGELEUT TO

215418594741 P.03

(APR 1984)

(a) "Contractor's principal officials," as used in this clause, means directors, officers, managers, superintendents, or other representatives supervising or directing--

- (1) All or substantially all of the Contractor's business;
- (2) All or substantially all of the Contractor's operations at any one plant or separate location in which this contract is being performed; or
- (3) A separate and complete major industrial operation in connection with the performance of this contract.

(b) Under Public Law 85-804 (50 U.S.C. 1431-1435) and Executive Order 10789, as amended, and regardless of any other provisions of this contract, the Government shall, subject to the limitations contained in the other paragraphs of this clause, indemnify the Contractor against--

- (1) Claims (including reasonable expenses of litigation or settlement) by third persons (including employees of the Contractor) for death; personal injury; or loss of, damage to, or loss of use of property;
- (2) Loss of, damage to, or loss of use of Contractor property, excluding loss of profit; and
- (3) Loss of, damage to, or loss of use of Government property, excluding loss of profit.

(c) This indemnification applies only to the extent that the claim, loss, or damage (1) arises out of or results from a risk defined in this contract as unusually hazardous or nuclear and (2) is not compensated for by insurance or otherwise. Any such claim, loss, or damage, to the extent that it is within the deductible amount of the Contractor's insurance, is not covered under this clause. If insurance coverage or other financial protection in effect on the date the approving official authorizes use of this clause is reduced, the Government's liability under this clause shall not increase as a result.

(d) When the claim, loss, or damage is caused by willful misconduct or lack of good faith on the part of any of the Contractor's principal officials, the Contractor shall not be indemnified for--

- (1) Government claims against the Contractor (other than those arising through subrogation); or
- (2) Loss or damage affecting the Contractor's property.

(e) With the Contracting Officer's prior written approval, the Contractor may, in any subcontract under this contract, indemnify the subcontractor against any risk defined in this contract as unusually hazardous or nuclear. This indemnification shall provide, between the Contractor and the subcontractor, the same rights and duties, and the same provisions for notice, furnishing of evidence or proof, and Government settlement or defense of claims as this clause provides. The Contracting Officer may also approve indemnification of subcontractors at any lower tier, under the same terms and conditions. The Government shall indemnify the Contractor against liability to subcontractors incurred under subcontract provisions approved by the Contracting Officer.

(f) The rights and obligations of the parties under this clause shall survive this contract's termination, expiration, or completion. The

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*CONTRACT DACA 87-89-C-  
MODIFICATION DITU 48  
Attachment 1  
Page 2 of 2*

Government shall make no payment under this clause unless the agency head determines that the amount is just and reasonable. The Government may pay the Contractor or subcontractor, or may directly pay parties to whom the Contractor or subcontractor may be liable.

(g) The Contractor shall--

(1) Promptly notify the Contracting Officer of any claim or action against, or any loss by, the Contractor or any subcontractors that may reasonably be expected to involve indemnification under this clause;

(2) Immediately furnish to the Government copies of all pertinent papers the Contractor receives;

(3) Furnish evidence or proof of any claim, loss, or damage covered by this clause in the manner and form the Government requires; and

(4) Comply with the Government's directions and execute any authorizations required in connection with settlement or defense of claims or actions.

(h) The Government may direct, control, or assist in settling or defending any claim or action that may involve indemnification under this clause.

(i) The cost of insurance (including self-insurance programs) covering a risk defined in this contract as unusually hazardous or nuclear shall not be reimbursed except to the extent that the Contracting Officer has required or approved this insurance. The Government's obligations under this clause are--

(1) Excepted from the release required under this contract's clause relating to allowable cost; and

(2) Not affected by this contract's Limitation of Cost or Limitation of Funds clause.

(End of clause)

~~11 7 800.00 1977 JAN~~  
~~12 2 103 57 1976 APR~~

*LS JB*  
*LS JB*

FROM : OREGON DEQ--HERMISTON

OCT-29-1997 13:09 FROM : DC, TOCDF TOBELE,UT

TO

815415674741 P.25

CONTROL 11/24/97-89-C-02  
MODIFIED POCY  
Page 1 of 1

Definition of Unusually Hazardous Risks

The risks of:

1) sudden or slow release of, and exposure to, lethal chemical agents during the disposal of stockpiles of chemical munitions, mines or other forms of weapons-related containerization; and

2) explosion, detonation or combustion of explosives, propellants or incendiary materials during the course of disposal of the stockpiles at the Tooele Army Depot, Tooele, Utah.

PROVIDED, that indemnification shall be available to the contractor under this clause only for those claims, losses and damage arising out of or resulting from supplies furnished or services rendered by the contractor under this contract, and PROVIDED FURTHER, that this clause shall in no way indemnify the contractor against criminal fines or penalties levied by federal or state tribunals, nor shall this clause indemnify the contractor against the costs of defending, settling or otherwise participating in such criminal actions brought in federal or state tribunals. The term "lethal chemical agents," for the purposes of this clause, means any toxic chemicals or substances which are (or at one time were) contained in munitions, mines or other forms of weapons-related containerization, including derivatives or compounds of such chemicals or substances. The term "disposal," for the purposes of this clause, means the destruction or demilitarization of chemical munitions, mines or other forms of weapons-related containerization.

FROM : OREGON DEQ--HERMISTON

OCT-28-1997 17:10 FROM 100 TO/CF TO/BE/UT TO WASHINGTON

805415574741 P.05

UNCLASSIFIED  
EXCLUDED FROM AUTOMATIC  
DOWNGRADING AND  
DECLASSIFICATION  
PROCESS  
DATE 08/28/2008  
BY 60322  
Page 1 of 2



March 27, 1992

MEMORANDUM OF DECISION

SUBJECT: Authority Under Public Law 95-804 to Include an Indemnification Clause in Contract DACAB7-89-C-0076 with EG&G Defense Materials, Inc.

EG&G Defense Materials, Inc., (EG&G) has requested that the Army include an indemnification clause under 50 U.S.C. §§ 1431-1435 (Pub. L. 95-804) in its contract DACAB7-89-C-0076, in accordance with Federal Acquisition Regulation (FAR) subpart 50.203-1.

On September 5, 1989, the Army awarded contract DACAB7-89-C-0076 to EG&G for the site preparation, construction, systemization, operation, maintenance and decommission of the Toxic Chemical Agent Disposal Facility, at Tooele Army Depot, Tooele, Utah. The purpose of the facility is to demilitarize the chemical weapons stockpile stored at Tooele Army Depot. Given the tremendous lethal potential of chemical weapons, a catastrophic incident involving the facility may subject EG&G to enormous financial liability. Therefore, I find that performance of the contract subjects EG&G to unusually hazardous risks which are defined in Attachment A.

I have considered the availability, cost and terms of private insurance to cover these risks, as well as the viability of self-insurance, and have concluded that adequate insurance to cover these unusually hazardous risks is not available to EG&G at reasonable cost. I have also examined EG&G's program of workers' compensation insurance. On the basis of this review, I find that the use of an indemnification clause in this contract will facilitate the national defense.

In view of the foregoing and pursuant to the authority vested in me by 50 U.S.C. §§ 1431-1435 (Pub. L. 95-804), and Executive Order 10789, as amended, I hereby authorize the contracting officer to include the indemnification clause set forth at FAR subpart 50.203-1, together with the alternate language prescribed for cost-reimbursement contracts, in contract DACAB7-89-C-0076, provided that clause defines the unusually hazardous risks precisely as described in Attachment A. I further authorize its inclusion in subcontractor subcontracts under the EG&G contract, provided the pass-through indemnification is limited to the unusually hazardous risks defined in Attachment A and provided the contracting officer approves the pass-through indemnification in writing. I also authorize its inclusion in certain second-tier subcontracts under the EG&G contract, provided the pass-through




HLL Contract DARA 21-89-C-0076  
 HLL MODIFICATION P21248  
 HLL Amendment II  
 HLL Page 2 of 2  
 -2-

Indemnification is limited to the unusually hazardous risks defined in Attachment A, provided the contracting officer approves the pass-through indemnification in writing and further provided that the contracting officer is in writing that critical supplies or services are not reasonably available from a second-tier subcontractor without undue delay.

Should it prove necessary, in implementing this Memorandum of Decision, to incorporate language into the contract to clarify, directly or by reference, terms found in the indemnification clause, the contracting officer shall not include any such clarifying language without the prior notice and approval of the Office of the Assistant Secretary of the Army (Research, Development and Acquisition).

It is not possible to determine the actual or estimated cost to the Government as the result of the use of this indemnification clause, inasmuch as the liability of the Government, if any, will depend upon the occurrence of an incident described in the statement of unusually hazardous risks.

The contractual documents executed pursuant to this authorization shall comply with the requirements of FAR subparts 28.4 and 50.4 as implemented by the Department of Defense and the Department of the Army.

  
 R. P. R. Stone

Attachment

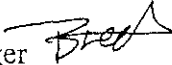
State of Oregon

Department of Environmental Quality

Memorandum

Date: September 24, 1997

**To:** Environmental Quality Commission

**From:** Brett McKnight, Manager   
Eastern Region Hazardous Waste Program  
Department of Environmental Quality

**Subject:** Transmittal of Attorney General Review Regarding Incorporation of Raytheon Demilitarization Company as Co-Permittee to the Umatilla Chemical Disposal Facility Hazardous Waste Permit

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The Attorney General's office has reviewed Raytheon Demilitarization Company's response to the Department's information request. The information request (attached) came from comments heard from the Commission at the August 22, 1997 Umatilla work session.

In summary, the Attorney General's office had the following comments:

- Information regarding the relationship between Raytheon Demilitarization Company (RDC) and its superintendent corporations is adequate, but information regarding RDC's financial assets were not included. Asset and liability differences between RDC and the superintendent corporations are not clarified. The Attorney General suggests that RDC should provide its own asset and liability statements.
- It appears that the insurance policies issued to Raytheon, Inc., cover RDC. It's not clear what the pollution exclusions in some policies do, or do not, cover. For instance, does the \$25 million National Union Fire policy cover hazardous waste activities? (See endorsement #18). RDC does not clarify which policies it believes would cover third party damage from a release of hazardous pollutants.
- Some issues arise from the discussion of the Army's indemnification of Raytheon for third party liability under Public Law 85-804. They are:
  - a) Would such indemnification be provided to the extent RDC might be found liable as a private contractor regardless of potential defenses otherwise available to the Army?
  - b) When is it expected that the Secretary of the Army will issue the indemnification to RDC?

c) Is there a limitation (cap) on the amount of indemnification?

The Attorney General recommends that these questions should be discussed at the October 2 Commission work session.

Attachment

cc: Raj Malhotra, UMCDF (PMCD)  
Samuel Kasley, Raytheon Demilitarization Company (UMCDF)  
Larry Edelman, Attorney General

x:\uad\fredrick\word\rayth. mod\rdc memo to eqc.doc



File  
COPY

# Oregon

John A. Kitzhaber, M.D., Governor

Department of Environmental Quality  
2146 NE 4th Street, Suite 104  
Bend, OR 97701  
(541) 388-6146

August 28, 1997

Eastern Region  
Bend Office

Samuel J. Kasley  
Umatilla Project Manager  
Raytheon Demilitarization Company  
P.O. Box 1188  
Hermiston, OR 97838

Dear Mr. Kasley:

As Raytheon representatives heard at the August 22 meeting of the Environmental Quality Commission (EQC), more information is needed from Raytheon, Inc. about the relationship between Raytheon, Inc. and Raytheon Demilitarization Company (RDC) to determine whether or not RDC can meet the statutory requirements of Oregon Revised Statute 466.060 (attached) in order to be a co-permittee with the U.S. Army for the Umatilla Chemical Demilitarization Facility (UMCDF).

ORS 466.060 and the implementing rules establish criteria to be met by owners and operators of hazardous waste treatment and/or disposal facilities. To assist the EQC in evaluating addition of Raytheon, Inc. or Raytheon Demilitarization Company as a co-permittee on UMCDF Permit #OR6 213 820 917, a senior corporate official and/or counsel for Raytheon, Inc. should be prepared to address the following issues at the EQC Worksession in La Grande, Oregon on Thursday, October 2, and should provide written responses on these issues to Brett McKnight at the Department of Environmental Quality by no later than Wednesday, Sept. 17 for evaluation prior to the October meeting. The Army and Raytheon, Inc. will have approximately one hour to address the EQC on October 2.

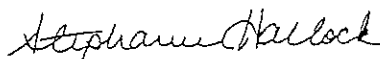
1. Provide a schematic of the corporate structure of Raytheon, showing the relationship of all parent, holding and/or subsidiary corporations;
2. Provide a legal analysis of the relationship among Raytheon Demilitarization Company and other Raytheon entities;
3. Provide an explanation of the managerial and human resource relationships, if any, of Raytheon Demilitarization Company and other Raytheon entities;
4. Provide an analysis of the financial relationship of Raytheon Demilitarization Company to other Raytheon entities; and
5. Provide a list and copies of all liability policies which provide coverage for activities of Raytheon Demilitarization Company with respect to the construction and operation of the incinerators at Umatilla.

Samuel J. Kasley  
August 28, 1997  
Page 2

The information provided in response to the items listed above should be under signature of Raytheon's corporate counsel. In addition, Raytheon, Inc. should be prepared to discuss with the EQC why Raytheon Demilitarization Company rather than Raytheon, Inc. has the capability to meet the statutory requirements to be co-permittee, since it is our understanding that Raytheon Demilitarization Company has been only recently formed.

Questions regarding preparation of these responses should be directed to Larry Edelman or, in his absence, to Larry Knudsen at the Oregon Department of Justice, (503) 229-5725.

Sincerely,



Stephanie Hallock  
Administrator  
Eastern Region

Attachment: ORS 466.060

cc: Members, EQC  
Larry Edelman, DOJ  
Larry Knudsen, DOJ  
Langdon Marsh, Director, DEQ  
Brett McKnight, DEQ  
Raj Malhotra, UMCDF



DEPARTMENT OF THE ARMY  
PROGRAM MANAGER FOR CHEMICAL DEMILITARIZATION  
ABERDEEN PROVING GROUND, MARYLAND 21010-5401  
16 September 1997

Project Manager  
for Chemical Stockpile Disposal

PMU - 970273

Subject: Response to 28 August 1997 request for additional information regarding the addition of Raytheon Demilitarization Company as Co-Permittee to UMCDF Hazardous Waste Permit (OR6 213 820 917)

Mr. Brett McKnight  
Hazardous Waste Manager  
Oregon Department of Environmental Quality  
2146 N.E. Fourth Street, Suite 104  
Bend, Oregon 97701

STATE OF OREGON  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
RECEIVED

SEP 18 1997

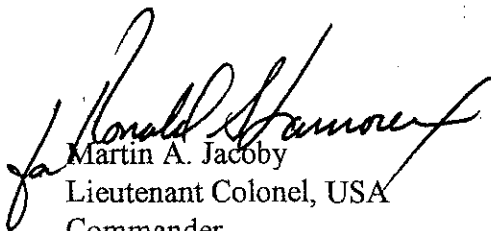
EASTERN REGION  
BEND

Dear Mr. McKnight:

This letter transmits a response to the Department of Environmental Quality's (DEQ) 28 August 1997 letter regarding the addition of Raytheon Demilitarization Company as a co-permittee to the Umatilla Chemical Agent Disposal Facility Hazardous Waste Permit. Mr. James C. Higgins, Jr., Vice President, Secretary, and General Counsel of Raytheon Demilitarization Company prepared this response.

If you have any questions, please call my technical point of contact, Mr. Karl H. Kinkade, (541) 564-7052.

Sincerely,

  
Martin A. Jacoby  
Lieutenant Colonel, USA  
Commander

\*CERTIFICATION STATEMENT



Raj K. Malhotra  
UMCDF Site Project  
Manager

\*CERTIFICATION STATEMENT

Enclosures

\*I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

CF:

Mr. C. Galloway (CEHND-CD-UM)  
Mr. H. Townsend (CEHNC-CH-CT)  
Ms. L. LaMere (AMSIO-ACE-S)  
Mr. J. Stang (PMCD-Edgewood)  
Mr. P. Bergeron (PMCD-Edgewood)  
Mr. K. Kinkade (SAIC)  
Ms. C. Beyer (SAIC)  
Mr. D. Nylander (RDC)  
Mr. M. Yakawich (SCBUL-CD)

Raytheon Demilitarization  
Company  
30 South 17th Street  
Philadelphia, PA 19103  
Mailing Address  
P.O. Box 8223  
Philadelphia, PA 19101-8223  
Tel 215.422.3000  
Fax 215.422.4971

**Raytheon**

215-422-4813 tel.  
215-422-4507 fax

September 15, 1997

Ms. Stephanie Hallock  
Administrator, Eastern Region  
Department of Environmental Quality  
State of Oregon  
2146 NE 4th Street, Suite 104  
Bend, Oregon 97701

Re: Raytheon Demilitarization Company as Co-Permittee Under  
Umatilla Chemical Demilitarization Facility  
Hazardous Waste Permit No. OR6 213 820 917

Dear Ms. Hallock:

This is in response to your letter of August 28, 1997 to Samuel J. Kasley, Raytheon Demilitarization Company's project manager for the Umatilla Chemical Demilitarization facility ("UMCDF"). We are also responding to the letter of Brett McKnight, Manager, Regional Hazardous Material Program, Oregon Department of Environmental Quality, dated August 13, 1997 to Lt. Col. Martin Jacoby of the Department of the Army's Umatilla Chemical Depot, and Raj Malhotra of the Army's Program Management for Chemical Demilitarization, seeking information from us. Moreover, since the Environmental Quality Commission asked a number of questions at a meeting August 22, 1997 regarding Raytheon's experience at the Johnston Atoll facility, we will address those issues as well. Our response is divided into two sections: a statement of history and experience and outline of parent companies and affiliates of Raytheon Demilitarization Company ("RDC"), and a summary of the insurance coverage and U.S. Government indemnification applicable to the operations of RDC.

#### RDC Organization and Experience

As you know, RDC was awarded Contract No. DAAAA 09-97-C-0025 on February 10, 1997 by the Army's Program Manager for Chemical Demilitarization for the incineration of various weapons and munitions stored at the Umatilla Arsenal. To understand fully RDC's qualifications to safely build, operate, maintain and decommission UMCDF, one needs to know the current internal ownership hierarchy of Raytheon Company and its subsidiaries and a certain amount of history regarding relevant acquisitions made under the overall guidance of Raytheon Company, the ultimate parent of RDC. A copy of Raytheon Company's 1996 Annual Report is enclosed.



If you refer to the attached Chart no. 1, you will note that RDC was incorporated in Delaware in 1992, and is a wholly-owned subsidiary of Raytheon Engineers & Constructors International, Inc. (Delaware, 1993), which is in turn a wholly-owned subsidiary of Raytheon Company (Delaware, 1928), a \$12 billion publicly-traded corporation with operations in aircraft, defense, electronics, commercial businesses and engineering and construction.

As you will observe from Chart no. 2, all of the people and resources possessed by Raytheon Company and its subsidiaries directly involved in demilitarization work currently reside in RDC and, to a lesser extent, Raytheon Engineers & Constructors, Inc., RDC's close affiliate. This has occurred as a result of several steps. In November 1986 a predecessor corporation to Raytheon Engineers & Constructors International, Inc., current parent of RDC, purchased the stock of Stearns Catalytic Corporation which in 1984 won the first two contracts, ever, related to chemical weapons demilitarization: (1) Contract DACA87-84-C-0081 for the purchase of all equipment and the development of software for all future chemical demilitarization facilities in the U.S., the so-called "Annex G contract," and (2) Contract DACA87-84-C-0040 for installation of equipment and construction of the Johnston Atoll Chemical Agent Disposal ("JACADS") facility. Stearns Catalytic Corporation, in August 1986, also won the operations and maintenance contract (no. DACA87-86-C-0098) for JACADS.

After the stock purchase of Stearns Catalytic Corporation, the predecessor to Raytheon Engineers & Constructors International, Inc. made a capital contribution of the stock to Raytheon Engineers & Constructors, Inc. (which at the time was known as United Engineers & Constructors, Inc.), thus transferring all the people and resources utilized for chemical demilitarization to the company. Then, adding to its experience, on September 20, 1996 Raytheon Engineers & Constructors, Inc. and the Army executed Contract DAAA09-96-C-0081 for the continuation of operations and maintenance at JACADS and its decommissioning.

Another company within the Raytheon group has played a role in chemical weapons destruction. At the JACADS facility Raytheon Engineers & Constructors, Inc. and RDC utilized an internal subcontract with Harbert-Yeargin Inc. for maintenance. Please note Harbert-Yeargin Inc.'s position on chart no. 1.

With the increasing contracting possibilities for Raytheon Engineers & Constructors, Inc. with the Army Program Management for Chemical Demilitarization, the company saw a need to flow all demilitarization assets into an organization that would be exclusively committed to the Army's programs. Thus, in 1992 RDC was incorporated. Since then, but mostly since 1996, Raytheon Engineers & Constructors, Inc. and Harbert-Yeargin Inc. have gradually shifted demilitarization assets to RDC. That shift for Harbert Yeargin Inc. is complete but for Raytheon Engineers & Constructors, Inc. is still in process; we expect it to be fully complete by October 1, 1998. RDC, headquartered in Philadelphia and carrying 190 employees, has the following directors and officers:

Directors

Morton L. Brond  
Charles E. Dry  
Fred Hissong, Jr.  
Robert Marshall  
Charles Q. Miller  
William H. Swanson

Officers

Charles Q. Miller	Chairman of the Board and Chief Executive Officer
Fred Hissong, Jr.	President and Chief Operating Officer
Morton L. Brond	Vice President, Chief Financial Officer and Treasurer
James C. Higgins, Jr.	Vice President, Secretary and General Counsel
Timothy L. Montgomery	Vice President-Contracts
Karen L. Degler	Assistant Secretary
Christopher Ziino	Assistant Treasurer

RDC has available to it, through internal "seconding agreements" with affiliates and its ultimate parent, Raytheon Company, people and other resources to discharge its contractual obligations at UMCDF. For example, if required, it will utilize any additional engineering, environmental engineering, construction management, operations, and safety and health expertise in the Raytheon Engineers & Constructors, Inc., and Raytheon Service Company affiliates. Please refer to chart no. 1 and the attached brochure for information about the corporate position, capabilities and experience of these companies.

In summary, even though RDC's first official contract award for demilitarization work was for UMCDF, one should understand that it has, practically speaking, performed demilitarization work since 1984 and all the resources utilized by Stearns Catalytic Corporation and Harbert-Yeargin Inc. for the JACADS and Annex G contracts are, to a great extent, now part of RDC, and, when the transfer of Raytheon Engineers & Constructors, Inc. is complete, will soon fully be part of RDC, and thus are available for performance of the contract for UMCDF.

**Insurance and Indemnification**

Raytheon Company, the ultimate parent of RDC, has in place various contracts of insurance covering the operations of all of its subsidiary companies, including RDC. This coverage, which is on "first-dollar" basis but has a self-insured retention amount of \$5 million, rises through a series of layers to \$350 million for many operations of the subsidiaries. I am enclosing various pages extracted from the policies of insurance which indicate how RDC is included in the Raytheon Company program, the amount of coverage for each layer beginning at \$5 million and reaching to \$350 million and the exclusion of coverage for pollution under certain conditions. I am also enclosing Chart no. 3 indicating the various layers of general liability coverage applicable to RDC's operations at UMCDF. Note that, like virtually all liability insurance, there are exclusions under the policies.

RDC has made a request of the Secretary of the Army for indemnification under Public Law 85-804 against liability to third parties for bodily injury and property damage arising out of the "unusually hazardous risks" of operations at UMCDF. A P.L. 85-804 indemnification is authorized by Executive Order of the President and may be issued by heads of federal cabinet agencies when a determination has been made that the contractor is engaged in operations which pose an "unusually hazardous risk". Under Federal Acquisition Regulation 50.403-1 applicable to the indemnification, the indemnification supplements, and does not replace, any insurance available to the contractor for its operations. All five Army contracts for destruction of chemical weapons to date (including the contract for the Tooele, Utah, Depot ) have had indemnifications issued by the Secretary. We expect the Secretary of the Army to issue the indemnification for UMCDF in the near future.

\*

\*

\*

RDC understands the concerns and interests of the government of the state of Oregon concerning our planned operations at Umatilla. RDC and its affiliates want to aid as best we can the Department of Environmental Quality and the Environmental Quality Commission in gaining an understanding of our ability to perform the contract and to conduct our operations in accordance with the terms of the RCRA permit. You can expect our full cooperation.

Mr. Fred Hisson, President and Chief Operating Officer, and I will be in attendance at the Commission's meeting in LaGrande on October 2 to explain further RDC's plans and to answer questions that may arise.

Sincerely yours,

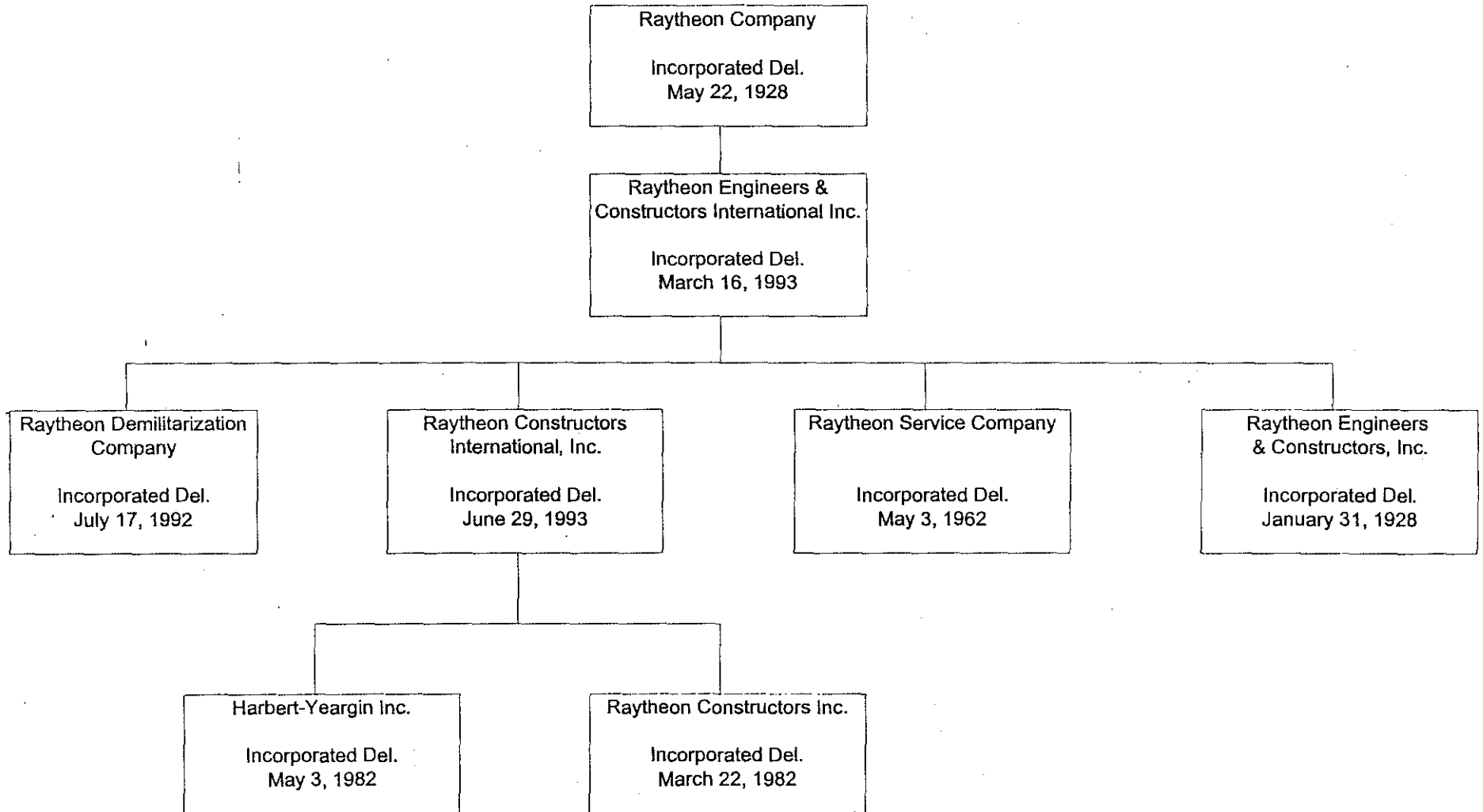


James C. Higgins, Jr.  
Vice President, Secretary and  
General Counsel

Encs.

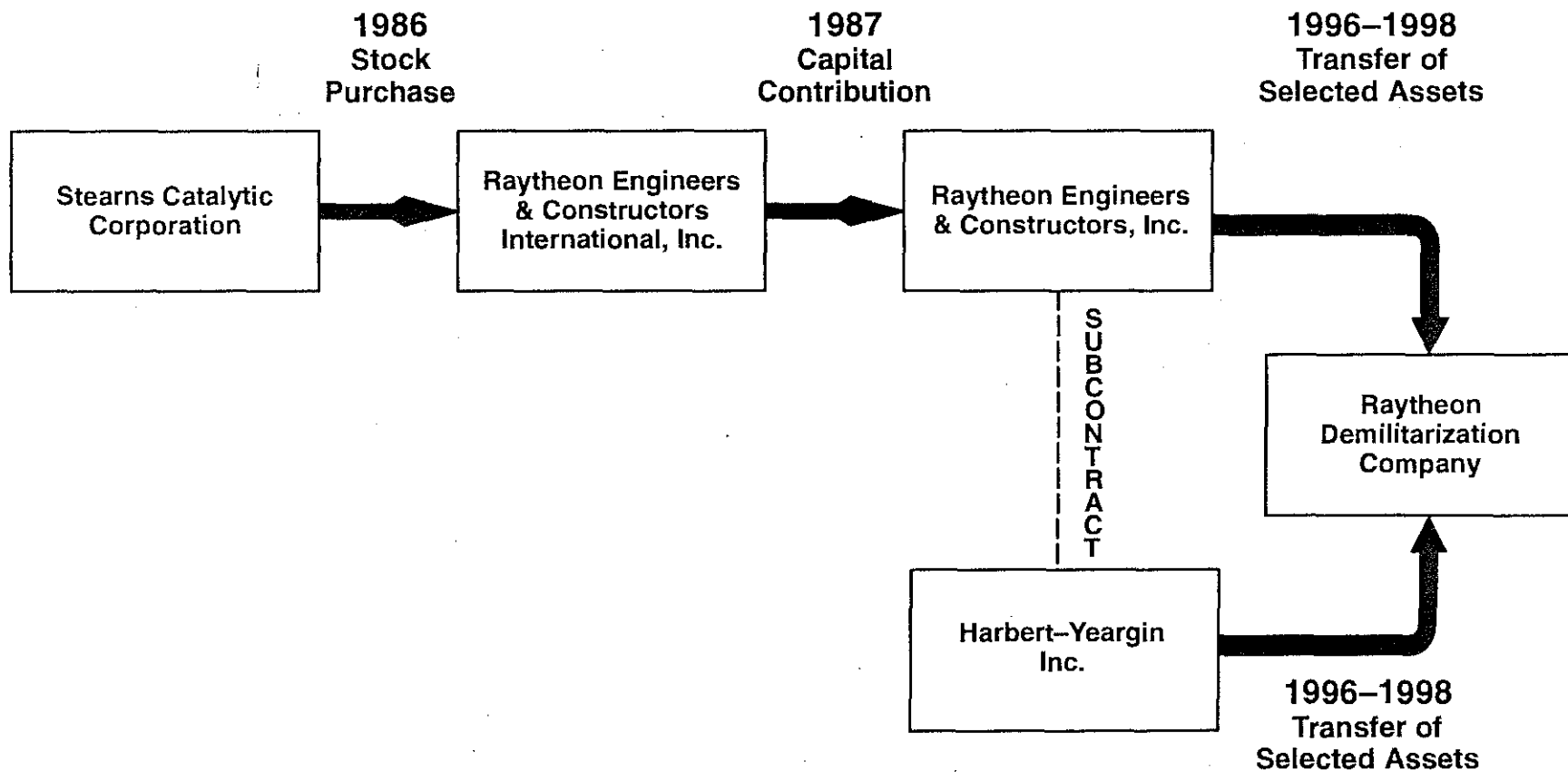
CHAI NO. 1

**Raytheon Demilitarization Company  
Parent and Affiliated Company Structure**



NOTE: Raytheon Company has over 100 other subsidiaries.

**Chart No. 2**  
**Raytheon Demilitarization Company**  
**Asset Acquisition History**



### Chart No. 3 Raytheon Company Liability Insurance Program Demilitarization Projects

Pollution Liability Claims  
*Construction, Operation and Maintenance Activities*

Limits (Millions)	General Liability Claims (non-pollution)	Named Peril (smoke, heat, fumes from hostile fire, explosion, wind, vandalism, lightning, flood, earthquake, malicious mischief, riot and civil commotion, collision or upset of vehicles, mobile equipment or aircraft)	All Other Perils	Contractor's Pollution	Professional Liability
\$350	A.C.E. LTD.* \$200MM	A.C.E. LTD.* \$200MM	A.C.E. LTD.* \$200MM	A.C.E. LTD.* \$200MM	A.C.E. LTD.* \$200MM
\$150	X.L. LTD.* \$75MM	X.L. LTD.* \$75MM	X.L. LTD.* \$75MM	X.L. LTD.* \$75MM	X.L. LTD.* \$75MM
\$75	GOERLING-KONZERN (U.K. BRANCH) \$45MM	GOERLING-KONZERN (U.K. BRANCH)** \$45MM	GOERLING-KONZERN (U.K. BRANCH)** \$45MM	ZURICH RE (U.K.) CONTRACTOR'S POLLUTION† COVERAGE B \$25MM	ARCHITECT-ENGINEER'S ERRORS & OMISSIONS COVERAGE A \$25MM
\$30				RELIANCE INSURANCE CO. CONTRACTOR'S POLLUTION † COVERAGE B \$25MM	ARCHITECT-ENGINEER'S ERRORS & OMISSIONS COVERAGE A \$25MM
\$5	NATIONAL UNION INS. CO. OF PITTSBURGH \$25MM	NATIONAL UNION INS. CO. OF PITTSBURGH** \$25MM	NATIONAL UNION INS. CO. OF PITTSBURGH** \$25MM	LEXINGTON INSURANCE CO. CONTRACTOR'S POLLUTION † COVERAGE B \$20MM	ARCHITECT-ENGINEER'S ERRORS & OMISSIONS COVERAGE A \$20MM
	↑ NATIONAL UNION FRONTED POLICY \$5MM	↑ NATIONAL UNION*** FRONTED POLICY \$5MM	↑ NATIONAL UNION FRONTED POLICY \$5MM	↑ CONTRACTOR'S POLLUTION SELF-INSURED \$5MM	↑ ARCHITECT-ENGINEER'S ERRORS & OMISSIONS SELF-INSURED \$5MM

\* Policy requires the onset of pollution to be known within 7 days by the insured and reported to the insurer within 40 days  
 \*\* No coverage for pollution at a hazardous waste disposal site or for removal, treatment, etc. of pollutants at a site occupied by the insured  
 \*\*\* When pollution is the cause of fire, liability for fire and ensuing damage is covered  
 † No coverage for pollution caused in the operation of a facility utilizing hazardous waste



*Aon Risk Services*

Thursday, September 11, 1997

James C. Higgins Jr.  
Raytheon Engineers and Constructors, Inc.  
30 South 17<sup>th</sup> Street  
Philadelphia, PA 19103

Re: Umatilla Oregon Project

Dear Jim:

As instructed by Matt Lupa, we have included the declaration pages for the Raytheon Casualty Program and Contractors Pollution Liability. We have included the most obvious provisions related to pollution for this project. There may be other provisions within the policies that may effect recovery of a pollution claim. The coverage's are subject to all terms, conditions and exclusions of the policies.

Please note that we have not received the Gerling General Liability policy or the Zurich Re Contractors Pollution policies. I have included our cover notes binding coverage with those carriers.

If you have any questions, please give us a call.

Sincerely,

A handwritten signature in black ink, appearing to read "Joe Quarantello Jr.", is written over the typed name.

Joseph W. Quarantello Jr.  
Account Manager

cc: Matt Lupa - Raytheon  
Erik Eckilson - Aon, Boston  
Kathleen Hunter - Aon, Boston

**NATIONAL UNION FIRE INSURANCE COMPANY OF PITTSBURGH, PA, HEREIN CALLED THE COMPANY**

IN CONSIDERATION OF THE PAYMENT OF PREMIUM, IN RELIANCE UPON THE STATEMENTS IN THE DECLARATIONS MADE A PART HEREOF AND SUBJECT TO ALL TERMS OF THIS POLICY, AGREES WITH THE NAMED INSURED AS FOLLOWS:

THE DECLARATIONS, TABLE OF CONTENTS, GENERAL CONDITIONS, COVERAGE PARTS AND ENDORSEMENTS COMPLETE THIS COMBINATION POLICY.

<b>POLICY NUMBER:</b> 00 319 70 97  <b>ADDRESS OF INSURED:</b>  141 Spring Street Lexington, MA 02173	<b>NAMED INSURED:</b>  RAYTHEON COMPANY AND/OR ITS OWNED, CONTROLLED, AFFILIATED OR SUBSIDIARY COMPANIES, INCLUDING ANY OTHER ORGANIZATION OF WHICH IT ASSUMES ACTIVE MANAGEMENT AS THEY EXIST NOW OR MAY HEREAFTER BE CONSTITUTED.
---	---

**POLICY PERIOD:** THIS POLICY SHALL BECOME EFFECTIVE APRIL 1, 1994, AT 12:01 A.M., EASTERN STANDARD TIME, AND SHALL CONTINUE IN FORCE UNTIL CANCELED. THE POLICY SHALL BE DEEMED WRITTEN FOR A SUCCESSION OR ANNUAL PERIODS COMMENCING UPON THE EFFECTIVE DATE.

**OCCUPATION:** CONGLOMERATE

COVERAGE PARTS	
Coverage Part One	Property Insurance
Coverage Part Two	Liability Insurance
Coverage Part Three	Open Cargo Insurance
Coverage Part Four	Workers' Compensation and Employers Liability Insurance

**PRODUCER:** ROLLINS HUDIG HALL  
99 HIGH STREET  
BOSTON, MA 02110

**INSURER:** NATIONAL UNION FIRE INSURANCE COMPANY OF PITTSBURGH, PA  
101 FEDERAL STREET  
BOSTON, MA 02110

**TOTAL ADVANCE PREMIUM:** \$3,471,304

\_\_\_\_\_  
Authorized Agent



**DECLARATIO  
UMBRELLA LIABILITY**



**Member Companies  
of  
American International Group**

POLICY NO. BE 932-56-55  
RENEWAL OF: 3099778

- AMERICAN HOME ASSURANCE COMPANY
- NATIONAL UNION FIRE INSURANCE COMPANY OF PITTSBURGH, PA.

ITEM 1.  
Name of Insured RAYTHEON COMPANY

Address 141 SPRING ST  
(Street, Town, State) LEXINGTON MA 02173-7899

70 Pine Street, New York, N.Y. 10270  
(Executive Offices)

A Capital Stock Company  
Herein called the Company

This Declaration Page, with policy provisions and endorsements, if any, issued to form a part thereof, completes the above numbered Umbrella Liability Policy.

ITEM 2. Policy Period	From: June 01, 1997 To: June 01, 1998 (12:01 A.M. Standard Time at the address of the Insured stated above)		
ITEM 3. Limit of Liability	<p>The limit of the Company's liability shall be as stated herein subject to all the terms of this policy having reference thereto</p> <p>(A) \$25,000,000 Single Limit any one occurrence Personal Injury or Property Damage or Advertising Liability or any combination thereof</p> <p style="text-align: center;">In excess of</p> <p>(1) the amount recoverable under the underlying insurance as set out in the attached Schedule A.</p> <p style="text-align: center;">or</p> <p>(2) \$5,000,000 ultimate net loss in respect of each occurrence not covered by said underlying insurance.</p> <p>(B) \$25,000,000 In the aggregate for the policy period or each annual period in accordance with the "Limit of Liability-Retained Limit" Section of the policy.</p>		
ITEM 4. Premium Computation	<p><u>Rating Basis</u></p> <p><u>Deposit Premium</u> \$ 1,100,000</p>	<p><u>Estimated Exposure</u> N/A</p> <p><u>Minimum Premium</u> \$1,100,000</p>	<p><u>Rate</u> FLAT</p> <p><u>Estimated Premium</u> \$1,100,000</p> <p><u>Audit Period</u> NOT SUBJECT TO AUDIT</p>

Producer No.: 07407  
Producer: AON RISK SERVICES INC. OF MA  
(Name and Address) 99 HIGH STREET  
BOSTON MA 02110-3271

*Laura C. Murrell*  
MA 02110-3271

Date of Issue \_\_\_\_\_ Countersigned by \_\_\_\_\_ (Licensed Resident Agent)

**ENDORSEMENT #7**

**THIS ENDORSEMENT, EFFECTIVE 12:01 A.M. 8/1/97 FORMS A PART OF**  
**POLICY NO. BE 932-56-55 ISSUED TO RAYTHEON COMPANY**  
**BY NATIONAL UNION FIRE INSURANCE COMPANY OF PITTSBURGH, PA**

**PERSONS INSURED - AMENDED**

It is understood and agreed that Definition (A) - Persons Insured is deleted in its entirety and replaced with the following:

- (A) Persons Insured means each of the following to the extent set forth below:
- (a) Raytheon Company and/or its owned, controlled, affiliated or subsidiary companies as now or hereafter constituted including any other organization of which it assumes active management (hereafter called the Named Insured);
  - (b) any director, officer, stockholder thereof while acting within the scope of his duties as such;
  - (c) any employee of the named insured while acting within the scope of his duties as such;
  - (d) any regular or substitute doctor, nurse, or first aid operative serving the named insured, while acting within the scope of his duties as such;
  - (e) any other person while using an automobile owned or hired by the named insured with the permission, and within the scope of the permission, of the named insured; but as respects the loading or unloading thereof, the term "insured" shall only mean the lessee or borrower of such automobile or his employee;
  - (f) any other party while acting as real estate manager for the named insured;
  - (g) the United States of America, but only as respects operations of the named insured in connection with the named insured's work under contracts therewith, and only with respect to acts or omissions of the United States of America in supervising such operations of the named insured;
  - (h) any non-paid consultants (retired Raytheon employees) but with respect to operations performed for the named insured;
  - (i) the Raytheon Employees Credit Union;
  - (j) any joint venture, in which the named insured has an interest, but only with respect to the liability of the named insured as a member thereof, and

(k) any person or organization for whose protection the named insured has agreed by written contract entered into prior to loss to provide insurance or whom the named insured has elected to designate as an additional insured upon a certificate of insurance certifying coverage under this policy. Regardless of any other written contractual provisions, in no event shall this insurance, with respect to such person or organization, exceed the actual liabilities expressly assumed by the named insured, the applicable limits or coverage that the named insured has so agreed to provide or the applicable limits or coverage of this policy

22304A.D00

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AUTHORIZED REPRESENTATIVE

page 2 of 2

Lead 3 of 6

**ENDORSEMENT #18**

**THIS ENDORSEMENT, EFFECTIVE 12:01 A.M. 6/1/97 FORMS A PART OF**

**POLICY NO. BE 932-56-55 ISSUED TO Raytheon Company**

**BY NATIONAL UNION FIRE INSURANCE COMPANY OF PITTSBURGH, PA.**

**TIME ELEMENT POLLUTION ENDORSEMENT**

Notwithstanding anything contained in this policy to the contrary, it is agreed that the exclusion relating to the discharge, dispersal, release or the escape of smoke, vapors, soot, fumes, acid, alkalis, toxic chemicals, liquids or gases, waste materials or other irritants, contaminants or pollutants is replaced by the following:

- I. This Policy does not cover:
  1. Any "Personal Injury" or "Property Damage" arising out of the actual, alleged or threatened discharge, dispersal or escape of pollutants:
    - a) At or from premises you currently own, rent or occupy or that you formerly owned, rented or occupied;
    - b) At or from any site or location used by or for you or others for the handling, storage, disposal, processing or treatment of waste material;
    - c) Which are at any time transported, handled, stored, treated, disposed of or processed as waste by or for you or any person or organization for whom you may be legally responsible; or
    - d) At or from any site or location on which you or any contractors or subcontractors working directly or indirectly on your behalf are performing operations:
      - (i) To test for, monitor, clean up, remove, contain, treat, detoxify or neutralize the pollutants, or
      - (ii) If the pollutants are brought on or to the site or location by or for you.

ENDORSE.DJT

2. Any loss, cost or expense arising out of any governmental directive, order or request that you test for, monitor, clean up, remove, contain, treat, detoxify, or neutralize pollutants.

Pollutants are defined as any solid, liquid, gaseous or thermal irritant or contaminant, including smoke, vapor, soot, fumes, acids, alkalis, chemicals and waste material. Waste material includes materials which are intended to be or have been recycled, reconditioned or reclaimed.

II. Provided, however, that this exclusion above does not apply to:

1. Discharge, dispersal, release or escape directly or indirectly caused by fire, explosion, lightning, windstorm, vandalism or malicious mischief, riot and civil commotion, flood, earthquake collision or upset of a motor vehicle, mobile equipment or aircraft, automatic sprinkler leakage, mechanical breakdown; or
2. Personal Injury or Property Damage which is within the Product Hazard or the Completed Operations hazard.

III. This exclusion will also not apply if said discharge, dispersal, release or escape of pollutants was not a result of a Named Peril occurrence as defined in Part II above and meets all of the following conditions:

- a) It was accidental and neither expected nor intended by the Named Insured.
- b) It was instantancous and was demonstrable as having commenced at a specific date during the term of this policy.
- c) Its commencement became known to the Insured within seven days.
- d) Its commencement was reported in writing to the insurance company within 90 days of becoming known to the Risk Manager.
- c) Reasonable effort was expended by the Named Insured to terminate the situation as soon as conditions permitted.

Nothing contained in Part III of this endorsement shall operate to provide any coverage with respect to:

1. Any site or location used by the Insured, or by others on the Insured's behalf, principally for the handling, storage, disposal, dumping, processing or treatment of hazardous waste material.
2. Any fines or penalties.
3. Any clean up costs ordered by the Superfund Program, or any federal, state or local governmental authority. However, this specific exclusion (3) shall not serve to deny coverage for third party clean up costs otherwise covered by this endorsement simply because of the involvement of a governmental authority.
4. Acid Rain.
5. Clean up, removal, containment, treatment, detoxification or neutralization of pollutants situated on premises the Insured owns, rents or occupies at the time of the actual discharge, dispersal, seepage, migration, release or escape of said pollutants.

All other terms and conditions remain unchanged.

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Authorized Representative

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834

POLICY NO.

9700118

AHG

ASSURED/REASSURED



Alexander Howden Group Limited

PAGE: 2 OF 6

**TYPE:** EXCESS UMBRELLA LIABILITY INSURANCE.

**FORM:** (A) end/or Companies Insurance Policy plus Short Excess Umbrella Form (Occurrence basis) following AIG Wording with amendments, if any, to be agreed Leading Underwriter only.

**ASSURED:** RAYTHEON COMPANY as per Underlying Policy.  
OF: 141 Spring Street, Lexington, Massachusetts 02173, U.S.A.

**PERIOD:** 12 Months at date to be agreed <sup>1st June 1997</sup> ~~Leading Underwriter only~~ 12.01 a.m. Local Standard Time.

**INTEREST:** Covering in respect of the Assured's liability as per the Underlying Policy.

**LIMITS OF LIABILITY:**

USD 45,000,000	any one occurrence
USD 45,000,000	annual aggregate where in the Underlying
<b>EXCESS OF:</b>	
USD 25,000,000	any one occurrence
USD 25,000,000	annual aggregate where applicable other than:
USD 50,000,000	annual aggregate in respect of Products Liability and Completed Operations Hazard

**WHICH IN TURN EXCESS OF:**  
Various Insurances as more fully defined in the Underlying Policy.

Leading Underwriters Agreement (LUA) and/or Assured re-signing of term policies to be initiated Leading Lloyd's Broker/Underwriter only. Increases in signed limits up to within plus 10% subject to agreement and initials from first two underwriters only.

TT(PMA)

Wordings, Schedules, Proposed Forms, and TCR Signings (i.e. LU) shall apply only.

Agreed that covered underwriter if required without production of original slip or policy. Agreed cancelled for us to non underwritten as agreed and LU shall apply only irrespective of individual underwriter does not sign of cancellation if any. Subject otherwise to CESA 1960, companies agreed authorization facilities supplied by giving instructions and 449946 will be sent with a form for return within 14 days if necessary allowing any objection, which should be provided, returned. By signing this policy agreement to the CESA 1960 and/or the leading CESA 1960 company to arrange for LUMA to sign the policy on its behalf and accept that such signing will be a valid signing for the purposes of the CESA 1960.

Lloyd's underwriters and companies (including LUMA members) agree to sign re-insurance policy (PMA 20747), following the same word and conditions as the leading insurer, if required. LUMA authorized to accept temporary pro-rated limit.

LUMA authorized to sign direct policy documents prior to premium payment in accordance with LUMA Early Documentation Schedule.

Lloyd's Market (Underwriters/LLU) and Companies subject to CESA, insurance terms to issue policies on its FID basis as required.

All Invoices issued within 30 days.

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20/05/97



22 MAY 1997 18:16

AHG NORTH AMERICAN

NO. 102 P. 3

834 POLICY NO.

X-9700118



Alexander Howden Group Limited

PAGE 1 OF 5

AHG ASSURED/REASSURED

SITUATION: Worldwide as per Underlying Policy.

CONDITIONS: Following all terms and conditions of the Underlying AIG Policy plus:

- 1) Notice of Loss to: Aon Group Limited, London.
- 2) N.M.A. 1998 Service of Suit Clause - U.S.A. naming McCullough, Campbell and Lane and/or nominees..
- 3) N.M.A. 1546 Tax Clause - U.S.A., Companies only, if applicable.
- 4) Nuclear Incident Exclusion Clause - as per Underlying Policy.
- 5) N.M.A. 1477 Radioactive Contamination Exclusion Clause - Liability - Direct - U.S.A.
- 6) To the extent that Punitive Damages are not insurable in the United States, coverage is afforded under this Policy.
- 7) Follow Form Endorsement, as attached.

PREMIUM: USD 400,000 (for 100%) annual.

- INFORMATION:
- 1) Underwriting Submission dated April, 1997 seen and noted by Underwriters.
  - 2) Underlying Policy written by National Union Fire Insurance Company of Pittsburgh.
  - 3) Underwriters have seen and noted a copy of the expiring National Union Policy (referenced BE 309-97-78).
  - 4) Attached Schedule of Underlying Insurance to be updated for 1997.
  - 5) Underwriters deem the United Kingdom exposure to be NIL% of the total, therefore the 4% Insurance Premium Tax is not applicable.

**GERLING-KONZERN**  
**GENERAL INSURANCE COMPANY**  
**UK BRANCH**

MANAGER: GERLING INSURANCE SERVICE COMPANY LTD

62	500230	01
62	920039	01

100%

12/5/97

10 FENCHURCH STREET, LONDON EC3M 5JY

ALL AMENDMENTS/EXTENSIONS TO BE AGREED

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20/05/97



20.MAY.1997 18:17

AHG NORTH AMERICAN

NO.102 P.4

834

POLICY NO.

9700118



Alexar & Howden  
Group Limited

PAGE: 4 OF 6

AHG

ASSURED/REASSURED

RAYTHEON COMPANY

FOLLOW FORM ENDORSEMENT

It is agreed that this Policy is following the exact same terms and conditions of the National Union Fire Insurance Company Policy Number \_\_\_\_\_ except with respect to the Limits of Liability stated herein, the Premium stated herein and any coverage modification endorsements attached hereto.

All pre-printed terms and conditions of the Policy Jacket are deleted to the extent that they vary from or are inconsistent with the terms and conditions of the National Union Fire Insurance Company Policy Number \_\_\_\_\_.



ALL OTHER TERMS AND CONDITIONS OF THIS POLICY REMAIN UNCHANGED.

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20/05/97

*LEX. 10FS*

**LEXINGTON INSURANCE COMPANY**

Wilmington, Delaware

(A Stock Insurance Company)

Administrative Offices: 200 State Street, Boston, Massachusetts 02109  
(hereinafter called the Company)

**ARCHITECTS & ENGINEERS PROFESSIONAL LIABILITY POLICY AND  
POLLUTION ERRORS & OMISSIONS LIABILITY AND  
CONTRACTORS POLLUTION LIABILITY**

Policy No.: 563-5161

Renewal of: 563-5117

NOTICE: This is a CLAIMS-MADE POLICY. Subject to the terms and conditions of the Policy, this insurance applies to only those CLAIMS THAT ARE FIRST MADE AGAINST THE INSURED AND REPORTED TO THE COMPANY DURING THE POLICY PERIOD. By acceptance of this Policy the insured agrees that the statements in the Declarations, the Application and any attachments are the Insured's agreements and material representations. The Insured also agrees that this Policy embodies all agreements existing between the Insured and the Company. Please read and review the Policy carefully and discuss the coverage with your insurance representative.

**DECLARATIONS**

ITEM 1. Named Insured: RAYTHEON COMPANY (See Endorsement #1)

Address: 141 Spring Street

Lexington, MA 02173

ITEM 2. Policy Period:

From: 06/01/97 to: 06/01/98  
at 12:01 A.M. standard time at the address of the insured stated above.

ITEM 3. Limits of Liability: (See Endorsement #2) Each Claim Annual Aggregate

ITEM 4. Self-Insured Retention: (See Endorsement #2) Each Claim

ITEM 5. Premium: \$ 1,514,420.

<u>Advance Premium</u>	<u>Annual Minimum Premium</u>	<u>Minimum Earned Premium</u> <u>At Inception</u>
\$1,514,420	\$1,514,420	\$378,605

ITEM 6. Audit Rate: Flat

ITEM 7. Professional Services: (See Endorsement #3)

ITEM 8. Retroactive Date: (See Endorsement #4)

ITEM 9. Discovery Option: (See Endorsement #7)

ITEM 10. Endorsements made a part of this policy: Refer to Forms Schedule

COUNTERSIGNED ON \_\_\_\_\_

At Boston, Massachusetts 02109

\_\_\_\_\_  
Authorized Representative

*LEX 2 OF 5*

- e. **waste** means any waste material (i) containing **by-product material** other than the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content, and (ii) resulting from the operation by any person or organization of a **nuclear facility** included within the definition of **nuclear facility** below;
- f. **nuclear facility** means:
- i) any nuclear reactor;
  - ii) any equipment or device designed or used for (a) separating the isotopes of uranium or plutonium, (b) processing or utilizing **spent fuel**, or (c) handling, processing or packaging wastes;
  - iii) any equipment or device used for the processing, fabricating, or alloying of **special nuclear material** if at any time the total amount of such material in the custody of the Insured at the premises where such equipment or device is located consists of or contains more than 25 grams of plutonium or uranium 233 or any combination thereof, or more than 250 grams of uranium 235;
  - iv) any structure, basin, excavation, premises or place prepared or used for storage or disposal of **waste**, and includes the site on which any of the foregoing is located, all operations conducted on such site and all premises used for such operations.
- g. **nuclear reactor** means any apparatus designed or used to sustain nuclear fission in a self-supporting chain reaction or to contain a critical mass of fissionable material;
- h. with respect to injury to or destruction of property, the words "injury" or "destruction" include all forms of radioactive contamination of property;

*The following exclusions apply to Contractors Pollution Liability only.*  
II-2. ADDITIONAL EXCLUSIONS THAT APPLY SOLELY WITH RESPECT TO COVERAGE A (2):

- R. This insurance will not apply to **Pollution Conditions Claims** arising from, based upon or attributable to any Insured's intentional, knowing, willful or deliberate noncompliance with any statute, regulation, ordinance, administrative complaint, notice of violation, notice letter, executive order, or instruction of any government agency or body.
- S. This insurance will not apply to **Pollution Conditions Claims** based upon or arising out of pollution at, on to or from property or facilities which are or were at any time owned or rented by the **Insured**.
- T. This insurance will not apply to **Claims** due to **Property Damage** to that particular part of the **Insured's** work out of which the **Pollution Condition** arises; but this exclusion does not apply if the damaged work or work out of which the damage arises is performed on the **Insured's** behalf by a subcontractor

Lex 3 of 5

- U. This insurance will not apply to **Claims** arising from any consequence, whether direct or indirect, of war, invasion, act of foreign enemy, hostilities (whether war be declared or not), civil war, rebellion, revolution, insurrection, military, or usurped power, strike, riot, or civil commotion.
- V. This insurance will not apply to any **Claim** arising from any waste or any other products or materials transported, consigned, shipped, or delivered via **Motor Vehicle**, aircraft, watercraft, rolling stock, or **Mobile Equipment** to a location beyond the boundaries of the site at which the **Insured** is performing **Covered Operations**. However, this exclusion does not apply to the transportation of wastes that results in **Bodily Injury** or **Property Damage** due to spill, overturn, loading or unloading.

### III. DEFINITIONS:

- A. **Bodily Injury** means sickness, disease, death, mental anguish and/or emotional distress
- B. **Claim** shall mean any demand for money or services including, but not limited to, the service of suit or institution of arbitration proceedings against the **Insured**.
- C. **Claim Expenses** shall mean:
  - 1. within the **Insured's** Self-Insured Retention, all fees, costs and expenses resulting from the investigation, adjustment, defense and appeal of a **Claim**. **Claim Expenses** shall not include the salaries of any employee of the **Insured**.
  - 2. excess of the **Insured's** Self-Insured Retention, fees charged by any lawyer designated by the **Company**; and all other fees, costs and expenses resulting from the investigation, adjustment, defense and appeal of a **Claim**, if authorized by the **Company**. **Claim Expenses** shall not include the salaries of any employee of the **Company**.
- D. **Clean-up Costs** mean expenses incurred in the removal or remediation of soil, surface water, ground water, or other contamination resulting from **Pollution Conditions**; provided such expenses:
  - 1. are specifically mandated by the government of the United States or any state thereof, or Canada or any province thereof, or any political subdivision thereof, or any foreign jurisdiction acting under the authority of environmental law(s); or
  - 2. have been actually incurred by the government of the United States or any state thereof, or Canada or any province thereof, or any political subdivision thereof, or any foreign jurisdiction, or by third parties.
- E. **Damages** shall mean any amount which an **Insured** is legally obligated to pay for any **Claim** to which this insurance applies and shall include judgments, interest on judgments, **Claim Expenses** and settlements, provided always that **Damages** shall not include the return or withdrawal of professional fees, sanctions, fines or penalties imposed by law, or other matters that are deemed uninsurable under the law pursuant to which the **Policy** shall be construed.

*LEX 4 OF 5***ENDORSEMENT #1****NAMED INSURED ENDORSEMENT**

This Endorsement, effective 12:01 A.M. June 1, 1997, forms a part of Policy No 563-5161 issued to Raytheon Company by Lexington Insurance Company.

The Named Insured is hereby amended to include Raytheon Company and its owned, controlled, affiliated or subsidiary companies, including those acquired subsequent to the inception date of the Policy, but coverage hereunder for newly acquired entities will not apply to a period greater than one hundred twenty (120) days from the date of such acquisition; however, if the Named Insured shall give the Company notice and if requested file an application for coverage of such acquired subsidiary or owned or controlled Company within the aforesaid period of one hundred twenty (120) days and the Named Insured shall:

- i. pay any additional premium; and
- ii. accept such terms

as may be required by the Company, then this Policy shall continue to apply to such subsidiary or owned or controlled Company.

*Michael R. [Signature]*

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**AUTHORIZED REPRESENTATIVE**

LEX 545

ENDORSEMENT # 3

PROFESSIONAL SERVICES/COVERED OPERATIONS ENDORSEMENT

This Endorsement, effective 12:01 A.M. June 1, 1997, forms a part of Policy No. 563-5161, issued to Raytheon Company by Lexington Insurance Company.

It is hereby understood and agreed that Professional Services shall mean:

Professional Services include, but are not limited to, architecture, engineering, design, consulting, training, surveying, construction management, laboratory testing and analysis and other related professional services.

It is further agreed that Covered Operations as respects Coverage I.A.2. is defined as:

Covered Operations include, but are not limited to, construction, erection, fabrication, procurement, installation, remediation, contract maintenance and other related construction operations.

*[Handwritten Signature]*

AUTHORIZED REPRESENTATIVE

28-MAY-1997 12:16 FROM AHG FIN & PROF RISKS TO 0016175422597 P.03

834

POLICY NO. QA9700048



Alexander Howden Group Limited PAGE: ...1. OF 3

AHG

ASSURED/REASSURED

**TYPE:** EXCESS PROFESSIONAL LIABILITY AND CONTRACTORS POLLUTION LIABILITY INSURANCE

**FORM:** LSW 055

**INSURED:** RAYTHEON COMPANY and others as more fully described in the underlying policy and / or as maybe agreed on the underlying policy number 563-5117 or renewal thereof.

**PRINCIPAL ADDRESS:** 141 Spring Street, Lexington, Massachusetts 02173 - 7899, U.S.A.

**PERIOD:** From 1st June 1997 to 1st June 1998 both days at 12:01 a.m. Local Standard Time.

**INTEREST:** To cover the Insured's Liability as more fully described in the Primary Policy and / or as maybe agreed on the Primary Policy.

**LIMIT OF LIABILITY:** USD 10,000,000 any one claim and in the aggregate (including costs and expenses).

Excess of

USD 60,000,000 any one claim and in the aggregate (including costs and expenses).

Which in turn is excess of a self insured retention of :

USD 5,000,000 each and every claim (including costs and expenses),

USD 10,000,000 in the aggregate (including costs and expenses)

thereafter,

USD 1,000,000 each and every claim (including costs and expenses)

**SITUATION / JURISDICTION:** Worldwide

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28/05/97

834 POLICY NO. QA9700048  
AHG ASSURFORCASUED



Alexander Howden  
Group Limited  
PAGE: 2 OF 3

**CONDITIONS:** All terms and conditions as Underlying as far as applicable including:-

- 1) Agree extend if required for 45 days at terms and conditions to be agreed L/U only. (Slip condition only not to appear in Cover Notes / Policy Wording).
- 2) All amendments, alterations, additions and / or deletions, to be agreed L/U only. (Slip condition only not to appear in Cover Notes / Policy Wording).

**ANNUAL PREMIUM:** USD 125,000

**COMMISSION:** 10% to Aon Risk Services Inc - Boston, Massachusetts.

**INFORMATION SEEN BY**

- UNDERWRITERS:**
- 1) Aon Risk Services Inc. of Massachusetts 'Renewal Specifications' Submission.
  - 2) Aon Risk Services fax dated 16th May 1997 enclosing Lexington fax dated 17th April 1997 (13 pages).

00469454.DOC/IIM  
28/05/97

ZURICH 2 OF 2



*RELIANCE 1 OF 2*

RELIANCE INSURANCE COMPANY OF ILLINOIS  
FRREPORT, ILLINOIS

FOLLOWING FORM EXCESS POLICY  
DECLARATIONS

POLICY NUMBER: NTE172146601

Item 1: NAMED INSURED RAYTHEON COMPANY

ADDRESS 141 Spring Street

Lexington, MA 02173

Item 2: POLICY PERIOD:

FROM June 1, 1997 TO June 1, 1998

12:01 A.M. standard time at the address of the NAMED INSURED shown above.

Item 3: PRIMARY INSURANCE:

Primary Carrier(s): Lexington Insurance Company

Policy Number(s): 536-5161

Policy Period(s): June 1, 1997 - June 1, 1998

Limits of Liability: See Endorsement #3

Coverage: Claims Made Professional Liability

Item 4: DESCRIPTION OF COVERAGE HEREUNDER

Coverage: Claims Made Excess Professional Liability

Limits of Liability: \$40,000,000/ Ultimate net CLAIM  
\$40,000,000 and in the total Aggregate

Item 5: POLICY PREMIUM: \$463,384

Item 6: RETROACTIVE DATE: Per the underlying Lexington policy form

ENDORSEMENTS ATTACHED TO THIS POLICY: See Endorsement #1

Broker: AON Risk Services, Inc. of Massachusetts  
99 High Street  
Boston, MA 02110-3271

*[Signature]*  
\_\_\_\_\_  
Authorized Representative SG/mmb 6/30/97  
WINS #102642

*Agent*

*RELIANCE 2 IF 2***ENDORSEMENT #2**

This endorsement, effective 12:01 a.m., June 1, 1997 forms a part of Policy No. NTE172146601 issued to RAYTHEON COMPANY by Reliance Insurance Company of Illinois.

In consideration of the premium paid, it is agreed that this Policy is Excess Professional Liability of the underlying Lexington Insurance Company Professional Liability Policy. All terms and conditions of the underlying Lexington Insurance Company Policy and including endorsements will apply.

It is further agreed that any change, modifications of endorsements made to the underlying Lexington Insurance Company Policy must be received by the underwriter prior to applying to this Policy.

All other terms and conditions remain the same.

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(Authorized Representative)

SG/mmb 6/30/97

XL 1 OF 8

7

Policy No. XLUMB-00374Date: AUGUST 30, 1996

## EXCESS LIABILITY INDEMNITY POLICY INSURANCE DECLARATIONS

- Item 1 (a) Named Insured: RAYTHEON COMPANY
- (b) Address of Named Insured: 141 SPRING STREET,  
LEXINGTON, MA 02173  
U.S.A.
- Item 2 Limits of Liability:
- (a)
- | <u>Layer</u> | <u>Per Occurrence<br/>Limit</u>     | <u>Per Occurrence<br/>Retention</u> |
|--------------|-------------------------------------|-------------------------------------|
| 1            | 100% part of \$75,000,000 excess of | \$75,000,000                        |
- (b) Annual Aggregate: \$75,000,000
- Item 3 Policy Inception Date: MAY 1, 1986
- First Annual Period Expiration Date: MAY 1, 1987
- Item 4 Retroactive Coverage Date: APRIL 1, 1986
- Item 5 Representative of Named Insured: RAYTHEON COMPANY
- Item 6 Currency:
- (a) Premium: UNITED STATES DOLLARS
- (b) Claims: UNITED STATES DOLLARS
- Item 7 Premium: \$720,000

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\* At 12:01 A.M. at the address of the Named Insured listed in Item 1(b) above.

XL 2 OF 8

BROKERS COPY

Page 1 of 2

Insured: RAYTHEON COMPANY  
 Policy No: XLUMB-00374  
 Endorsement No: 17  
 Effective Date: JUNE 1, 1997

**COVERAGE "A" EXTENSION AND INCORPORATION OF SCHEDULES  
 BY REFERENCE ENDORSEMENT**

1. In consideration of the additional premium stated below, it is hereby agreed that Coverage A of the Policy is extended for another Annual Period commencing at 12:01 A.M. prevailing time at the address of the Named Insured on the Extension Date listed below. Except if a Change of Limit and/or Retention Endorsement is issued and as indicated on any such endorsement, all other limitations, terms, exclusions and conditions of the Policy remain unchanged, including, without limitation, paragraph (1) of Section VI. R. regarding automatic reinstatement of the aggregate limit of liability set forth in Item 2(b) of the Declarations.
  
2. Schedules A, B and C dated as of the date(s) listed below are hereby incorporated by reference and shall be deemed to be attached to the Policy; provided, however, that if the Named Insured has not provided an up-to-date Schedule B prior to the issuance of this Endorsement, (i) the Named Insured covenants to provide such an updated Schedule B, completed in accordance with applicable instructions, as soon as is practicable, which schedule automatically shall be incorporated by reference and deemed to be attached to the Policy, and (ii) the Named Insured warrants and represents that it has arranged for replacement insurance (excess but not primary) with coverage at least as broad and limits at least as great as the insurance listed on the most recent Schedule B supplied to the Company in respect of this Policy and covenants that such replacement insurance will be listed on the updated Schedule B to be provided as set forth above.

Additional Premium: \$630,720  
 Extension Date: JUNE 1, 1997 - JUNE 1, 1998  
 Schedule A Date: NONE  
 Schedule B Date: TO BE AGREED  
 Schedule C Date: DATE SIGNED - APRIL 17, 1996

Ref: XS4-031.02

CONTD....



XL 3 OF 8

BROKERS COPY

Insured: RAYTHEON COMPANY  
 Policy No: XLUMB-00374  
 Endorsement No: 17  
 Effective Date: JUNE 1, 1997

**COVERAGE "A" EXTENSION AND INCORPORATION OF SCHEDULES  
 BY REFERENCE ENDORSEMENT CONT'D.**

It is agreed that the only purposes of Schedules A, B and C are to set forth the following information as respects the corresponding indicated provisions of the Policy, and nothing contained in such Schedules shall affect application of any other provisions of the Policy:

<u>Schedule</u>	<u>Information</u>	<u>Policy Provision</u>
A	additional insured entities	III.P (2) (b)
B	underlying insurance	IIA (1)
C	exceptions to Watercraft exclusion	IV.J

XL INSURANCE COMPANY, LTD.

By:   
 LYLE MCCOY

Title: VICE PRESIDENT

Date: JULY 14, 1997

Ref: XS4-031.02



XL 4 of 8

-8-

reimbursement) makes available Aircraft owned, operated or used by it or aviation transportation services to others;

- (2) use of any Aircraft held in inventory or otherwise for sale, lease, charter or delivery to another person by an Insured in the business of manufacture, sale, lease or charter of Aircraft;
- (3) use of Aircraft for product testing or demonstration purposes;
- (4) use of Aircraft owned by a party other than the Insured which is being serviced, maintained, fueled or tested or otherwise is in the temporary care, custody or control of the Insured in connection with any business operations of the Insured relating to Aircraft servicing, maintenance, fueling, testing, storage or associated or similar matters; or
- (5) use of any Aircraft giving rise to liability of the Insured arising out of the Insured's Products.

P. The "Insured" means, except as specifically stated otherwise in this Policy, all Insureds as defined below:

- (1) the Named Insured and, if the Named Insured is designated in Item 1(a) of the Declarations as a partnership or Joint Venture, the partnership or Joint Venture so designated and each partner or member thereof but only with respect to his or its liability as such;
- (2) (a) any subsidiary or affiliate of the Named Insured for any Annual Period whose accounts as of the date of the financial statements of the Named Insured submitted to the Company most recently prior to the rating of the premium for such Annual Period (i) are consolidated in the financial statements of the Named Insured in accordance with generally accepted accounting principles in the United States of America, or (ii) were eligible for such consolidation (or in the case of a non-United States Named Insured would have been consolidated or eligible for consolidation if United States generally accepted accounting principles applied) and whose financial statements were submitted to the Company with such financial statements of the Named Insured as of such date;

XL 50A8

-9-

- (b) any subsidiary, affiliate or associated company of the **Named Insured** listed on Schedule A hereto;
- (3) any present or former officer, director, stockholder or employee of any person or entity named in paragraph (1) or (2) above or (6) below, but only while acting within the scope of his or her duties as such, and any person or organization with respect to liability for providing real estate management for any such person or entity named in paragraph (1) or (2) above or (6) below;
- (4) any person, organization, trustee or estate to whom any person or entity named in paragraph (1) or (2) above or (6) below is obligated by virtue of a written contract or agreement to provide insurance such as is afforded by this Policy, but only to the extent of such obligation and only in respect of operations (other than commercial insurance operations) by or on behalf of such person or entity named in paragraph (1) or (2) above or (6) below or of facilities owned or used by such person or entity named in paragraph (1) or (2) above or (6) below;
- (5) with respect to any **Automobile** owned by any person or entity named in paragraph (1), (2) or (3) above or (6) below or hired for use on behalf of any such person or entity, any person or organization legally responsible for the use thereof, provided the actual use of the **Automobile** is with the permission of such person or entity;
- (6) any **Joint Venture** in which any entity listed in paragraph (1) or (2) above has an interest, but only if:
- (a) the **Insured** has sole responsibility for the **Joint Venture**, or
- (b) the **Insured** is obligated to provide insurance for the **Joint Venture** in its entirety such as is afforded by this Policy.
- (7) It is agreed automatically to include as an **Insured** without listing on Schedule A hereto or adjustment of premium under this Policy for any **Annual Period** any entity acquired or formed by or merged with an **Insured** (a "Potential Additional Insured") during such **Annual Period** provided that:
- (a) the fair value of the sum of all cash, securities, assumed indebtedness and other consideration expended by all **Insureds** for any such acquisition, formation or merger or any series of interrelated acquisitions, formations or mergers does not exceed 5% of the total assets of the **Named Insured** and its

XL 6 OF 8

-10-

consolidated subsidiaries and affiliates as most recently reported to the Company for rating purposes prior to such Annual Period;

- (b) the incremental annual gross revenues attributable to such acquisition, formation or merger or series of interrelated acquisitions, formations or mergers do not exceed 5% of the total annual gross revenues of the Named Insured and its consolidated subsidiaries and affiliates as most recently reported to the Company for rating purposes prior to such Annual Period; and
- (c) neither the operations of the Potential Additional Insured prior to such acquisition, formation or merger or any series of interrelated acquisitions, formations or mergers nor the resultant combined or consolidated operations of the Insured and the Potential Additional Insured subsequent to such acquisition, formation or merger or any series of interrelated acquisitions, formations or mergers are materially different from those of such Insured prior to such acquisition, formation or merger or series of interrelated acquisitions, formations or mergers.

Unless notice to the Company shall have been given and additional premium, if any, shall have been paid in respect of any acquisition, formation or merger (or series thereof) not meeting the criteria set forth herein, such Potential Additional Insured shall not be an Insured hereunder, and liability assumed by an Insured in connection with such acquisition, formation or merger (or series thereof) shall not be indemnified hereunder.

With respect to any Occurrence giving rise to liability of any Potential Additional Insured that qualifies as an Insured hereunder, the Inception Date shall be the date of merger with or acquisition or formation of the Potential Additional Insured by an Insured or such other date as may be agreed in writing between the Named Insured and the Company. If during any Annual Period an Insured acquires a business, division or other operations by asset acquisition, such asset acquisition shall be considered an acquisition of an entity for purposes of this paragraph (7).

- Q. "Insured's Products" means goods or products manufactured, sold, tested, handled or distributed by the Insured or others trading under its name, or tools, uninstalled equipment or abandoned or unused materials that were the subject of completed operations performed for others by the Insured.



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**J. WATERCRAFT**

Liability arising out of the design, construction, maintenance, sale, manning, ownership or operation of any Watercraft, but this Exclusion J shall not apply to:

- (1) Watercraft or risks listed on Schedule C hereto and any additional Watercraft acquired in the ordinary course of business during the Policy Period which are of a similar type and use as the Watercraft listed on Schedule C; provided, however, that the aggregate gross tonnage of all such additional Watercraft shall not exceed 20% of the gross tonnage of Watercraft listed on Schedule C;
- (2) loading or unloading of any Watercraft at premises owned, leased or controlled by the Insured;
- (3) liability for any Personal Injury or Property Damage to third parties arising out of or allegedly arising out of Incidental Watercraft Use (provided that damage to the hull or any portion, component or equipment of the Watercraft owned, leased or chartered by the Insured or to its cargo contents shall not constitute Property Damage to third parties);
- (4) liability for Personal Injury, Property Damage or Advertising Liability arising out of the design, construction, maintenance or sale by the Insured of any Watercraft less than 75 feet in length; or
- (5) Personal Injury, Property Damage or Advertising Liability arising out of or alleged to arise out of design, manufacture, maintenance or sale by the Insured of any component part or equipment of any Watercraft.

**K. POLLUTION**

- (1) (a) liability for Personal Injury, Property Damage or Advertising Liability arising out of the Discharge of Pollutants into or upon land or real estate, the atmosphere, or any watercourse or body of water whether above or below ground or otherwise into the environment; or
- (b) liability, loss, cost or expense of any Insured or others arising out of any direction or request, whether governmental or otherwise, that any Insured or others test for, monitor, clean up, remove, contain, treat, detoxify or neutralize Pollutants.

This Exclusion K applies whether or not such **Discharge** of such **Pollutants**:

- (i) results from the **Insured's** activities or the activities of any other person or entity;
- (ii) is sudden, gradual, accidental, unexpected or unintended; or
- (iii) arises out of or relates to industrial operations or the **Waste** or by-products thereof.

(2) Paragraph (1) of this Exclusion K does not apply to:

- (a) **Product Pollution Liability**; or
- (b)
  - (i) liability of the **Insured** for **Personal Injury** or **Property Damage** caused by an intentional **Discharge** of **Pollutants** solely for the purpose of mitigating or avoiding **Personal Injury** or **Property Damage** which would be covered by this Policy; or
  - (ii) liability of the **Insured** for **Personal Injury** or **Property Damage** caused by a **Discharge** of **Pollutants** which is not **Expected** or **Intended**, but only if the **Insured** becomes aware of the commencement of such **Discharge** within seven (7) days of such commencement;

provided that the **Insured** gives the **Company** written notice in accordance with Section D of Article V of this Policy of such commencement of the **Discharge** under subparagraphs (2)(b)(i) or (ii) of this Exclusion K within forty (40) days of such commencement. Such notice must be provided irrespective of whether notice as soon as practicable otherwise would be required pursuant to Section A of Article V of this Policy.

**L. NUCLEAR**

Liability for:

- (1) **Personal Injury, Property Damage** or **Advertising Liability** in the United States, its territories or possessions, Puerto Rico or the Canal Zone (A) with respect to which an **Insured** under this Policy is also an insured under a nuclear energy liability policy issued by Nuclear Energy Liability Insurance Association, Mutual Atomic Energy Liability Underwriters or Nuclear Insurance Association of Canada, or would be an

COPY

Form A.C.E. No. 004-11/91

Policy No. RTN-5025/4



**A.C.E. INSURANCE COMPANY (Bermuda), LTD.**  
("Insurer")

Producer: **FRANK B. HALL (INTERMEDIARIES) LTD.**

In favor of: **RAYTHEON COMPANY**

Address: **141 Spring Street, Lexington, MA 02173**

Type of Coverage: **EXCESS LIABILITY**

In the amount as stated in Item 2 of the Declarations.

**SEE REVISED POLICY FORM ENDORSEMENT**

Term: ~~Reporting to the Office of the Registrar of Companies, Bermuda, on or before the 31st day of December 1992.~~

prevailing time at the address of the Named Insured and in accordance with the terms and conditions of the form(s) attached.

**PREMIUM \$735,000**

IN WITNESS WHEREOF, this Policy has been made, entered into and executed by the undersigned in Hamilton, Bermuda this 3rd day July, 1992.

By: *William J. Loschert*  
**WILLIAM J. LOSCHERT**  
Title: **EXECUTIVE VICE PRESIDENT**  
**UNDERWRITING**

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ACE 2 of 5

COPY

Form A.C.E. No. 004-11/91

THIS IS AN OCCURRENCE (AS  
DEFINED HEREIN) FIRST REPORTED  
POLICY WITH AN OPEN-END  
DISCOVERY PERIOD (IF PURCHASED)  
ON THE TERMS AND CONDITIONS SET  
FORTH HEREIN

**EXCESS LIABILITY INSURANCE****DECLARATIONS**

- Item 1 (a) Named Insured: RAYTHEON COMPANY  
(b) Address of Named Insured: 141 Spring Street, Lexington, MA 02173
- Item 2 Limit of Liability:  
(a) Limit in respect of each occurrence: \$200,000,000  
(b) Annual period limit in the aggregate for all covered occurrences: \$200,000,000  
(c) Per Occurrence Retention Amount: See Attached Schedule
- Item 3 Policy Inception Date: See Revised Policy Form Endorsement  
First Annual Period Expiration Date: 1st April, 1993
- Item 4 Currency: United States Dollars
- Item 5 Representative of Named Insured: Frank B. Hall (Intermediaries) Ltd.
- Item 6 Notice:-- ACE Insurance Company (Bermuda), Ltd.  
The ACE Building  
30 Woodbourne Avenue  
Hamilton HM 08, Bermuda  
(809) 295-5221 telecopy  
3543 ACEIL BA telex
- Item 7 Applicable Initial Endorsements  
Revised Policy Form  
Per Occurrence Retention Schedule

Said insurance is subject to the provisions, stipulations, exclusions and conditions contained in this form and the representations and warranties of the Named Insured contained in the Named Insured's initial and extension applications for this policy of insurance, which are hereby made a part of said insurance, together with other provisions, stipulations, exclusions and conditions as may be endorsed on said policy or added thereto as therein provided (collectively hereinafter referred to as the "Policy").

ACE 3 OF 5

- (c) as respects any liability of a person or party, who is not an Insured assumed by an Insured under a contract or agreement, by an Insured at the time of such assumption.
- (3) **Commercial Risk**

As respects any **Integrated Occurrence** arising out of the Insured's Products, actual or alleged **Personal Injury** or **Property Damage** similar to, and not vastly greater in order of magnitude than, that included in such **Integrated Occurrence** arising out of sales, if any, of such products by the Insured after the date of the **Notice of Integrated Occurrence** shall be deemed **Expected or Intended**. No inference shall be drawn from the giving of a **Notice of Integrated Occurrence** or from this paragraph (3) that actual or alleged **Personal Injury** or **Property Damage** arising out of sales of such products by the Insured prior to the date of such **Notice of Integrated Occurrence** either was or was not **Expected or Intended**.

N. "**Inception Date**" means the date set forth in Item 4 of the Declarations; provided, however, that with respect to any Insured which becomes an Insured subsequent to the **Inception Date**, the **Inception Date** for that Insured shall be the date such person or entity became an Insured under this Policy or such other date as may be agreed in writing between the **Named Insured** and the Insurer; provided further that as respects any layer of coverage not set forth in Items 2 and 3 of the original Declarations which is added by Endorsement, the **Inception Date** shall be the effective date of such Endorsement unless otherwise agreed in writing between the **Named Insured** and the Insurer.

O. "**Incidental Watercraft Use**" means use by the Insured of any owned, leased or chartered **Watercraft** less than 75 feet in length but shall not include:

- (1) use of **Watercraft** for the commercial carriage for a fee of passengers or cargo for parties other than the Insured in exchange for a fee;
- (2) use of **Watercraft** in connection with the commercial provision of marine services to others for a fee;
- (3) use of any **Watercraft** held in inventory or otherwise for lease or charter to another person by an Insured in the business of lease or charter of **Watercraft**; or
- (4) use of **Watercraft** owned by a party other than the Insured which is being serviced, maintained, fueled, or tested or otherwise is in the temporary care, custody or control of the Insured in connection with any business operations of the Insured relating to **Watercraft** servicing, maintenance, fueling, testing, storage or associated or similar matters.

P. The "**Insured**" means, except as specifically stated otherwise in this Policy, all Insureds as defined below:

- (1) the **Named Insured** and, if the **Named Insured** is designated in Item 1(a) of the Declarations as a partnership or **Joint Venture**, the partnership or **Joint Venture** so designated and each partner or member thereof but only with respect to his or its liability as such;
- (2) (a) any subsidiary or affiliate of the **Named Insured** for any **Annual Period** whose accounts as of the date of the financial statements of the **Named Insured** submitted to the Insurer most recently prior to the rating of the premium for such **Annual Period** (i) are consolidated in the financial statements of the **Named Insured** in accordance with generally accepted accounting principles in the United States or America, or (ii) were eligible for such consolidation (or in the case of a non-United States **Named Insured** would have been consolidated or

Acc 4 of 5

eligible for consolidation if United States generally accepted accounting principles applied) and whose financial statements were submitted to the Insurer with such financial statements of the Named Insured as of such date;

- (b) any subsidiary, affiliate or associated company of the Named Insured listed on Schedule A hereto;
- (3) any present or former officer, director, stockholder or employee of any person or entity named in paragraph (1) or (2) above or (6) below, but only while acting within the scope of his or her duties as such, and any person or organization with respect to liability for providing real estate management for any such person or entity named in paragraph (1) or (2) above or (6) below;
- (4) any person, organization, trustee or estate to whom any person or entity named in paragraph (1) or (2) above or (6) below is obligated by virtue of a written contract or agreement to provide insurance such as is afforded by this Policy, but only to the extent of such obligation and only in respect of operations (other than commercial insurance operations) by or on behalf of such person or entity named in paragraph (1) or (2) above or (6) below or of facilities owned or used by such person or entity named in paragraph (1) or (2) above or (6) below;
- (5) with respect to any Automobile owned by any person or entity named in paragraph (1), (2) or (3) above or (6) below or hired for use on behalf of any such person or entity, any person or organization legally responsible for the use thereof, provided the actual use of the Automobile is with the permission of such person or entity;
- (6) any Joint Venture in which any entity listed in paragraph (1) or (2) above has an interest, but only:
- (a) if, and only to the extent that, the Insured is obligated to provide insurance for the Joint Venture in its entirety such as is afforded by this Policy, or
- (b) if the Joint Venture is listed on Schedule A hereto.
- (7) It is agreed automatically to include as an Insured without listing on Schedule A hereto or adjustment of premium under this Policy for any Annual Period any entity acquired or formed by or merged with an Insured (a "Potential Additional Insured") during such Annual Period provided that:
- (a) the fair value of the sum of all cash, securities, assumed indebtedness and other consideration expended by all Insureds for any such acquisition, formation or merger or any series of interrelated acquisitions, formations or mergers does not exceed 5% of the total assets of the Named Insured and its consolidated subsidiaries and affiliates as most recently reported to the Insurer for rating purposes prior to such Annual Period;
- (b) the incremental annual gross revenues attributable to such acquisition, formation or merger or series of interrelated acquisitions, formations or mergers do not exceed 5% of the total annual gross revenues of the Named Insured and its consolidated subsidiaries and affiliates as most recently reported to the Insurer for rating purposes prior to such Annual Period; and
- (c) neither the operations of the Potential Additional Insured prior to such acquisition, formation or merger or any series of interrelated acquisitions, formations or mergers nor the resultant combined or consolidated operations of the Insured and the Potential Additional Insured subsequent to such acquisition, formation or merger or any series of interrelated acquisitions, formations or mergers are

ACE 50FS

tonnage of all such additional Watercraft shall not exceed 20% of the gross tonnage of Watercraft listed on Schedule C;

- (2) loading or unloading of any Watercraft at premises owned, leased or controlled by the Insured;
- (3) liability for any Personal Injury or Property Damage to third parties arising out of or allegedly arising out of Incidental Watercraft Use (provided that damage to the hull or any portion, component or equipment of the Watercraft owned, leased or chartered by the Insured or to its cargo contents shall not constitute Property Damage to third parties);
- (4) liability for Personal Injury, Property Damage or Advertising Liability arising out of the design, construction, maintenance or sale by the Insured of any Watercraft less than 75 feet in length; or
- (5) Personal Injury, Property Damage or Advertising Liability arising out of or alleged to arise out of design, manufacture, maintenance or sale by the Insured of any component part or equipment of any Watercraft.

K. POLLUTION

- (1) (a) liability for Personal Injury, Property Damage or Advertising Liability arising out of the Discharge of Pollutants into or upon land or real estate, the atmosphere, or any watercourse or body of water whether above or below ground or otherwise into the environment; or
- (b) liability, loss, cost or expense of any Insured or others arising out of any direction or request, whether governmental or otherwise, that any Insured or others test for, monitor, clean up, remove, contain, treat, detoxify or neutralize Pollutants.

This Exclusion K applies whether or not such Discharge of such Pollutants:

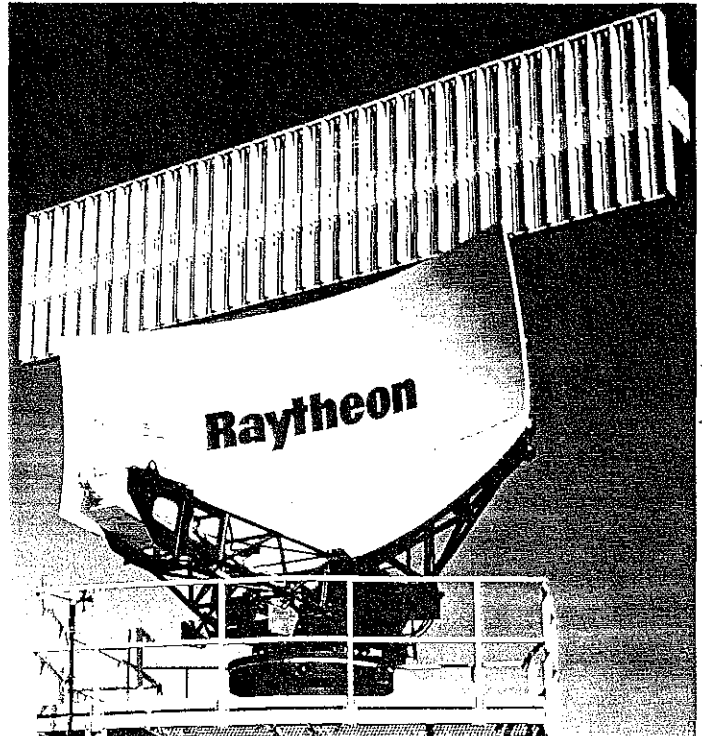
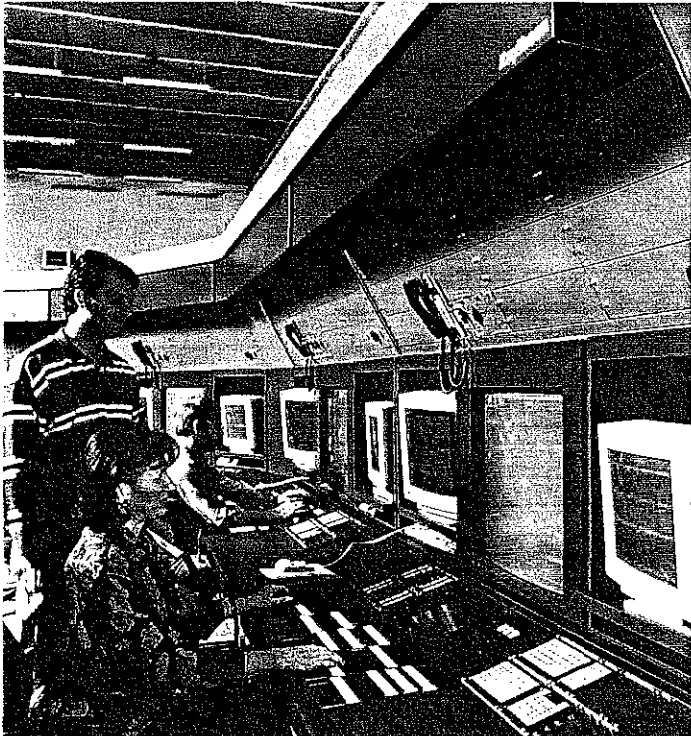
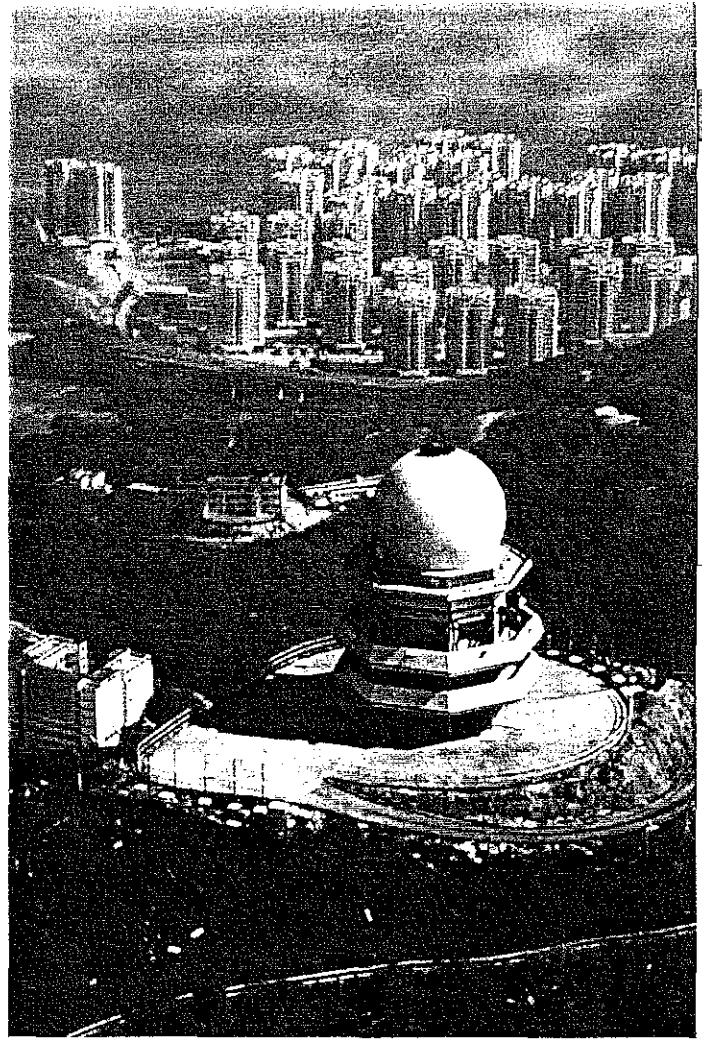
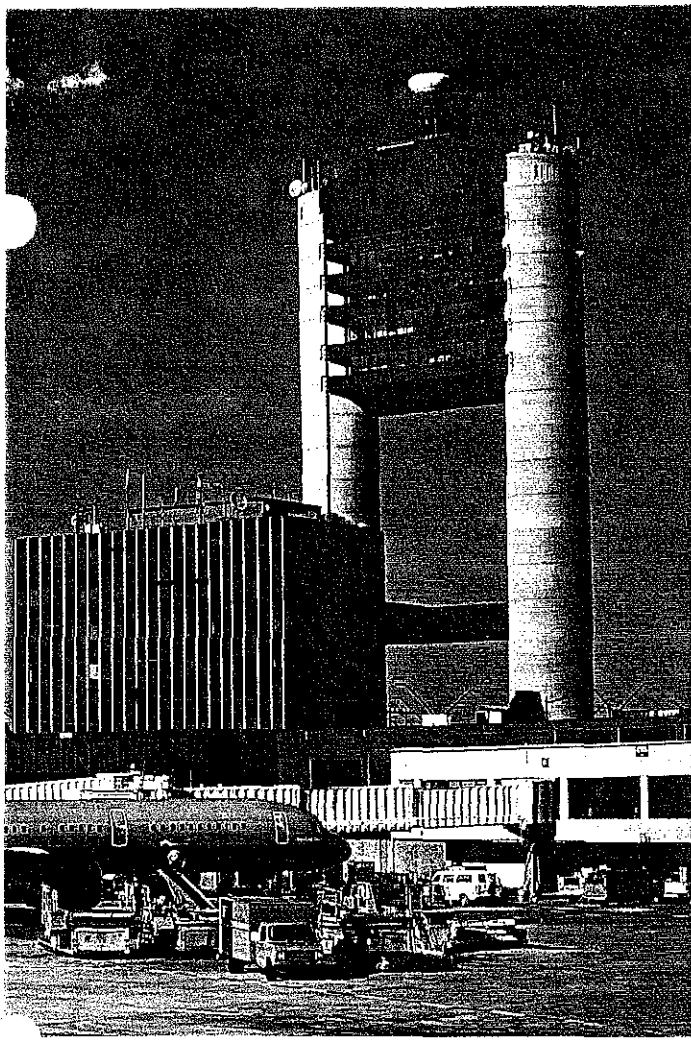
- (i) results from the Insured's activities or the activities of any other person or entity;
- (ii) is sudden, gradual, accidental, unexpected or unintended; or
- (iii) arises out of or relates to industrial operations or the Waste or by-products thereof.

- (2) Paragraph (1) of this Exclusion K does not apply to:

(a) Product Pollution Liability; or

- (b) (i) liability of the Insured for Personal Injury or Property Damage caused by an intentional Discharge of Pollutants solely for the purpose of mitigating or avoiding Personal Injury or Property Damage which would be covered by this Policy; or
- (ii) liability of the Insured for Personal Injury or Property Damage caused by a Discharge of Pollutants which is not Expected or Intended, but only if the Insured becomes aware of the commencement of such Discharge within seven (7) days of such commencement;

provided that the Insured gives the Insurer written notice in accordance with Section D of Article V of this Policy of such commencement of the Discharge under subparagraphs (2)(b)(i) or (ii) of this Exclusion K within forty (40) days of such commencement. Such notice must be provided irrespective of whether notice as soon as practicable otherwise would be required pursuant to Section A of Article V of this Policy.



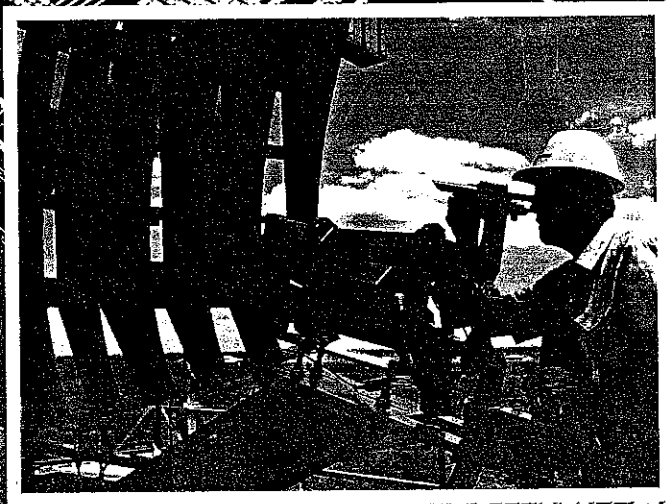
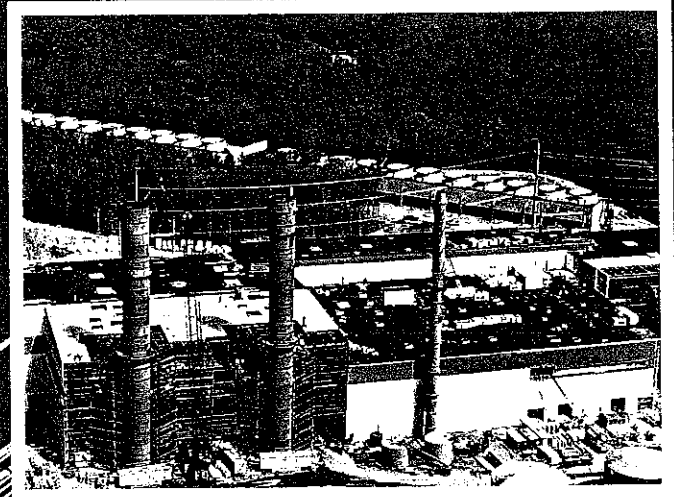
# RAYTHEON

Reports are not included.



**Raytheon** Engineers &  
Constructors

**THE SINGLE SOURCE FOR  
TOTAL SERVICE**



State of Oregon  
Department of Environmental Quality

Memorandum

**Date:** September 17, 1997

**To:** Director and Commission Members  
**From:** Joni Hammond, Eastern Region  
**Subject:** La Grande EQC Open House Invitees

Senator Ron Wyden  
Wayne Kinney- Senator Ron Wyden's staff person in La Grande  
Sarah Hendrickson-Union County Soil and Water Conservation District (SWCD)  
Dale Counsell-Board Chair of Union County SWCD  
Steve Mc Clure-Union County Commissioner  
Colleen MacLeod-Union County Commissioner  
John Howard-Union County Commissioner  
Mark Davidson-Mayor of La Grande  
City Counsel of La Grande  
Wes Hare-City Manager of La Grande  
Ron Gross- Public Works Director of La Grande  
Sue Briggs- Mayor of Union  
Leonard Almquist- Union City Manager  
Paul Boehene-La Grande Ranger District Ranger  
Sharon Beck-Cattleman's Association  
Tom Schuft- ODOT Region V Manager  
Jill Miles- Oregon Economic Development Department in La Grande  
Senator Gordon Smith  
Liz Lorenzen- Senator Gordon Smith's staff person from Pendleton  
Representative Bob Smith  
John Snyder- Representative Bob Smith's staff person in Medford  
State Senator Mark Simmons  
State Senator David Nelson  
Alice Nelson- State Senator David Nelson's wife  
State Representative Bob Jensen  
Cheri DeBeaumont- Oregon Housing and Community Services Department  
Ross Cornelius- Oregon Housing and Community Services Department  
Donna Betts- Union County Economic Development  
Brent Lake- Department of Land Conservation and Development  
Steve Anderson- Anderson Perry & Associates  
Scott Nebaker- Anderson Perry & Associates  
Greg Thurman- Cascade Earth Sciences

Memo To: Director and Commission Members  
September 17, 1997  
Page 2

Ben Boswell- Wallowa County Commissioner  
Roberta Huddleston- North Powder City Recorder  
Joe Garlitz- Elgin City Manager  
Bart Barlow-Boise Cascade Corporation  
Michele Young-Enterprise City Recorder  
Debbie McDaniel- Wallowa City Recorder  
Keith Watters- Joseph Public Works Director  
Tom Barbouletos-Oregon State Police  
Bob Lund-Oregon State Police  
Jeff Williams- Oregon State Police  
Chris Kelly- Environmental Protection Agency



## PLANNING DEPARTMENT

P.O. Box 706 -:- Irrigon, Oregon 97844  
(541) 922-4624 or (541) 676-9061 ext. 50  
Fax # (541) 922-3472

TAMRA J. MABBOTT  
Director

SHARON TIMMS

October 2, 1997

Thank you for providing an opportunity for public comments about the addition of Raytheon to the Umatilla Chemical Disposal Facility (UMCDF) permit. My name is Tamra Mabbott, Morrow County Planning Director, and I am representing the Morrow County Court.

Last October, the Morrow County Planning Commission submitted comments to the Environmental Quality Commission. That letter, dated October 28, 1996 is attached. The County never received a response and our request was not incorporated into the final permit. In sum, last October's request was to include in the Army's permit, conditions that would have been imposed if the Army was required to obtain land use approval. As you know, the Army was exempt from land use permit review.

Since that time, the Oregon Legislature adopted House Bill 3740, which allows a County to impose a fee for storage and handling of certain chemical agents. The bill, now ORS Chapter 554, becomes effective October 4, 1997. The intent of the law is to enable a County to recover some of the costs associated with impacts of a large remediation project such as the UMCD facility. Most of the impacts the County has identified are environmental in nature. Examples include poor water quality and a critical groundwater area, municipal water and sewer systems that are currently at or over capacity.

Today Morrow County requests the Environmental Quality Commission not name Raytheon Corporation to the UMCDF permit unless compliance with ORS Chapter 554 is made a condition to the permit.

Thank you for your consideration.



## PLANNING COMMISSION

P. O. Box 706 :- Irrigon, Oregon 97844  
(503) 922-4624

October 28, 1996

Henry Lorenzen, Chair  
Environmental Quality Commission  
c/o Brett McKnight, DEQ  
2146 N.E. Fourth Street  
Suite 104  
Bend, Oregon, 97701

RE: ID No. OR6 213 820 917

Dear Mr. Lorenzen:

In response to the proposed Permit for Storage and Treatment of Hazardous Waste for the Umatilla Army Depot Incinerator, the Morrow County Planning Commission requests the Environmental Quality Commission consider certain conditions be made a part of the permit approval. As you know, exactions or mitigation measures are typically required of land use permits. In this case there will be no land use permit review and consequently the EQC permit is the only opportunity to address land use impacts. Please consider the following conditions:

1. Open the north access gate to the Depot. The opening should include necessary improvements to make the gate and access functional.
2. Improve the interior Depot road that leads to north gate.
3. Compensate Morrow County for any improvements made to Division Street, the County road that connects to the north gate.
4. Assist Morrow County and the City of Irrigon in identifying impacts to local infrastructure, sewer, water, and roads, and, compensate for identified improvements.
5. Conduct a comprehensive study of the short and long-term impacts to housing. The information in the EIS regarding housing is not accurate.
6. Conduct an analysis of buildable lands in north Morrow County.
7. In 1990, the DEQ designated the Lower Umatilla Basin a

"Groundwater Management Area." The Depot is located within this basin and should therefore be required to conduct an analysis and/or otherwise identify the impact the proposed project will have on groundwater quality. Once the impacts are identified, the Army should submit a plan for mitigation and allow for local input similar to the Action Plan process for the Lower Umatilla Basin Groundwater Management Area. The Army should provide funding for proposed mitigation.

8. The Army is located in a Critical Groundwater Area, a designation imposed by the Water Resources Department which limits new water allocations. The EIS does not thoroughly address the water rights. The Army should be required to clarify and demonstrate legal ownership of water rights. If the Army is exempt from water rights regulation, the Army should provide an analysis of impacts of additional use of groundwater. If the impact is negative, mitigation measures should be imposed.

9. The EIS (page 3-6, 3.1.2) references restrictive easements on adjacent property. The Planning Department has no record of such easements and this matter should be clarified if the easements are relevant to the permit.

We appreciate your consideration of these conditions. If you would like clarification or additional information about these requests, please contact Tamra Mabbott, Morrow County Planning Director.

Thank you for your consideration.

Sincerely,

Marvin Padberg, Chair  
Morrow County Planning Commission

cc: Sue Oliver, DEQ Hermiston  
City of Irrigon Planning Commission  
City of Boardman Planning Commission  
Morrow County Court  
Umatilla County Planning Commission

**A-Engrossed  
House Bill 3740**

Ordered by the House June 12  
Including House Amendments dated June 12

Sponsored by Representative JENSON, Senator NELSON

**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.

[Requires] **Allows** county governing body to assess effects on local communities of recovery or remedial action involving [*hazardous substances*] **chemical agents** that are conducted within county.

[Requires] **Allows** county governing body to impose fee to mitigate such effects on entity conducting recovery or remedial action or on owner of site at which such action occurs.

Defines terms.

**A BILL FOR AN ACT**

1  
2 Relating to fees imposed by counties to mitigate effects of certain actions involving hazardous sub-  
3 stances.

4 **Be It Enacted by the People of the State of Oregon:**

5 **SECTION 1. As used in this Act:**

6 (1) **"Chemical agents" means:**

7 (a) **Blister agents, such as mustard gas;**

8 (b) **Nerve agents, such as sarin and VX;**

9 (c) **Residues from demilitarization, treatment and testing of blister agents; and**

10 (d) **Residues from demilitarization, treatment and testing of nerve agents.**

11 (2) **"Major recovery action" means a recovery action that will take more than one year  
12 to complete and that will employ 200 or more individuals.**

13 (3) **"Major remedial action" means a remedial action that will take more than one year  
14 to complete and that will employ 200 or more individuals.**

15 (4) **"Owner" means a person or the State of Oregon, the United States of America or any  
16 agency, department or political subdivision thereof that owns, possesses or controls property  
17 upon which a remedial or recovery action involving stored chemical agents is conducted.**

18 (5) **"Recovery action" means any activity designed to mitigate the effects of an unin-  
19 tended release of chemical agents into the air, water or soil of this state.**

20 (6) **"Remedial action" means any activity intended to prevent the release of chemical  
21 agents into the air, water or soil of this state. "Remedial action" includes controlled de-  
22 struction of chemical agents.**

23 **SECTION 2. (1) If a site for the storage or disposal of chemical agents is located within  
24 a county and if a major recovery or major remedial action is anticipated to occur at the site,  
25 the governing body of the county may conduct an assessment of the social and economic  
26 effects on communities within the county that are likely to occur by reason of the major**

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.

1 recovery or major remedial action.

2 (2) When assessing the effects on communities caused by the major recovery or major  
3 remedial action, the county governing body may consider, among other matters, the follow-  
4 ing:

- 5 (a) Effects upon roads and streets;
- 6 (b) Effects upon existing sewer and water systems;
- 7 (c) Effects upon schools;
- 8 (d) Effects upon medical facilities and services;
- 9 (e) Additional law enforcement requirements;
- 10 (f) Additional housing requirements; and
- 11 (g) Technical planning requirements.

12 (3) After completion of the assessment required under this section, the county governing  
13 body may impose upon the owner of the site an annual fee reasonably calculated to mitigate  
14 the social and economic effects on communities that are occurring or that are likely to occur  
15 by reason of the major recovery or major remedial action. The annual fee may be imposed  
16 during the first year in which the major recovery or major remedial action is conducted and  
17 in each succeeding year for the duration of the major recovery or major remedial action.  
18 When a fee is imposed under this section, the fee shall be reviewed in each year and may  
19 be adjusted when circumstances make an adjustment necessary or appropriate. The total  
20 aggregate fee imposed under this section shall not exceed five percent of the total aggregate  
21 cost of the major recovery or major remedial action.

22 (4) If the entity responsible for conducting the major recovery or major remedial action  
23 is different from the owner of the site at which the major recovery or major remedial action  
24 is conducted, the fee authorized by this section may be imposed upon either the owner or the  
25 entity or upon both jointly.

26



approval is issued or denied. In order to achieve orderly transition and compliance with the environmental laws, the agency may issue an order establishing conditions for the interim operation of the facility.

**SECTION 9.** The agency shall recover the costs of the agency in developing, negotiating and publicizing a Green Permit in the following manner:

(1) The sponsor shall fully reimburse the agency for the agency's direct and indirect costs of conducting the review, negotiating the relevant permit revisions, responding to public comment, monitoring the provisions in the Green Permit and environmental outcomes resulting from the Green Permit and publicizing and conducting the public hearings.

(2) The agency shall appropriately document the direct and indirect costs of the agency and collect payment for such costs from the sponsor. The agency shall collect a deposit from the sponsor, against which the agency shall bill until the deposit is depleted. When the deposit is depleted, the agency shall collect an additional deposit. The initial deposit shall accompany the sponsor's initial Green Permit proposal and shall be in the amount of \$5,000. The agency shall deliver to the sponsor an accounting of all charges and the amount of the deposit remaining at the closure of each month's accounting records.

(3) All moneys collected by the Department of Environmental Quality pursuant to this section shall be deposited into the General Fund of the State Treasury to an account of the Department of Environmental Quality. Such moneys are continuously appropriated to the Department of Environmental Quality for the payment of expenses of the Department of Environmental Quality in carrying out the provisions of sections 2 to 9 of this Act. The Director of the Department of Environmental Quality shall keep a record of all moneys deposited into the State Treasury pursuant to this section and shall indicate by special cumulative accounts the source from which moneys are derived and the individual activity against which each withdrawal is charged. The fees collected under this section by the Lane Regional Air Pollution Authority shall be retained by and shall be income to the regional authority. Such fees shall be accounted for and expended in the same manner as are the funds collected by the Department of Environmental Quality under this section.

**SECTION 10.** The Environmental Quality Commission shall submit a report to the Seventieth Legislative Assembly that addresses the status and success of the Green Permit program. The report may include recommendations regarding the continuation or modification of

the program, development of other programs or the establishment of a permanent Green Permit program.

**SECTION 11.** An agency shall not issue a Green Permit after December 31, 2000.

**SECTION 12.** There is appropriated to the Department of Environmental Quality, for the biennium beginning July 1, 1997, out of the General Fund, the sum of \$70,000 for the purpose of carrying out this Act.

**SECTION 13.** Notwithstanding any other law, the limitation on expenditures established by section 2, chapter \_\_\_\_\_, Oregon Laws 1997 (Enrolled House Bill 5016), for the biennium beginning July 1, 1997, as the maximum limit for payment of expenses from fees, moneys or other revenues, including Miscellaneous Receipts, including receipts for federal contract services, but excluding lottery funds, collected or received by the Department of Environmental Quality, is increased by \$73,000 for the purpose of carrying out the provisions of this Act.

**SECTION 14.** 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 July 1, 1997.

Approved by the Governor July 14, 1997  
Filed in the office of Secretary of State July 14, 1997  
Effective date July 14, 1997

CHAPTER 554

AN ACT

HB 3740

Relating to fees imposed by counties to mitigate effects of certain actions involving hazardous substances.

Be It Enacted by the People of the State of Oregon:

**SECTION 1.** As used in this Act:

- (1) "Chemical agents" means:
  - (a) Blister agents, such as mustard gas;
  - (b) Nerve agents, such as sarin and VX;
  - (c) Residues from demilitarization, treatment and testing of blister agents; and
  - (d) Residues from demilitarization, treatment and testing of nerve agents.

(2) "Major recovery action" means a recovery action that will take more than one year to complete and that will employ 200 or more individuals.

(3) "Major remedial action" means a remedial action that will take more than one year to complete and that will employ 200 or more individuals.

(4) "Owner" means a person or the State of Oregon, the United States of America or any agency, department or political subdivision

ereof that owns, possesses or controls property upon which a remedial or recovery action involving stored chemical agents is conducted.

(5) "Recovery action" means any activity designed to mitigate the effects of an unintended release of chemical agents into the air, water or soil of this state.

(6) "Remedial action" means any activity intended to prevent the release of chemical agents into the air, water or soil of this state. "Remedial action" includes controlled destruction of chemical agents.

**SECTION 2.** (1) If a site for the storage or disposal of chemical agents is located within a county and if a major recovery or major remedial action is anticipated to occur at the site, the governing body of the county may conduct an assessment of the social and economic effects on communities within the county that are likely to occur by reason of the major recovery or major remedial action.

(2) When assessing the effects on communities caused by the major recovery or major remedial action, the county governing body may consider, among other matters, the following:

- (a) Effects upon roads and streets;
- (b) Effects upon existing sewer and water systems;
- (c) Effects upon schools;
- (d) Effects upon medical facilities and services;
- (e) Additional law enforcement requirements;
- (f) Additional housing requirements; and
- (g) Technical planning requirements.

(3) After completion of the assessment required under this section, the county governing body may impose upon the owner of the site an annual fee reasonably calculated to mitigate the social and economic effects on communities that are occurring or that are likely to occur by reason of the major recovery or major remedial action. The annual fee may be imposed during the first year in which the major recovery or major remedial action is conducted and in each succeeding year for the duration of the major recovery or major remedial action. When a fee is imposed under this section, the fee shall be reviewed in each year and may be adjusted when circumstances make an adjustment necessary or appropriate. The total aggregate fee imposed under this section shall not exceed five percent of the total aggregate cost of the major recovery or major remedial action.

(4) If the entity responsible for conducting the major recovery or major remedial action is different from the owner of the site at which the major recovery or major remedial action is conducted, the fee authorized by this section may be imposed upon either the owner or the entity upon both jointly.

Approved by the Governor July 14, 1997  
Filed in the office of Secretary of State July 14, 1997  
Effective date October 4, 1997

## CHAPTER 555

AN ACT

HB 2113

Relating to State System of Higher Education building fees; amending ORS 351.170; and declaring an emergency.

**Be It Enacted by the People of the State of Oregon:**

**SECTION 1.** ORS 351.170 is amended to read:

351.170. (1) The State Board of Higher Education shall establish such rates, charges and fees for use of buildings, structures or projects referred to in ORS 351.160 (1), including revenue-producing buildings and structures already constructed, as, in the judgment of the board, will provide the required revenues to make the particular new building, project or structure self-liquidating and self-supporting, and as will provide the funds with which to amortize the principal of and pay the interest on the bonds issued to finance such buildings, structures or projects.

(2) The board shall charge and collect from each regular student a building fee at a rate not to exceed [~~\$18.50~~] \$25 for each regular term, for not less than three terms in each regular academic year, and not to exceed [~~\$27.75~~] \$37.50 if instruction is on a semester basis, or an equivalent rate of charge where instruction is on a different basis. The board is authorized to maintain adequate sinking funds for bonds outstanding. The fee shall be in addition to tuition and other fees charged to students and shall be deposited with the State Treasurer and credited to the appropriate subfund of the Higher Education Bond Sinking Fund.

**SECTION 2.** 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 July 1, 1997.

Approved by the Governor July 17, 1997  
Filed in the office of Secretary of State July 18, 1997  
Effective date July 17, 1997

## CHAPTER 556

AN ACT

HB 5036

Relating to bonds; and declaring an emergency.

**Be It Enacted by the People of the State of Oregon:**

**SECTION 1.** The amounts allocated, as provided by ORS 286.525 (1), for general obligation bonds, revenue bonds and financing agreements or certificates of participation of this state that

State of Oregon  
Department of Environmental Quality

Memorandum

Date: September 17, 1997

**To:** Director and Commission Members  
**From:** Joni Hammond, Eastern Region  
**Subject:** La Grande EQC Open House Invitees

Senator Ron Wyden  
Wayne Kinney- Senator Ron Wyden's staff person in La Grande  
Sarah Hendrickson-Union County Soil and Water Conservation District (SWCD)  
Dale Counsell-Board Chair of Union County SWCD  
Steve Mc Clure-Union County Commissioner  
Colleen MacLeod-Union County Commissioner  
John Howard-Union County Commissioner  
Mark Davidson-Mayor of La Grande  
City Counsel of La Grande  
Wes Hare-City Manager of La Grande  
Ron Gross- Public Works Director of La Grande  
Sue Briggs- Mayor of Union  
Leonard Almquist- Union City Manager  
Paul Boehene-La Grande Ranger District Ranger  
Sharon Beck-Cattleman's Association  
Tom Schuft- ODOT Region V Manager  
Jill Miles- Oregon Economic Development Department in La Grande  
Senator Gordon Smith  
Liz Lorenzen- Senator Gordon Smith's staff person from Pendleton  
Representative Bob Smith  
John Snyder- Representative Bob Smith's staff person in Medford  
State Senator Mark Simmons  
State Senator David Nelson  
Alice Nelson- State Senator David Nelson's wife  
State Representative Bob Jensen  
Cheri DeBeaumont- Oregon Housing and Community Services Department  
Ross Cornelius- Oregon Housing and Community Services Department  
Donna Betts- Union County Economic Development  
Brent Lake- Department of Land Conservation and Development  
Steve Anderson- Anderson Perry & Associates  
Scott Nebaker- Anderson Perry & Associates  
Greg Thurman- Cascade Earth Sciences

Memo To: Director and Commission Members  
September 17, 1997  
Page 2

Ben Boswell- Wallowa County Commissioner  
Roberta Huddleston- North Powder City Recorder  
Joe Garlitz- Elgin City Manager  
Bart Barlow-Boise Cascade Corporation  
Michele Young-Enterprise City Recorder  
Debbie McDaniel- Wallowa City Recorder  
Keith Watters- Joseph Public Works Director  
Tom Barbouletos-Oregon State Police  
Bob Lund-Oregon State Police  
Jeff Williams- Oregon State Police  
Chris Kelly- Environmental Protection Agency

TOUR ITINERARY – ENVIRONMENTAL QUALITY COMMISSION 10/3/97

Purpose: To provide an overview of the valley portion of the Grande Ronde River.

7:30 am Load and leave Motel

Site 1: Spruce Street Bridge: Headcut, push-up dam, flow, u/s water quality

Site 2: GR River @ Pierce: D.O. & pH violations, algae, La Grande STP outfall  
Riparian veg. rehab.

Site 3: GR River @ Peach: Just u/s of State Ditch. Larger D.O. & pH flux.  
Algae mats, vertical sloughing banks.

In route to next site note:

Wind breaks on Booth Lane

Booth crosses State Ditch – more algae, vertical banks, no veg.

Market crosses Old Channel (now Catherine Creek) –

better veg. but muddy water

Algae mats on old cut-off meanders

Many meanders in old river channel

Site 4: Confluence, Grande Ronde (State Ditch) and Catherine Crk. (old channel)  
State Ditch = Wide and shallow, bank erosion  
Old Channel = Better veg. & more stable, but very turbid

On return trip, note drilling rig – irrigation conversions to ground water

9:20 am Arrive at ODOT for Commission Meeting.

# UPPER GRANDE RONDE BASIN

## WATER QUALITY VIOLATIONS

### Chronic Violations

Dissolved oxygen ○

pH ○

Dissolved oxygen and pH ○

### Acute Violations

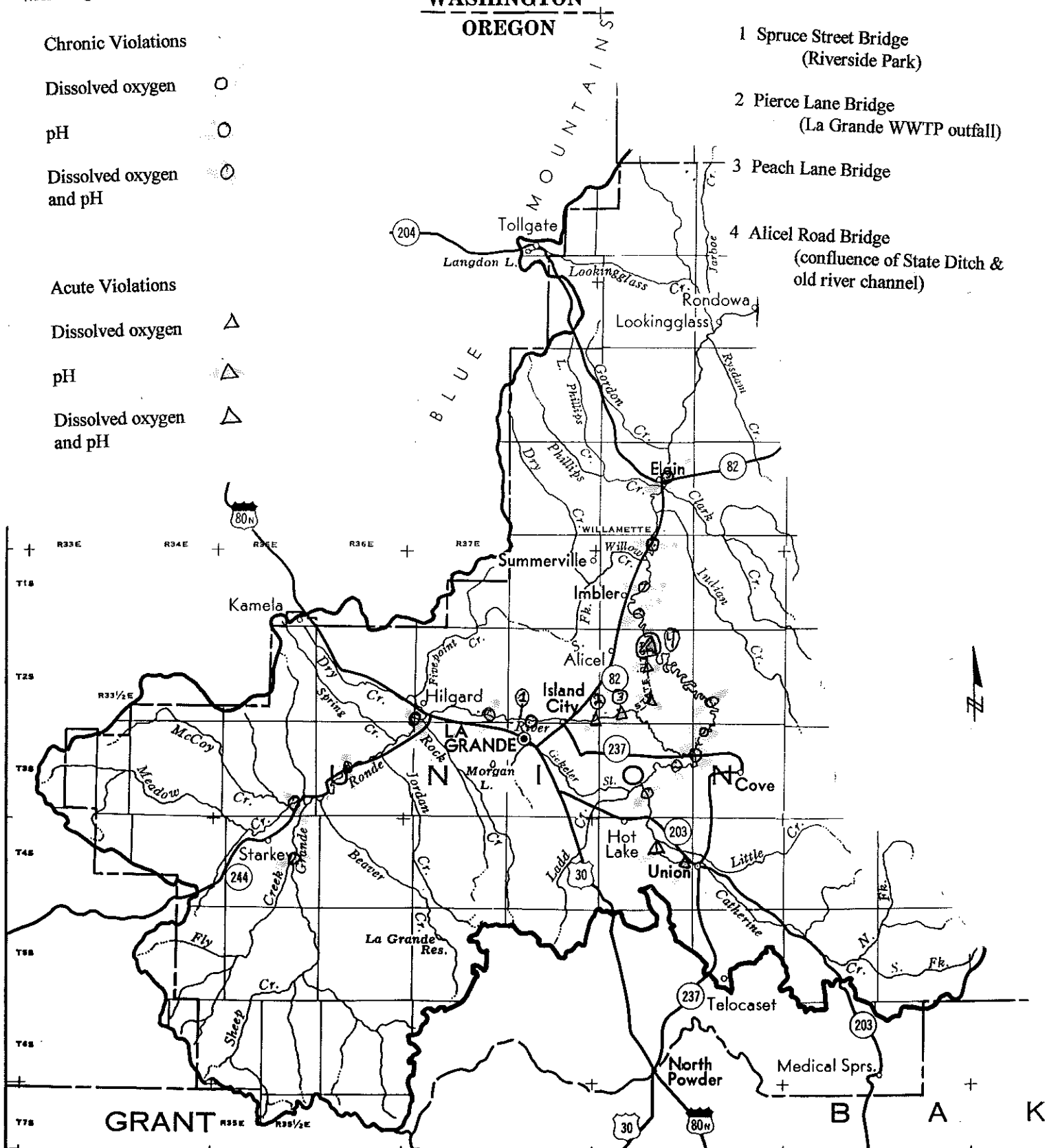
Dissolved oxygen △

pH △

Dissolved oxygen and pH △

WASHINGTON  
OREGON

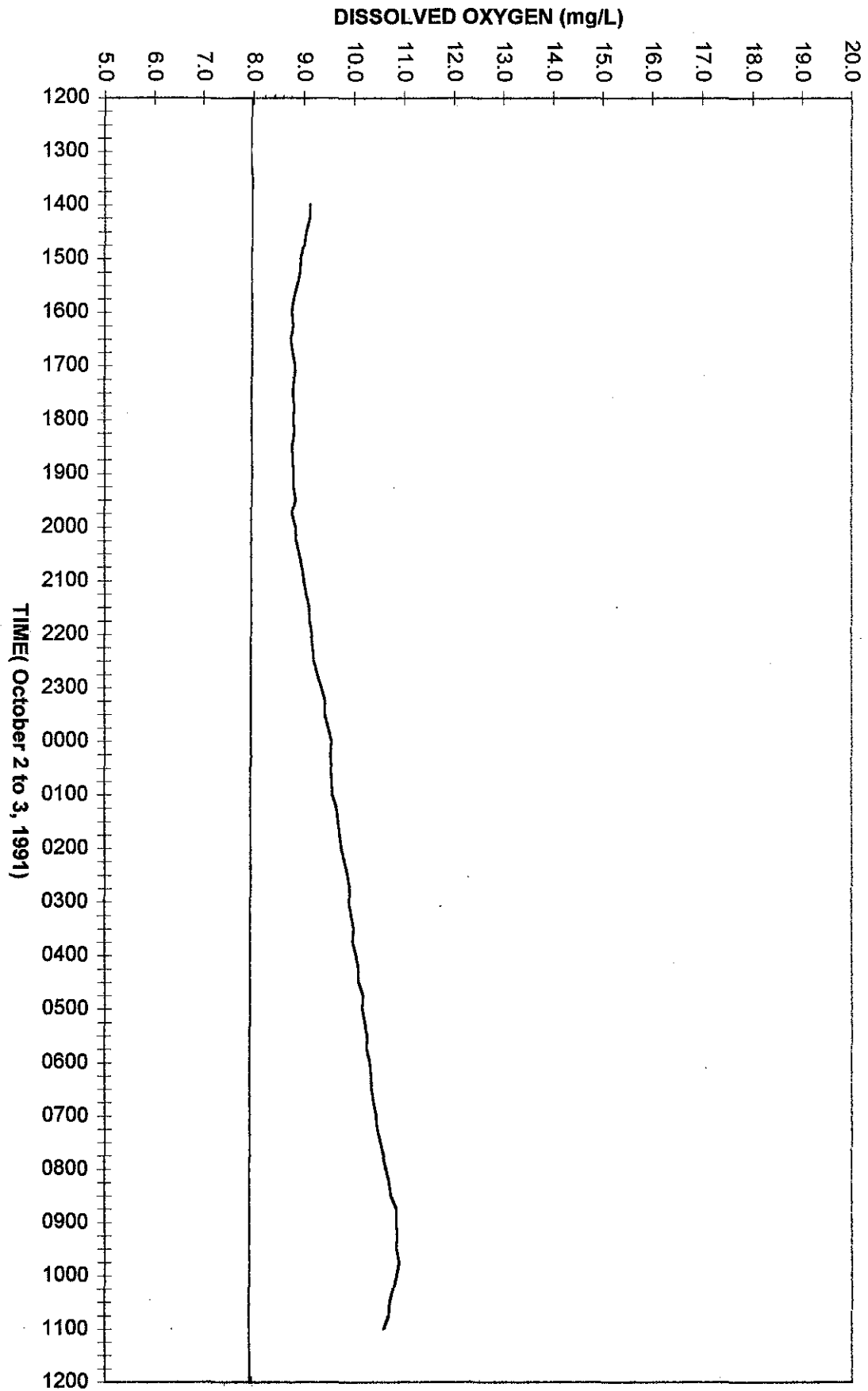
- 1 Spruce Street Bridge (Riverside Park)
- 2 Pierce Lane Bridge (La Grande WWTP outfall)
- 3 Peach Lane Bridge
- 4 Alicel Road Bridge (confluence of State Ditch & old river channel)



GRANT

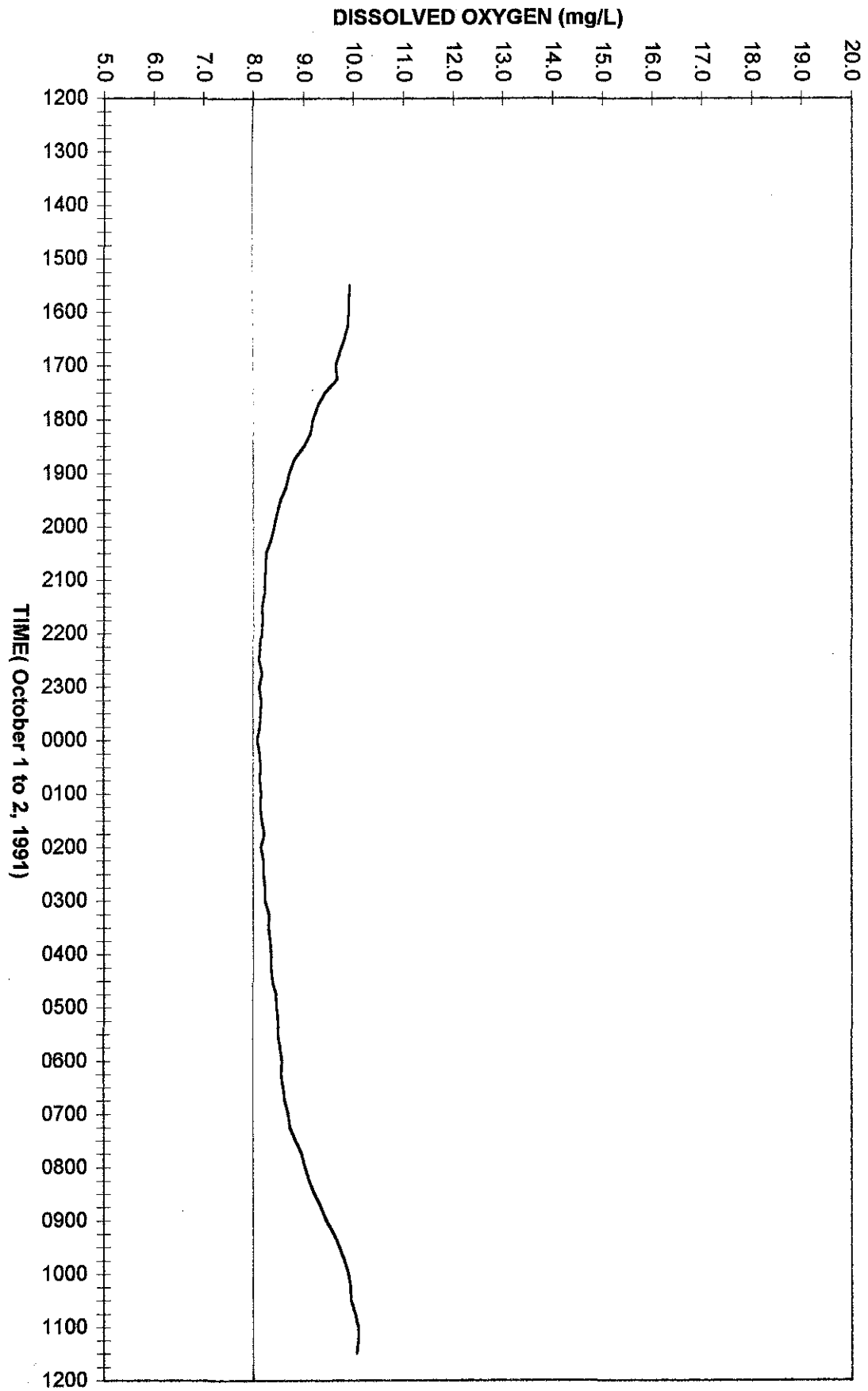
B A K

DISSOLVED OXYGEN PROFILE(Minam River-Upper Reach-404362)



$\Delta D.O. = 2.2 \text{ mg/l}$

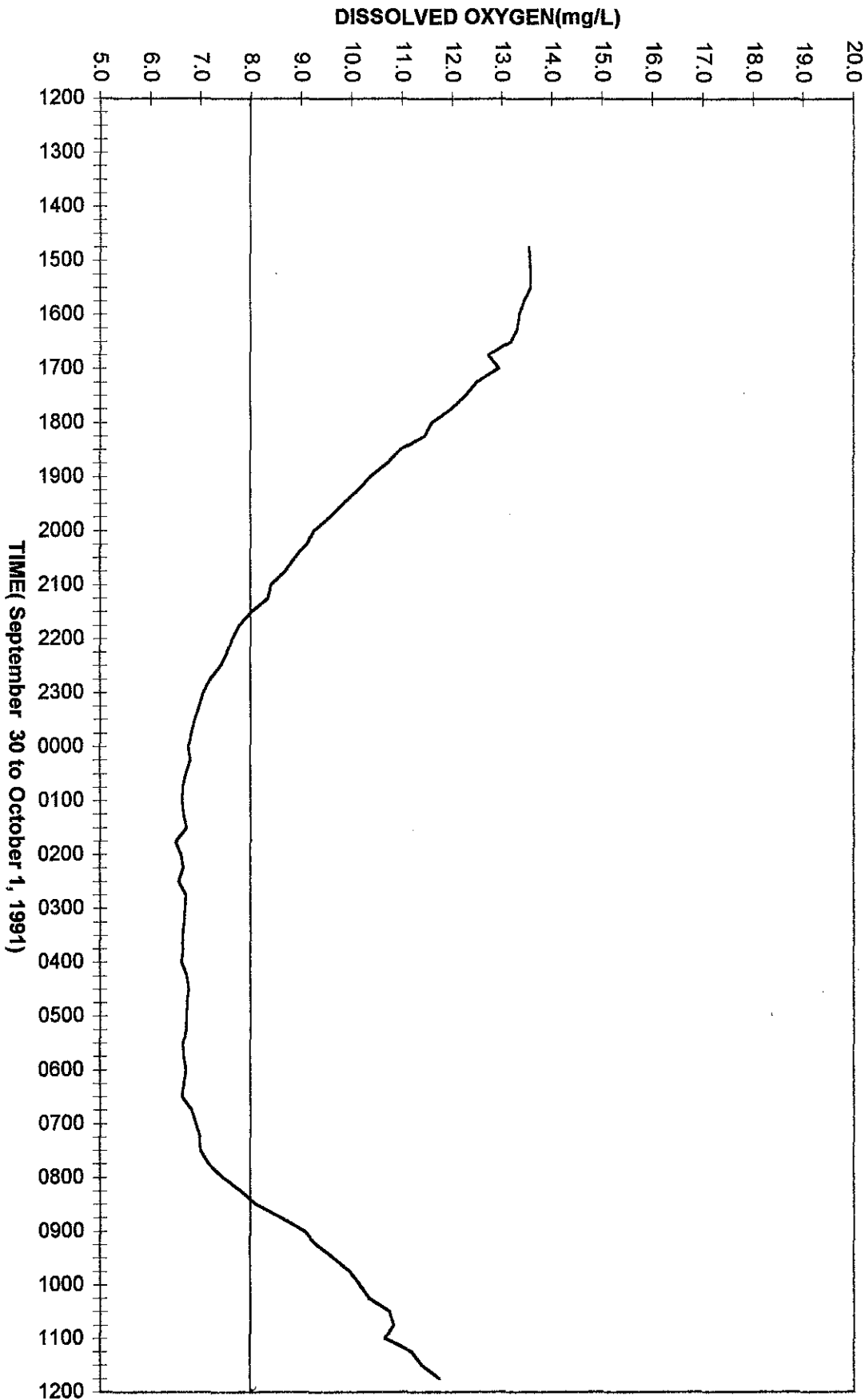
DISSOLVED OXYGEN PROFILE (GRR@ Weigh Station-d/s end-404357)



$\Delta DO = 2.0 \text{ mg/L}$

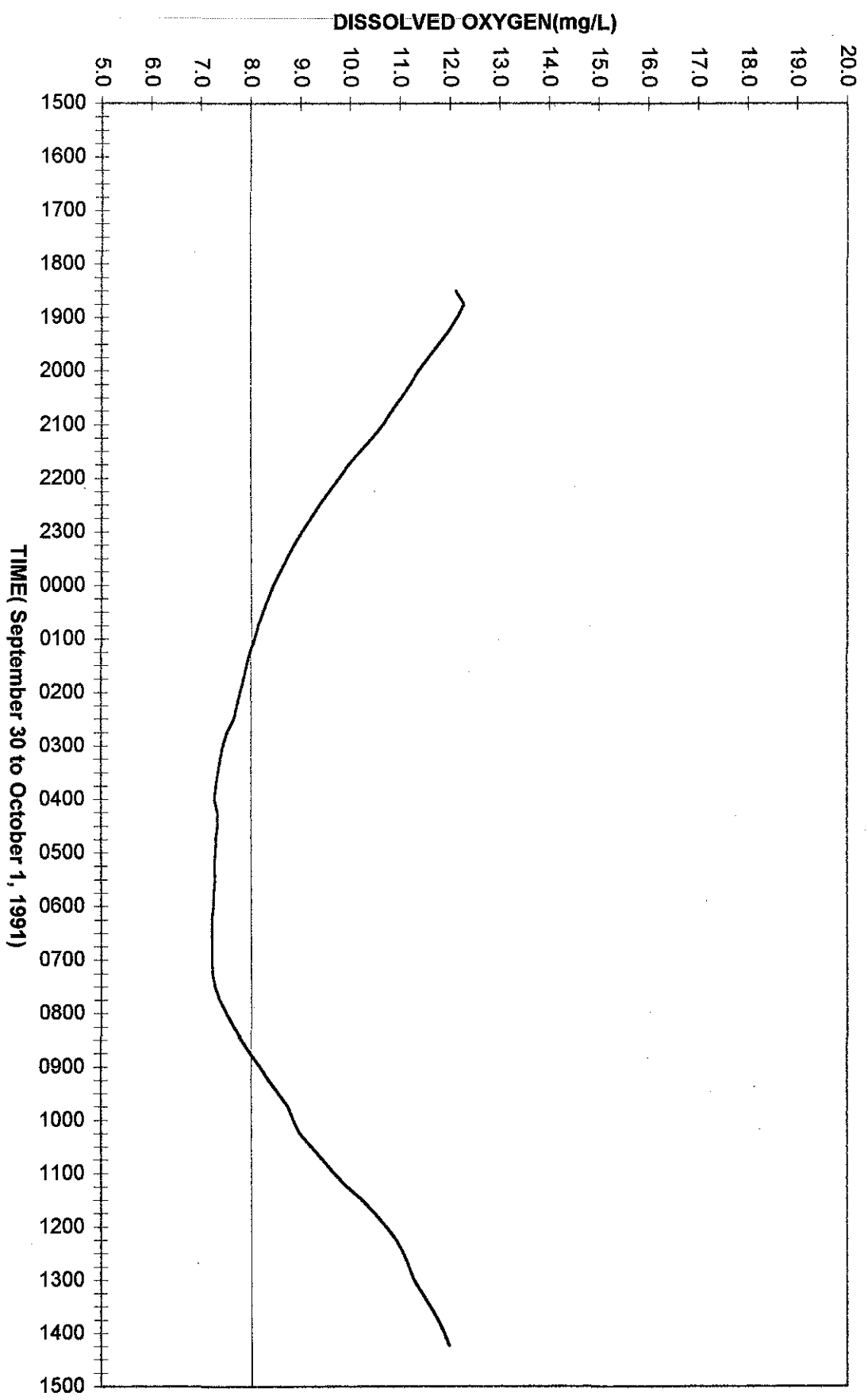


DISSOLVED OXYGEN PROFILE(GRR@ Pierce Lane-u/s-404354)



$\Delta DO = 7.0 \text{ mg/L}$

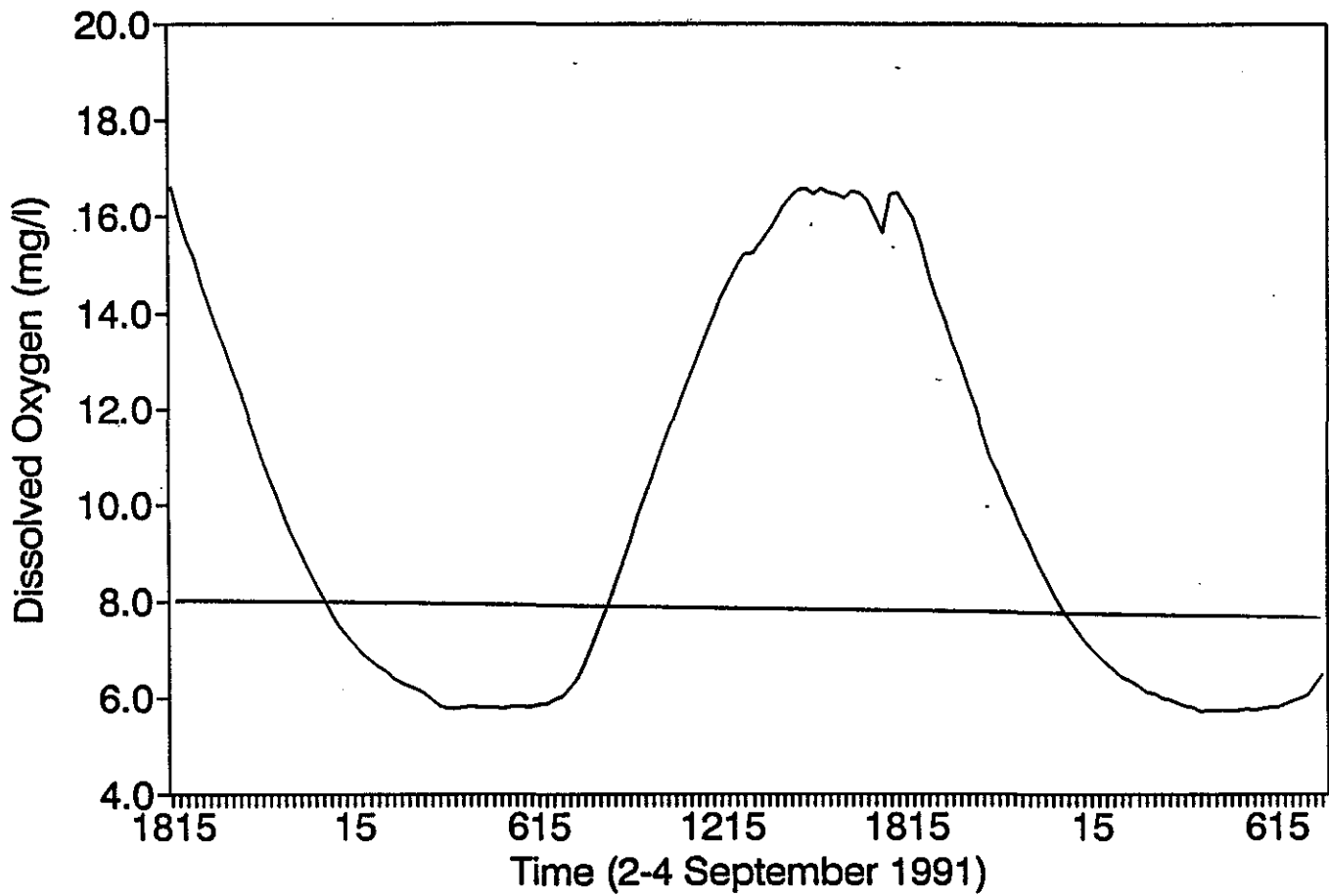
DISSOLVED OXYGEN PROFILE(GRR@ Peach Lane-u/s end-404355)



$\Delta DO = 5.1 \text{ mg/L}$

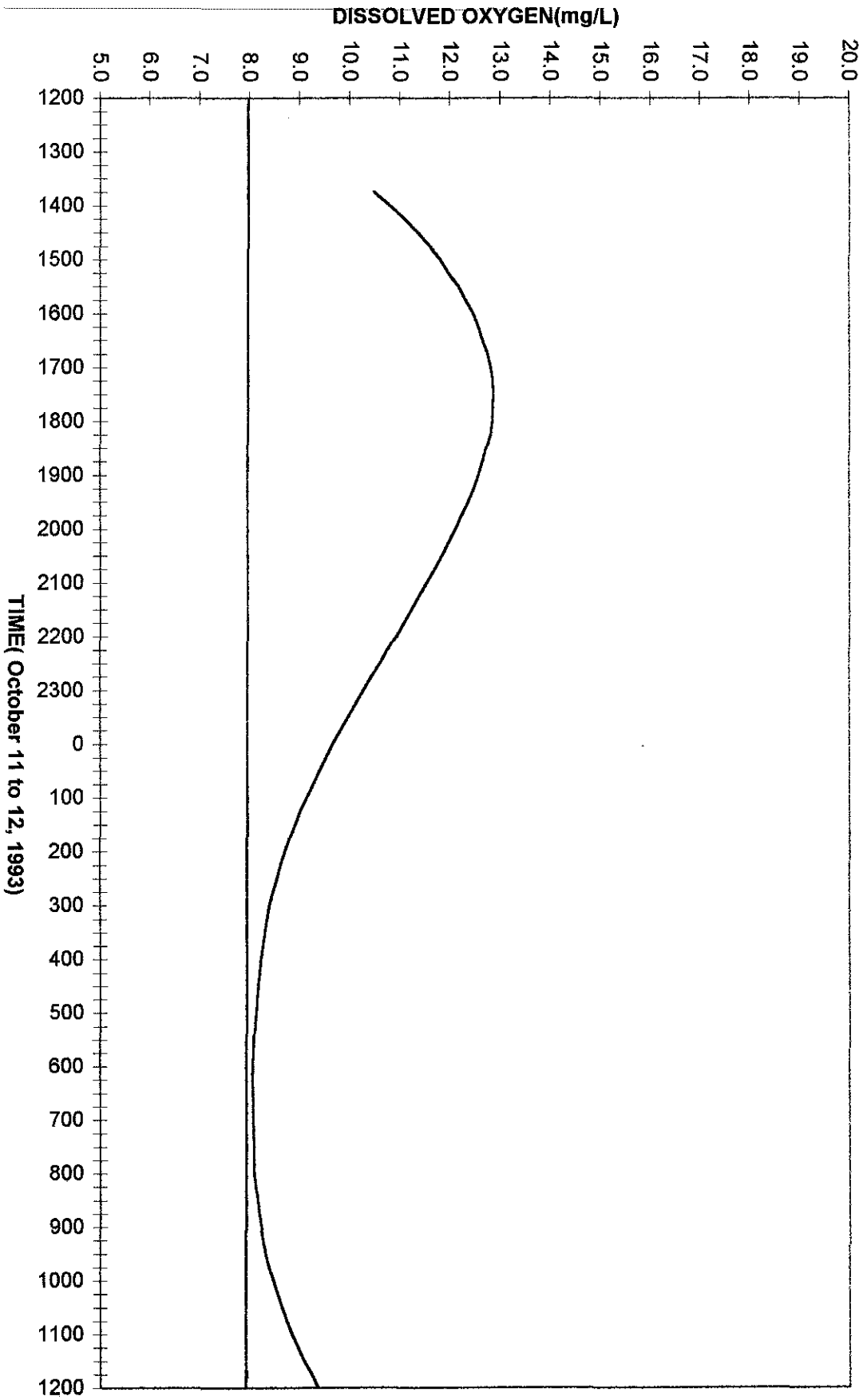
# Dissolved Oxygen Profile

Grande Ronde @ Peach Ln (RM 151.0)



$\Delta DO$  11 mg/l

DISSOLVED OXYGEN PROFILE(Catherine Crk@ Miller Lane-404350)



$\Delta DO = 4.6 \text{ mg/L}$

Approved \_\_\_\_\_  
Approved with Corrections \_\_\_\_\_

Minutes are not final until approved by the EQC

## **Environmental Quality Commission Minutes of the Two Hundred and Sixth-Second Meeting**

**August 22, 1997  
Regular Meeting**

The Environmental Quality Commission meeting was convened at 9:00 a.m. on Friday, August 22, 1997, at the Department of environmental Quality, 811 SW Sixth Ave., Portland, Oregon. The following members were present:

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

Also present were Larry Knudsen, Assistant Attorney General, Oregon Department of Justice; Tom Bispham, Acting Director, Department of Environmental Quality; and other staff.

Note: Staff reports presented at this meeting, which contain the Department's recommendations, are on file in the Office of the Director, 811 SW Sixth Avenue, Portland, Oregon 97204. Written material submitted at this meeting is made a part of the record and is on file at the above address. These written materials are incorporated in the minutes of the meeting by reference.

Chair, Henry Lorenzen called the meeting to order at 9:00 a.m.

### **A. Approval of Minutes**

The minutes were presented and reviewed. Larry Knudsen, DOJ, made one correction. On page 2, Item E, first paragraph, fourth line, it should read, "City Counselor to the City of Klamath Falls." That correction being made, Commissioner Van Vliet made a motion to approve the minutes as corrected; Commissioner McMahan seconded the motion. The motion was carried with three "yes" votes. Chair Lorenzen and Commissioner Eden did not vote as they were not present at the July, 1997 meeting.

### **B. Approval of Tax Credits**

Twenty-eight tax credit application and two certificate revocations were presented for approval for a pollution control facility tax credit. One application for a pollution prevention tax credit was presented for approval.

The following are applications presented for certification:

Roseburg Forest Products Co. (Application No. 4729) was removed from certification approval until a later date.

The total facility cost presented for certification was \$2,855,198 which represents a certificate value of \$1,345,990.

TC No.	Applicant	Certified Cost		Certificate Value
Pollution Prevention: Air				
4736	Warn Industries, Inc.	\$25,087		\$ 12,544
	1	\$25,087		\$ 12,544

Pollution Control: Air

4598	Coulson Investment Co.	\$46,273	100%	\$ 23,137
4627	The Boeing Co.	\$716,413	100%	\$ 358,207
4729	Roseburg Forest Products	PULLED	100%	PULLED
4744	Steven J. Rohner	\$121,750	45%	\$ 27,394
4752	Greg's Auto Service	\$3,090	100%	\$ 1,545
4754	Columbia Steel Casting Co., Inc.	\$44,900	100%	\$ 22,450
4767	Estergard Farms	\$185,734	100%	\$ 92,867
4768	United Disposal Services, Inc.	\$957	100%	\$ 479
4770	Oregon Metallurgical Corp.	\$143,311	100%	\$ 71,656
	8	\$1,262,428		\$ 597,733

Pollution Control: Water

4735	Jubitz Corporation	\$37,678	100%	\$ 18,839
4766	Robert C. Vandehey Farm	\$82,013	100%	\$ 41,007
	2	\$119,691		\$59,846

Pollution Control: Solid Waste

4765	United Disposal Services, Inc.	\$24,589	100%	\$ 12,295
4809	D & O Garbage Service, Inc.	\$107,186	100%	\$ 53,593
	2	\$131,775		\$ 65,888

Pollution Control: Underground Storage Tanks

4700	W.J.Wren & W.H. Wren, Partners	\$96,647	77%	\$ 37,209
4721	Mark B. Arnett	\$116,937	93%	\$ 54,376
4723	John A. Carson	\$185,291	96%	\$ 88,940
4725	Sheldon Oil Company	\$48,149	100%	\$ 24,075
4728	Norm Poole Oil, Inc.	\$117,488	87%	\$ 51,107
4733	Cain Petroleum Inc.	\$157,739	90%	\$ 70,983
4746	Sunset Fuel Company	\$96,557	100%	\$ 48,279
4755	Tee to Green II, Inc.	\$22,149	100%	\$ 11,075
4763	Willamette Industries, Inc.	\$47,858	100%	\$ 23,929

4772	Hawk Oil Company	\$124,716	83%	\$ 51,757
4773	May-Slade Oil Co.	\$42,943	100%	\$ 21,472
4778	Cain Petroleum Inc.	\$146,957	99%	\$ 72,744
4779	Edward Jean Plume	\$39,426	100%	\$ 19,713
4780	Howard J. Winterbottom	\$67,289	93%	\$ 31,289
4788	Donaldson's Chevron Service	\$31,158	100%	\$ 15,579
	15	\$1,341,304		\$622,525
Pollution Control	27	\$2,855,198		\$1,345,990
TOTAL	28	\$2,880,285		\$ 1,358,534

The certificate revocations are as follows:

Application No. 4700 contains some components certified on April 16, 1991, under Certificate No. 2502. The applicant is entitled to the remaining tax credit for the replaced components but is not entitled the remaining tax credit for components removed from service. Certificate No. 2502 revocation should coincide with certification of the facility represented on Application No. 4700 should coincide.

Application No. 4746 contains some components certified on June 14, 1991, under Certificate No. 2546. Considering ORS 468.155(2), the applicant is eligible for the remaining tax credit available for the replaced components. Certificate No. 2546 should be revoked to coincide with the certification of the facility represented on Application No. 4746.

A motion was made by Commissioner Van Vliet and seconded by Vice-Chair Whipple to approve both certificate revocations and all tax credit applications with the exception of tax credit application number 4627 (The Boeing Company). A discussion ensued regarding the Department's more stringent interpretation of "insignificant contributions" to pollution control. After discussion the Commission approved of the Department's more stringent interpretation and passed the motion with five "yes" votes.

Tax credit application numbers 4627 (The Boeing Company) represents a more stringent interpretation of ORS 468.155 than the Department has been using to determine eligible facility costs. ORS 468.155 (2)(d) excludes "... Any distinct portion of a pollution control facility that makes an insignificant contribution to the principal or sole purpose of the facility..." from the definition of a pollution control facility. The rule, OAR 340-16-025(3), parrots OAR 468.155. Lighting fixtures, lights, lamps, sprinkler systems, stairs, catwalks, platforms, handrails, and any engineering and labor costs associated with the installation of these items are ineligible costs because they make an insignificant contribution to the control, reduction or elimination of pollution. The Department recognizes costs of this nature are part of the cost of building a sound, clean, safe and pleasing working environment. However, under the pollution control facility program, they do not directly contribute to pollution control benefit and are ineligible for the purpose of reducing the applicant's tax liability. The Boeing Company received notification (certified mail) of the more stringent approach. In a telephone conversation with Maggie Vandehey, Gwen Brewstad of Boeing stated the company would not object to the more stringent approach. A motion was made by Vice-Chair Whipple and seconded by Commissioner Van Vliet to approve the Department's interpretation of ORS 468.155 (2)(d). The motion passed with five "yes" votes.

A discussion followed regarding the Department's discontinued practice of assigning all applications with a facility cost over \$250,000 to accounting firms under contract with the Department. The Boeing Company was the only application over \$250,000 presented. It was accompanied by a certified public accountant's certification of cost and those costs were reviewed by the Department.

OAR 340-16-030(d) states "... Certification of the actual cost of the claimed facility must be documented by a certified public accountant for facilities with a claimed facility cost over \$20,000." The CPA's certification of cost accompanies the application. The Department intends to rely on the applicant's CPA's certification of cost to meet the intent of the rule rather than incur the expense of the second CPA's review. The Department feels CPAs have professional

standards that meet the Department's requirements. By providing the applicant with guidelines for the requirements of the CPA's documentation, the Department believes the information would be adequate for the Department to determine the eligible facility cost. The engineering review brings most of the ineligible costs to the surface but the accounting review identifies some additional ineligible costs.

Chair Lorenzen expressed concern over this practice since the first accounting review is performed on the applicant's dime and the review would not be performed according to tax credit rules and statutes. He understood the Department was trying to reduce the use of general fund for tax credit purposes and asked if the Department could simply request the applicant pay for the second accountant review. There was an agreement that the Department would wait until further review to discontinue this practice. This agreement did not change the approval of the Boeing Company's tax credit application number.

### **C. Rule Adoption of the Air Contaminant Discharge Permit Fee Increase**

Greg Green, Air Quality Division Administrator, and Kevin Downing, Air Quality Program Analyst, presented the proposed modification to the Commission. The rulemaking raises the fees charged to sources subject to Air Contaminant Discharge Permit regulations by 30 percent. The increase in fees is needed to support existing staff in order to maintain service levels in permit issuance and compliance, ensure continued environmental benefits of the program and responsiveness to public concerns and interest.

Commissioner McMahan asked how many industries were affected and how often fees were paid in order to get a better understanding of why a 30 percent increase was needed to support six staff. Staff responded that the program is also supported by General and Federal funds and fees and with the increase, will account for about 60 percent of total program costs. Vice-Chair Whipple asked why no formal advisory committee was used. An informal workgroup of industry and association representatives were briefed on the matter and Legislative review of the issue was conducted during budget hearings. Mr. Green stated that the Division will be working with an industry group to review the program for efficiencies and to investigate whether appropriate industries are being charged appropriate amounts. This effort along with an initiative by the Director to review all of the Department's fees is intended to reduce the need to continually revise the fees.

Commissioner Van Vliet moved adoption of the revised rule. The motion was seconded by Commissioner Eden and was passed by five "yes" votes.

### **D. Rule Adoption of the Revision of Requirements for Construction or Reconstruction of Major Stationary Hazardous Air Pollutant Sources**

Greg Green and John Kinney, Air Quality Program Operations, presented proposed rule adoption. The Department proposed an adoption by reference of the new federal rules covering the case-by-case emission limitations for new and reconstructed major sources of hazardous air pollutants. Revisions were also proposed for existing sections of Division 32 to make the implementation of these case by case MACT rules identical to the new federal rules. These changes to the existing sections of Division 32 removed the requirements for evaluation of residual emissions, and the consideration of de minimus quantities of hazardous air pollutant emissions accompanying new, modified, or reconstructed sources. After a brief discussion on the dataset for 'similar sources', and a discussion of the revisions to the existing sections of Division 32, Commissioner Eden made a motion to adopt the rules and revisions as proposed and the motion was seconded by Commissioner McMahan. The motion passed with five "yes" votes.

### **E. Rule Adoption of the Wastewater Hardship Grant Program**

The history, need, and criteria for the Wastewater Hardship Grant Program were presented by Martin Loring, Manager of the Community Assistance Section of the Water Quality Division. The Commission asked several questions concerning the funding of wastewater projects in Oregon. Concern was raised over the reduction of funding for the financing programs at the Oregon Economic Development Department. Peggy Halferty, Clean Water State Revolving Fund (SRF) Program Coordinator, confirmed that we are working with other funding agencies to help assure funding to as many projects as possible. The Hardship Grant will not be providing much funding against the growing need of small communities for assistance. A motion was made by Commissioner Van Vliet to approve the rules as written; the motion was seconded by Commissioner McMahan. The motion was passed with five "yes" votes.



## **F. Issuance of Pollution Control Bonds**

This agenda item concerned authorization to issue, sell and use the proceeds of up to \$20 million in pollution control bonds. Barrett MacDougall presented the staff report in which the Department recommended the Commission adopt the Resolution as presented in Attachment A to the staff report together with the supporting findings. The Department explained that \$8 million in bonds would be sold immediately to provide State Match for the SRF, with an \$8 million dollar sale of Orphan site bonds in the Spring of 1998 and another \$4 million in SRF Match bonds in the Fall of 1998 if necessary. Commissioner McMahan moved approval and adoption of the Resolution and findings; Commissioner Eden seconded the motion. The motion was approved with five "yes" votes.

## **G. Reconsideration of Petition by Jeld-Wen, Inc for Declaratory Ruling Concerning Availability of Sewer as Defined in OAR 340-71-160(5)(f)**

In June, 1997, JWi petitioned the EQC for a declaratory ruling concerning the availability of sewer as defined in OAR 340-71-160(5)(f). Dick Nichols, Water Quality Manager from the Bend Office, presented the issue on behalf of the Department, with assistance from Larry Knudsen, Department of Justice (DOJ). Petition was represented by Jay Waldron, an attorney with Schwabe and Bill Fagan, an environmental engineer for JELD-WEN, inc.

The petition was considered at the July 17, 1997 meeting. At that meeting, Commissioners Van Vliet and McMahan moved and seconded, respectively, to deny the petition. Without taking action on the motion, Commissioners Van Vliet and McMahan indicated they were willing to table their motion and second until the August meeting when all members would be present.

Chair Henry Lorenzen summarized that Commissioner Eden and himself had an opportunity to review the staff report and the minutes from the July 17, 1997, EQC meeting. Chair Lorenzen held a vote on the motion tabled from the July 17, 1997, EQC meeting. A vote was called for the record. Commissioner McMahan voted no; Commissioner Van Vliet voted no; Vice-Chair Whipple voted no; Commissioner Eden voted no; and Chair Lorenzen voted no. The motion failed.

The Commission was advised by Larry Knudsen, DOJ, that if the Commission choose not to accept the petition, any legal action pursued by the Petitioner will go to the Circuit Court, and the Commission may have no involvement in resolution of the issue. If the Commission accepts the Petition, further litigation would be through a Court of Appeals, and the Commission would be involved in resolution of the issue. After much discussion of what is considered a reasonable service at a just rate and the implications if the commission did not accept the petition, Commissioner Eden made a motion to accept the petition and have a Presiding Officer selected by the October 2-3, 1997, EQC meeting. The motion was seconded by Vice-Chair Whipple. A vote was directed for the record. Commissioner McMahan voted yes; Commissioner Van Vliet voted yes; Vice-Chair Whipple voted yes; Commissioner Eden voted yes; and Chair Lorenzen voted yes. The petition for declaratory ruling was accepted.

## **H. Contested Case Hearing in the Matter of RMAC International Inc., Don C. Weege and John R. Spencer, Case No. SWWT-NWR-95-060**

Larry Cwik, DEQ Enforcement Section, appeared on behalf of the Department. He was duly sworn in by Chair Lorenzen.

In April 1995, the Department issued a Notice of Abatement and Department Order against RMAC International Inc. Don Weege, and John R. Spencer for failure to renew the company's Waste Tire Storage Site Permit, for failure to close the site as required by OAR 340-064-0040, and provided notice that the Department would abate the nuisance at the site unless the respondents submitted a site closure plan and closed the site in accordance with the Department's rules and regulations. The company failed to perform the closure and abatement, and the Department subsequently performed the abatement at the site. The Department incurred expenses in the amount of \$302,835 for this abatement. The Department agreed to dismiss Don Weege and John Spencer from the action. The company failed to appear for the hearing and the Department was seeking a Default Order against the company for its costs.

After a motion made by Commissioner Eden and seconded by Vice-Chair Whipple, the Commission unanimously approved the Department's Default Order which found that RMAC was the owner of the real property upon which the waste tires were stored and thus was liable for the Department's abatement costs under ORS 459.780.

### **I. Request for Increase Mass Load Limits in City of Brookings NPDES Permit**

Stephanie Hallock, Eastern Region Administrator, introduced Jonathan Gasik, a water quality engineer from the Medford Office. Mr. Gasik gave a brief description of the agenda item and provided the Commission with additional written information.

Chair Lorenzen said Oregon has an admirable goal of maintaining water quality by limiting discharges and expressed a concern about setting a precedent in chipping away at this goal. He was also concerned about this decision being used to justify mass load increases in other water bodies. Ms. Hallock responded that beneficial uses must always be protected and each water body is reviewed individually. Chair Lorenzen asked how the mass load increase fits in with the antidegradation policy. Ms. Hallock responded that the discharge was to the Pacific Ocean, which is not water quality limited. Also, inland waters, TMDLs will be designated to address the assimilative capacity of the streams, but no TMDLs are anticipated for the Pacific Ocean. Commissioner Van Vliet suggested oceanographers might find the oceans assimilative capacity is limited. Mr. Gasik responded that in the more slackwater areas, there could be a problem. However, in Brookings case, the outfall is located in an active surf area and the currents are fairly strong. Under these conditions, if the near field concerns are addressed, the far field issues are not a problem.

A motion was made by Commissioner Van Vliet to approve the request; the motion was seconded by Vice-Chair Whipple. The motion passed with five "yes" votes.

### **J. Total Dissolved Gas (TDG) Update**

Gene Foster, DEQ: Water Quality Division, presented the TDG information to the Commission. The spill program was operating within the EQC TDG waiver with the exception of the Bonneville Dam. Bonneville Dam was allowed to exceed the TDG physical limits set by the waiver because emergency work was required to fix damaged fish screens at the facility. The weekend of August 23, 1997 the U.S. Army Corps of Engineers was planning to test the newly repaired fish screening equipment. There were no exceedances of the TDG biological monitoring limits established by the waiver for any of the projects for the previous four weeks. The Department is continuing to meet with natural resource agencies in discussions of the U.S. Army Corps of Engineers Gas Abatement Program.

### **K. Work Session on the Umatilla Chemical Depot Permit Modification**

Stephanie Hallock, DEQ Eastern Region Administrator, introduced this work session with a description of a proposed modification to the permit for the Umatilla Chemical Disposal Facility to add Raytheon Demilitarization Company as a co-permittee and co-operator. Ms. Hallock described the steps the Department and the permit applicants have taken in processing the permit modification request. The Commission approved the opening of a public comment period to begin on August 29<sup>th</sup>, and requested both the U.S. Army and Raytheon bring representatives to the October work session to answer the Commission's questions concerning Raytheon's corporate structure and insurance liability issues. Sue Oliver of DEQ's Hermiston office gave the Commission a brief update of other activities related to the incineration facility at the Umatilla Chemical Depot.

### **Public Comment**

J. R. Wilkinson, Natural Resources, Confederated Tribes of the Umatilla Indian Reservation, appeared. He spoke to the issues of the Class III permit modifications and the concerns he had relative to the liability insurance as well as talked about the broader interests of the tribes relative to its authority under Comprehensive Environmental Response, Compensation and Liability Act.

## **L. Commissioners' Report**

Chair Lorenzen attended a briefing held by the Oregon Emergency Management and others for the staff of the Oregon Delegation, both Congress and Senate. The subject was the emergency response preparedness associated with the Umatilla Chemical Depot. He indicated a great deal of work still needed to be done in this area.

## **M. Acting Director's Report**

The calendar for the 1998 EQC meetings was discussed. The new schedule will be available at the next EQC meeting.

On September 2, 1997, DEQ will open the new Sunset Clean Air Station between Beaverton and Hillsboro. Dynamometers will be in place, and we will start offering voluntary enhanced testing to customers that day. We will have an "Open House" event at the station at 10 a.m. Set up of new, enhanced equipped, stations in other locations will proceed over the fall and winter. Mandatory enhanced testing will begin early next year. Beginning October 1, we will raise the test fee to \$21 in the Portland area, as the Commission approved last fall, to cover costs of the enhanced program.

Several hundred people applied for the 19 positions authorized to implement DEQ's portion of the Oregon Plan, including the Healthy Streams Partnership giving the Department a pool of outstanding candidates. It is hoped to have all positions filled by the time of a joint training session with new Department of Agriculture staff in early October.

A related matter – Phil Ward, ODA Assistant Director, resigned his position last month to take the Executive Director job with the Oregon Farm Bureau. Phil was a key player within ODA during development of the Healthy Streams Partnership.

With the support and technical assistance of Air Quality staff in the Salem office, a major industry will be reducing its air emissions. Evanite Fiber Corporation has made a commitment to temporarily reduce production while it is installing new technology that will allow it to maintain present production and still decrease emissions. The decrease will mean the company can operate as a Synthetic Minor rather than a Title V source. The new permit is expected to be out on public comment within two months.

At a recent agency quarterly managers meeting, DEQ honored the following DEQ people for their excellent work.

Pam Blake – Pam's work on non-point source pollution along the south coast is considered by many, including Vice President Gore, to be the most results-oriented, on-the-ground success in the Northwest. She is model for connecting an agency and its mission with the communities we serve. As the Oregon Plan implementation begins, the groundwork she has laid will serve DEQ and salmon very well.

Lauren Ettlin – Lauren gave ultimate meaning to the term "doing the dirty work" during nearly two years of developing the agency's new composting regulations. Her work was complex and controversial, but ultimately protective of Oregon's environment for present and future generations.

Marianne Fitzgerald – Marianne has helped moved Pollution Prevention from a vague concept to reality within Oregon. She has an outstanding ability to make believers out of skeptics. In the delivery of her P2 message, she has developed a remarkable network of contacts throughout industry and government.

Mike McCann – Opal Creek is not well known as a place where people and organizations with differing interests work cooperatively. Mike McCann went against the historic flow there and did an outstanding job leading a successful partnership with the US Forest Service, Persis Mining Company and Friends of Opal Creek on the Amalgamated Mill site cleanup. His coordination and technical skills were instrumental in remediating this site.

Cathy Phillips – Cathy has been recognized for enthusiastically and cheerfully stepping into a special assignment as Executive Support Specialist to the Water Quality Division Administrator during a key transition period. She was also instrumental in pulling together the details for the all staff, WQ strategic planning meeting in Salem. Her organizational skills and positive attitude make difficult assignments look easy.

Doug Terra – Doug did outstanding work over the last several months developing a strategic plan to bring together into one place all of DEQ's diverse information data bases. His work provided the foundation for a grant request to EPA that has yielded \$500,000 for the agency to use in consolidating data for much more effective and efficient access and use. Doug's work benefits not only agency people, but the public as well.

Lynne Kennedy, WQ division, was recognized by Water Resources Director, Martha Pagel, for her work on the Hydroelectric Reauthorization Task Force. Martha noted Lynne's communications skills, technical advice, excellent participation and good humor as contributors to ultimate success in developing water quality safeguards.

There being no further business, the meeting was adjourned at 1:25 p.m.

**PROPOSED RULE REVISIONS**

**MIXING ZONES**

**FOR**

**POINT SOURCE DISCHARGES**

**OUTSIDE MIXING ZONE -**

**MUST NOT EXCEED WQS**

**EDGE OF MIXING ZONE**

**MUST NOT BE ACUTELY TOXIC,  
MAY BE CHRONICALLY TOXIC  
AND MAY EXCEED WQS**

## EXAMPLE PERMIT LANGUAGE FOR MIXING ZONE

“Notwithstanding the effluent limitations established by this permit, no wastes shall be discharged and no activities shall be conducted which will violate Water Quality Standards as adopted in OAR Chapter 340 Division 41 except in the following defined mixing zone:

That portion of Schooner Creek within a two hundred (200) foot radius from the point of discharge. The ZID [Zone of Immediate Dilution] shall include that portion of Schooner Creek within a 20 foot radius of the point of discharge.”

## **WHAT TYPES OF DISCHARGES ARE AFFECTED?**

**RELATIVELY LARGE DISCHARGES TO SMALL STREAMS  
(NOT MUCH DILUTION)**

**OTHER TERMS USED FOR THESE STREAMS**

- EFFLUENT DOMINATED**
- INTERMITTENT STREAM**
- INADEQUATE RECEIVING STREAM**
- WATER QUALITY LIMITED STREAM**



## Estimated Number of Dischargers Affected, By Source Type

<u>Source Category</u>	<u>Total Number Permittees</u>	<u>Est. Number Permittees to Smaller Streams/ Storm Sewers</u>
Non-contact cooling water(G)	113	56
Filter backwash (G)	63	32
Fish hatcheries (G)	53	0
Log ponds (G)	25	12
Boiler blowdown (G)	19	18
Seafood processors (G)	27	9
Oil/water separators (G)	17	8
UST (G)	127	64
Washwater (G)	184	92
Domestic wastewater	250	75
Individual permits	<u>100</u>	<u>50</u>
	<b>979</b>	<b>416</b>

Note - does not include stormwater dischargers or recreational dredgers

## **ALTERNATIVES TO DISCHARGE TO SMALL STREAMS**

- RE-LOCATE OUTFALL TO LARGER STREAM
- CONNECTION TO SANITARY SEWER
- SUMMER IRRIGATION
- SUMMER IRRIGATION/WINTER STORAGE
- TREAT TO INSTREAM WATER QUALITY STANDARDS FOR ALL PARAMETERS
- RE-CYCLE/ELIMINATE GENERATION OF WASTEWATER
- TREATMENT/SUBSURFACE DISPOSAL

## **OVERVIEW OF PROPOSED RULE MODIFICATION**

**ALLOWS LONGER/BANK-TO-BANK MIXING ZONE IF  
DISCHARGER CAN DEMONSTRATE:**

- DISCHARGE IS INSIGNIFICANT**
- DISCHARGE IS TO CONSTRUCTED WATERWAY**
- DISCHARGE (OR DISCHARGE COMBINED WITH MITIGATION MEASURES)  
IS ENVIRONMENTALLY BENEFICIAL ON BALANCE**

State of Oregon


Department of Environmental Quality

Memorandum

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**Date:** September 3, 1997

**To:** Environmental Quality Commission

**From:** Langdon Marsh 

**Subject:** Agenda Item C, Adoption of Rule Modification for Mixing Zones for Point Source Discharges, EQC Meeting October 3, 1997

**Background**

On February 14, 1997, the Director authorized the Water Quality Division to proceed to a rulemaking hearing on proposed rules which would modify the requirements for mixing zones assigned to point source discharges.

Pursuant to the authorization, hearing notice was published in the Secretary of State's Bulletin on March 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 February 28, 1997.

A Public Hearing was held March 28, 1997 with Tom Lucas serving as Presiding Officer. Written comment was received through April 21, 1997, and again from August 15 through August 25, 1997. The Presiding Officer's Report (Attachment C) summarizes the oral testimony presented at the hearing and lists all the written comments received. (A copy of the comments is available upon request.)

Department staff have evaluated the comments received (Attachment D). Based upon that evaluation, modifications to the initial rulemaking proposal are being recommended by the Department. These modifications are summarized below and detailed in Attachment E.

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, a summary of the significant public comments and the changes proposed in

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

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response to those comments, 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**

The existing mixing zone rule specifies the conditions under which a zone of dilution or mixing zone may be allowed for point source dischargers. The assigned mixing zone allows the permittee an area of dilution around the point of discharge where instream water quality standards can be exceeded, provided water quality standards are met at the edge and outside of the mixing zone. Even with a very high level of treatment, almost all discharges do require some dilution and mixing with the receiving stream before all instream water quality standards can be met all the time. The "mixing zone rule" is actually identical language repeated in each basin's standards in Division 41, for example listed in OAR 340-41-445(4) for the Willamette Basin.

The existing mixing zone rule works well for point source discharges to relatively large receiving streams such as the Willamette River, where significant dilution is available. Where discharges are to smaller streams, or to storm drainage systems, however, the mixing zone required to provide adequate dilution may be several miles long. This is contrary to the language of the existing rule, which requires that the mixing zone be in "the immediate area of a wastewater discharge".

For domestic wastewater discharges, there is a specific minimum dilution rule that applies to facilities built or expanded after 1976. The Department has been moving most domestic wastewater discharges out of the smaller streams, almost always at the time of treatment plant upgrade and expansion. The most common way facilities have met the minimum dilution requirement is by constructing storage facilities with spray irrigation in the summer, to eliminate either the summer or the entire year's discharge. There are still some domestic wastewater sources that discharge to smaller streams.

For most large industrial process wastewater sources, particularly newer facilities, the Department has required that they have an adequately sized receiving stream. However, for hundreds of minor industrial discharges (including many sources on general permits), discharges have typically been allowed at the most convenient nearby receiving stream or drainage ditch or storm sewer, provided the wastewater discharged does not create a nuisance. There are also still some relatively significant discharges in minor receiving streams, for example Oremet and Teledyne Wah Chang.

The Department believes that some of the remaining discharges to smaller streams including storm drainage systems can be allowed with no impact on the overall biological integrity of the receiving waters. Because of the generally very high cost of alternatives to discharges, the Department believes that it is appropriate to modify the mixing zone rule, to allow larger mixing zones under specific and protective conditions.

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### **Relationship to Federal and Adjacent State Rules**

The Clean Water Act requires that NPDES permits have effluent limits that will assure that instream water quality standards are not violated outside of a designated mixing zone. There are no federal rules relating to mixing zones, and it is left up to the states to adopt mixing zone rules if desired. EPA has published guidelines to states on establishing mixing zones. The proposed rules are consistent with EPA guidance. The draft rule is not expected to affect adjacent states.

### **Authority to Address the Issue**

Oregon Revised Statutes (ORS) 183.335, 468.020, 468B.010, and 468B.030.

### **Process for Development of the Rulemaking Proposal (including Advisory Committee and alternatives considered)**

This rule making was initiated by the Department. Department staff met with a subcommittee of the Triennial Standards Policy Advisory Committee a total of 11 times, over about a year, and went through numerous drafts and exhaustively discussed the various issues. Full consensus was not reached by the subcommittee, although very substantial progress was made. The subcommittee agreed to forward the remaining issues to the full PAC for discussion and resolution. Two meetings with the full PAC were held, and the PAC voted unanimously to accept the draft rule on November 26, 1996. However, agreement was not reached on a few issues. Given the length of the discussions, it was agreed to "disagree" on the remaining issues and that full consensus on all issues was not likely. Briefly, the issues that were not agreed upon:

- The rule includes a purpose statement. Some members objected to the purpose statement as written.
- Some persons object to allowing chronic toxicity within the extended mixing zone. [All mixing zones allow chronic toxicity. To prohibit chronic toxicity within the mixing zone would mean that few if any dischargers could get a mixing zone of any size, which defeats the purpose of the rule. The rule does prohibit acute toxicity.]
- One person believes that the rule should require that dischargers purchase water so that the size of the extended mixing zone can be minimized, even if the discharge overall creates an environmental benefit without the water purchase.

**Summary of Rulemaking Proposal Presented for Public Hearing and Discussion of Significant Issues Involved.**

The draft rule as presented for public comment set out and defined those circumstances under which a larger mixing zone may be allowed:

1. The discharge either creates an **overall environmental benefit**, or the applicant is willing to undertake other mitigation measures that will more than offset the detrimental affects of the discharge. The study requirements for demonstrating an overall environmental benefit are comprehensive, and both the studies required and the mitigation measures proposed will be expensive. Since very few discharges on balance "improve" the receiving stream, over the entire length of the affected water ways and over the entire discharge period, it will be difficult for applicants to qualify. The Department expects that relatively few discharges will be able to successfully make this demonstration. Only existing dischargers could qualify for an alternate mixing zone under this section.
2. The **discharge is to a constructed water course**. There are many hundreds of smaller, less significant discharges to municipal storm sewers, road side ditches, or constructed effluent ditches. Some or all of these "receiving streams" may technically qualify as "waters of the state", however due to their artificial nature and limited biological value, discharges are expected to have little impact.
3. The **discharge is insignificant**, based upon volume, pollutant load, or short term nature. Filter backwash water and underground storage tank groundwater cleanups are the two categories of discharges that would qualify. In addition, the Department could designate other discharges as insignificant based on the pollutant characteristics, volume, and/or temporary nature.

**Summary of Significant Public Comment and Changes Proposed in Response**

Twelve persons or organizations commented on draft rule. Attachment C includes a list of commenters, and Attachment D summarizes the points raised and the Department's response to them. Region X of EPA submitted extensive comments which were received after the close of the initial comment period. In order to be able to consider these comments, plus some other late comments, the Department opened up a short, additional comment period in August, 1997.

Based on the comments received, the Department proposes to make the following **significant** changes:

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1. Allow existing dischargers to qualify for an alternate mixing zone, if they are able to demonstrate an overall environmental benefit.
2. Limit the discharges that could qualify for an alternate mixing zone, under the "insignificant discharge" portion of the rule, to only filter backwash and groundwater cleanup activities for underground storage tank cleanups.
3. Effluent that is acutely toxic, as defined by a standard bioassay test, would not be able to qualify for an alternate mixing zone, even when the receiving stream is a constructed water course.

Based on the comments received, the Department is proposing to make the following **minor** changes:

1. Alternate mixing zones will not be allowed if the discharge contains pollutants that bioaccumulate to an unacceptable level. The language added is a paraphrase of rule language included in the toxic pollutant water quality standard, and is proposed to be added to the mixing zone rule for clarity.
2. In order to qualify for an alternate mixing zone by demonstrating an overall environmental benefit, the study requirements have been expanded to include macroinvertebrates, and threatened or endangered species that may be present in the area of the receiving stream.
3. If dischargers propose mitigation measures in order to qualify for an alternate mixing zone, then they must demonstrate that the mitigation measures are effective.

#### **Summary of How the Proposed Rule Will Work and How it Will be Implemented**

Mixing zones are assigned and included in NPDES permits. The Department will be evaluating NPDES permit applications as they are received to determine whether the applicant is able to achieve a standard mixing zone, or whether the discharge may qualify for an alternate mixing zone. The Department is not proposing to modify any existing permits for the purpose of implementing this rule, but rather will wait for new or renewal applications.

The current permit application forms used by the Department do not include sufficient information on the receiving stream. A supplemental application form will be included in future permit application packets, which should allow the assignment of appropriate mixing zones without much additional staff time for most applications.

The following categories of discharges will require additional staff time and/or training:



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1. Discharges to ditches or degraded streams, where there is a question as to whether the stream is a constructed water course as described in this rule.
2. Discharges where the applicant is attempting to demonstrate that the discharge and any proposed mitigation measures provide an overall environmental benefit to the stream.
3. Discharges that can no longer be allowed, and where an alternative to discharge must be found. For these dischargers, the permit application will be denied. Additional staff time could be required if there is an appeal of the permit denial, or enforcement action to stop the discharge, or meetings to discuss the possible options with the applicant, or engineering review time for new wastewater treatment systems.

In order to implement the proposed rule, the following documents or training will need to be prepared:

1. Supplemental permit application to include additional information on the receiving stream, and guidance to applicants on how to locate and provide the required information.
2. Guidance to applicants relating to study requirements for qualifying for an alternate mixing zone based on the discharge and mitigation measures providing an overall environmental benefit.
3. Guidance and training for staff regarding how to determine if a receiving stream is a constructed water course.
4. Guidance for both staff and applicants as to how to determine estimated stream flows where there are no flow monitoring stations.

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**Recommendation for Commission Action**

It is recommended that the Commission adopt the rule amendments regarding mixing zones for point source discharges 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. Detailed Changes to Original Rulemaking Proposal made in Response to Public Comment
- F. Advisory Committee Membership
- G. Rule Implementation Plan

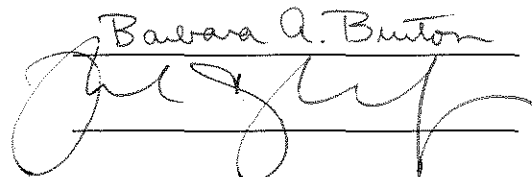
**Reference Documents (available upon request)**

Written Comments Received (listed in Attachment C)

Approved:

Section:

Division:



Report Prepared By: Barbara Burton

Phone: (503)378-8240, ext. 264

Date Prepared: September 3, 1997

## ATTACHMENT A

### PROPOSED MIXING ZONE RULE RELATING TO ALTERNATE REQUIREMENTS

(4) Mixing zones:

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

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

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

(i) Materials in concentrations that will cause acute toxicity to aquatic life as measured by a Department approved bioassay method. Acute toxicity is lethality to aquatic life as measured by a significant difference in lethal concentration between the control and 100 percent effluent in an acute bioassay test. Lethality in 100 percent effluent may be allowed due to ammonia and chlorine only when it is demonstrated on a case-by-case basis that immediate dilution of the effluent within the mixing zone reduces toxicity below lethal concentrations. The Department may on a case-by-case basis establish a zone of immediate dilution if appropriate for other parameters;

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

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

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

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

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

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

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

(A) Be as small as feasible;

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

(C) Minimize adverse effects on the indigenous biological community especially when species are present that warrant special protection for their economic importance, tribal significance, ecological uniqueness, or for other similar reasons as determined by the Department and does not block the free passage of aquatic life;

(D) Not threaten public health;

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

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

(A) Type of operation to be conducted;

(B) Characteristics of effluent flow rates and composition;

(C) Characteristics of low flows of receiving waters;

(D) Description of potential environmental effects;

(E) Proposed design for outfall structures.

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

(f) The Department may change mixing zone limits or require the relocation of an outfall if it determines that the water quality within the mixing zone adversely affects any existing beneficial uses in the receiving waters.

(g) Alternate requirements for mixing zones: For some existing or proposed discharges to some receiving streams, it may not be practicable to treat wastewater to meet instream water quality standards at the point of discharge or within a short distance from the point of discharge. Some of these discharges could be allowed without impairing the overall ecological integrity of the receiving streams, or may provide an overall benefit to the receiving stream. This section specifies the conditions and circumstances under which a mixing zone may be allowed by the Department that extends beyond the immediate area around a discharge point, or that extends across a stream width. An alternate mixing zone may be approved if the applicant demonstrates to the Department's satisfaction that the discharge (A) creates an overall environmental benefit, or (B) is to a constructed water course, or (C) is insignificant. The three circumstances under which alternate mixing zones may be established are described further below.

**(A) Overall environmental benefit.**

(i) Qualifying for alternate mixing zone based on overall environmental benefit: In order to qualify for an alternate mixing zone based on a finding of overall environmental benefit, the discharger must demonstrate to the Department's satisfaction the following:

(a) That all practical strategies have been or will be implemented to minimize the pollutant loads in the effluent; and

(b) For proposed increased discharges, the current actual discharge and mixing zone does not meet the requirements of a standard mixing zone; and

(c) Either that, on balance, an environmental benefit would be lost if the discharge did not occur, or that the discharger is prepared to undertake other actions that will mitigate the effect of the discharge to an extent resulting in a net environmental benefit to the receiving stream.

(d) For the purposes of this rule, the term "practical" shall include environmental impact, availability of alternatives, cost of alternatives, and other relevant factors.

(ii) Studies required and evaluation of studies: In order to demonstrate that, on balance, an environmental benefit will result from the discharge, the following information shall be provided by the applicant:

(a) The effluent flow and pollutant loads that are detected or expected in the effluent, by month, both average and expected worst case discharges. The parameters to be evaluated include at a minimum temperature, biochemical oxygen demand, total suspended solids, total dissolved solids, pH, settleable solids, e. coli bacteria, oil and grease, any pollutants listed in Table 20 of this rule division, and any pollutant for which the receiving stream has been designated by the Department as water quality limited; and

(b) Receiving stream flow, by month; and

(c) The expected impact of the discharge, by month, on the receiving stream for the entire proposed mixing zone area for all of the pollutants listed above. Included in this analysis shall be a comparison of the receiving stream water quality with the discharge and without the discharge; and

(d) A description of fish, other vertebrate populations, and macroinvertebrates that reside in or are likely to pass through the proposed mixing zone, including expected location (if known), species identification, stage of development, and time of year when their presence is expected. For existing discharges, the applicant shall provide the same information for similar nearby streams that are unaffected by wastewater discharges. In addition, any threatened or endangered species in the immediate vicinity of the receiving stream shall be identified; and

(e) The expected impact of the discharge on aquatic organisms and/or fish passage, including any expected negative impacts from the effluent attracting fish where that is not desirable; and

(f) A description of the expected environmental benefits to be derived from the discharge or other mitigation measures proposed by the applicant, including but not limited to improvements in water quality, improvements in fish passage, and improvements in aquatic habitat. If the applicant proposes to undertake mitigation measures designed to provide environmental benefits (e.g., purchasing water or water conservation rights to increase stream flows or establishing stream cover to decrease temperature), the applicant shall describe the mitigation measures in detail, including a description of the steps it will take to ensure that the benefits of the mitigation measures are attained and are not lost or diminished over time.

(g) Some or all of the above study requirements may be waived by the Department, if the Department determines that the information is not needed. In the event that the Department does waive some or all of the above study requirements, the basis for waiving the requirements will be included in the permit evaluation report upon the next permit renewal or modification relating to the mixing zone.

(h) Upon request of the Department, the applicant shall conduct additional studies to further evaluate the impact of the discharge, which may include whole effluent toxicity testing, stream surveys for water quality, stream surveys for fish and other aquatic organisms, or other studies as specified by the Department.

(i) In evaluating whether an existing or proposed increase in an existing discharge would result in a net environmental benefit, the applicant shall use the native biological community in a nearby, similar stream that is unaffected by wastewater discharges. The Department shall consider all information generated as required in this rule and other relevant information. The evaluation shall consider benefits to the native aquatic biological community only.

(iii) Permit conditions: Upon determination by the Department that the discharge and mitigation measures (if any) will likely result in an overall environmental benefit, the Department shall include appropriate permit conditions to insure that the environmental benefits are attained and continue. Such permit conditions may include but not be limited to:

(a) Maximum allowed effluent flows and pollutant loads;

(b) Requirements to maintain land ownership, easements, contracts, or other legally binding measures necessary to assure that mitigation measures, if any, remain in place and effective;

(c) Special operating conditions;

(d) Monitoring and reporting requirements; and

(e) Studies to evaluate the effectiveness of mitigation measures.

(B) **Constructed water course:** A mixing zone may be extended through a constructed water course and into a natural water course. For the purposes of this rule, a constructed water course is one that was constructed for irrigation, site drainage, or wastewater conveyance, and has the following characteristics:

(i) Irrigation flows, stormwater runoff, or wastewater flows have replaced natural streamflow regimes; and

(ii) The channel form is greatly simplified in lengthwise and cross sectional profiles; and

(iii) Physical and biological characteristics that differ significantly from nearby natural streams; and

(iv) A much lower diversity of aquatic species than found in nearby natural streams; and

(v) If the constructed water course is an irrigation canal, then it must have effective fish screens in place to qualify as a constructed water course.

(C) **Insignificant discharges:** Insignificant discharges are those that either by volume, pollutant characteristics, and/or temporary nature are expected to have little if any impact on beneficial uses in the receiving stream, and for which the extensive evaluations required for discharges to smaller streams are not warranted. For the purposes of this rule, only filter backwash discharges and underground storage tank cleanups are considered insignificant discharges.

(D) **Other requirements for alternate mixing zones:** The following are additional requirements for dischargers requesting an alternate mixing zone:

(i) Most discharges that qualify for an alternate mixing zone will extend through the receiving stream until a larger stream is reached, where thorough mixing of the effluent can occur and where the edge of the allowed mixing zone will be located. The portion of the mixing zone in the larger stream must meet all of the

requirements of the standard mixing zone, including not blocking aquatic life passage; and

(ii) An alternate mixing zone shall not be granted if a municipal drinking water intake is located within the proposed mixing zone, and the discharge has a significant adverse impact on the drinking water source; and

(iii) The discharge will not pose an unreasonable hazard to the environment or pose a significant health risk, considering the likely pathways of exposure; and

(iv) The discharge shall not be acutely toxic to organisms passing through the mixing zone; and

(v) An alternate mixing zone shall not be granted if the substances discharged may accumulate in the sediments or bioaccumulate in aquatic life or wildlife to levels that adversely affect public health, safety, or welfare; aquatic life, wildlife; or other designated beneficial uses; and

(vi) In the event that the receiving stream is water quality limited, the requirements for discharges to water quality limited streams supersede this rule.



# NOTICE OF PROPOSED RULEMAKING HEARING

Department of Environmental Quality

Water Quality Division

**OAR Chapter 340-41**

**DATE: TIME: LOCATION:**

March 28, 1997 1:00 p.m. DEQ Headquarter, 811 S.W. 6th Avenue, Portland, Room 3A

**HEARINGS OFFICER(s):** Unknown

**STATUTORY AUTHORITY:** ORS 183.335, 468.020, 468B.0120, 468B.030 and 468B.035

**or OTHER AUTHORITY:**

**STATUTES IMPLEMENTED:**

**ADOPT:**

**AMEND:** 340-41-205, 340-41-245, 340-41-285, 340-41-325, 340-41-365, 340-41-445, 340-41-485, 340-41-525, 340-41-565, 340-41-605, 340-41-645, 340-41-685, 340-41-725, 340-41-765, 340-41-805, 340-41-845, 340-41-885, 340-41-925, 340-41-965

**REPEAL:**

**RENUMBER:**

(prior approval from Secretary of State REQUIRED)

**AMEND & RENUMBER:**

(prior approval from Secretary of State REQUIRED)

- 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:**

This rulemaking proposal changes the rules regarding mixing zones allowed for point source dischargers of wastewaters. It would affect all water basins within Oregon. The rule will require some current permit holders to either eliminate or relocate their discharges when the discharge impacts a small stream.

**LAST DATE FOR COMMENT:** April 17, 1997

**AGENCY RULES COORDINATOR:** Susan M. Greco, (503) 229-5213  
**AGENCY CONTACT FOR THIS PROPOSAL:** Barbara Burton  
**ADDRESS:** 750 Front Street N.E.  
 Salem OR 97310  
**TELEPHONE:** (503) 378-8240/1-800-452-4011

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.

Susan Greco 2/14/97  
 Signature Date

ATT B

**State of Oregon  
Department of Environmental Quality**

**Memorandum**

**Date:** February 28, 1997  
**To:** Interested and Affected Public  
**Subject:** Rulemaking Proposal and Rulemaking Statements - Modification of Water Quality Rules Relating to Mixing Zones for Point Source Discharges

This memorandum contains information on a proposal by the Department of Environmental Quality (DEQ) to adopt rule amendments regarding mixing zones. 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 allow some point source dischargers of wastewater to have larger mixing zones than are allowed under the current rule. A mixing zone is an area in a stream receiving effluent, where mixing of the effluent and the stream occurs. Within a mixing zone, some instream water quality standards may be exceeded with some limitations. At the edge and outside of the mixing zone, all instream water quality standards must be met.

The Department has the statutory authority to address this issue under Oregon Revised Statutes (ORS) 183.335, 468.020, 468B.010, 468B.030, 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**

You are invited to review these materials and present written or oral comment in accordance with the following:

- Date:** March 28, 1997
- Time:** 1:00 PM
- Place:** Room 3A, DEQ Headquarters  
811 SW 6th Avenue  
Portland, Oregon

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**Deadline for submittal of Written Comments:** April 17, 1997

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

In addition, a work session to discuss this proposed rule has been scheduled for the Environmental Quality Commission for April 17, 1997. The Commission may choose to receive oral testimony relating to the proposed rule at that time, and any testimony received will be included in the record. Testimony will be by invitation of the Commission only.

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 June 6, 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.

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

The existing mixing zone rule allows the Department to establish mixing zones for each point source discharger, in the immediate vicinity of the discharge. Each assigned mixing zone is included in the National Pollutant Discharge Elimination System (NPDES) permit issued to the point source discharger of wastewater. This rule works well for discharges to relatively large receiving streams, where there is adequate dilution available. That is, with a high degree of treatment, almost all point source dischargers can qualify for a relatively small mixing zone if the discharge is to a larger receiving stream.

For most significant discharges to smaller receiving streams, the Department has over the years either required the discharger to stop discharges when the stream flows are too low (such as in the summer), or to build an outfall to a nearby but much larger receiving stream. For the remaining discharges to smaller streams, the Department has often allowed a mixing zone that extended the length of the smaller receiving stream until it joined a much larger stream, where adequate dilution could occur. Some of the assigned mixing zones are several miles long.

A recent court ruling found that the existing mixing zone rule does not allow very large mixing zones. The Department believes that there are still some significant discharges to smaller streams that should be removed. However, there are some circumstances under which discharges to smaller streams can be allowed, and still protect the overall biological integrity of the receiving stream. The discharges that could still be allowed are where the pollutant loads are very low or temporary, and where the "receiving stream" is a constructed water course with limited value as aquatic habitat (such as an irrigation canal or urban stormwater drainage ditch). In some few cases, a discharge may even provide an overall benefit to the receiving stream and these discharges could also be permitted a larger mixing zone.

**How was the rule developed**

A subcommittee of the Triennial Standards Policy Advisory Committee assisted in drafting the rule. The subcommittee met eleven times to discuss the draft rule. The full Triennial Standards Policy Advisory Committee met and voted to accept the rule as drafted, although there were some areas of remaining disagreement.

The documents relied upon are: Oregon Revised Statutes (ORS) 183, 468 and 468B; Oregon Administrative Rules (OAR) 340 Division 41; and the U.S. Environmental Protection Agency 1993 Water Quality Standards Handbook, Second Edition, Chapter 5.

Copies of the documents relied upon in the development of this rulemaking proposal can be

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reviewed at the Department of Environmental Quality's office at 750 Front Street, NE, Salem, Oregon. Please contact Barbara Burton at (503) 378-8240, extension 264, 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 proposed rule will affect all users of public waters, and will affect many dischargers with NPDES permits. It will have the effect of requiring many current permit holders to either eliminate or re-locate their discharges. The removal of all or most of the discharges will improve the water quality in the receiving streams. In some locations, removal of existing discharges will reduce the amount of stream flow available for out of stream uses such as irrigation.

For those NPDES permit holders required to eliminate or re-locate their outfalls for some or all of the year, the expense will vary depending on the location, distance to nearest larger receiving stream, availability of sewers, availability of land for irrigation, characteristics of the discharge, and other variables. The least expensive option is usually connection to a sanitary sewer, if available. Other options can be very costly.

For those NPDES permit holders discharging to smaller streams, but able to qualify for a larger mixing zone, there will be additional expense in preparing documentation supporting their request to stay in the stream. Costs may be less than \$10 to purchase a map and 10 hours of time to describe the discharge and receiving stream in order to qualify for a discharge to a constructed water course. Costs may be up to \$100,000 to conduct the more rigorous studies needed to demonstrate that a discharge results in an overall environmental benefit. Any costs for mitigation measures necessary to qualify a discharge would be in addition to study costs, and could be significant.

The proposed rule will require additional time by Department staff to review the next round of permit applications.

**How will the rule be implemented**

The rule will be implemented through the NPDES permit program. As permits come up for renewal, the discharge will be reviewed as to appropriateness for a given receiving stream. The Department intends to modify the permit application forms to require additional information regarding the receiving stream.

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Memo To: Interested and Affected Public  
Modification of Mixing Zone Rule  
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**Are there time constraints**

There are no firm deadlines. However, there are a number of expired permits that are being held pending resolution of this issue.

**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:

Barbara Burton, Western Region Water Quality Manager, at  
(503)378-8240, extension 264

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ATTACHMENT B

## ATTACHMENT A

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking Proposal  
for  
Modification of Water Quality Rules Relating to Mixing Zones for Point Source Discharges

### Fiscal and Economic Impact Statement

#### Introduction

Under the current legal interpretation of the existing mixing zone rule, most discharges to smaller streams would not be allowed at all and elimination of the discharge would be required. The Department has not yet fully implemented this interpretation of the rule. If the existing rule were implemented as required by the recent court decision, the cost to most dischargers would be greater than the costs expected from the proposed rules. The proposed rules provide alternatives to eliminating the discharges to smaller streams in some circumstances, but do not require any discharger to pursue the alternatives. The only "real" additional cost from the proposed rule will be the additional information required to be submitted with the permit applications.

#### General Public

The general public will not be directly affected.

#### Small Business

Small businesses which currently hold National Pollutant Discharge Elimination System (NPDES) permits and which discharge to storm drainage systems or smaller streams will be affected by this proposed rule. It is estimated that about 150 to 200 small businesses may be affected. As discussed above, implementation of the existing rule using the recent court interpretation would require most discharges to smaller streams be eliminated. The proposed rules provide alternatives to the "no discharge" option, and presumably applicants would only pursue alternatives if they were less costly than the existing requirements. However, for informational purposes, the costs of pursuing alternatives to the "no discharge" requirement of the existing rule are described below. Also included for informational purposes is a discussion of the ways that discharges to smaller streams could be eliminated.

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**Additional costs for preparing application, where discharge is to a constructed waterway**

- This is the only "real" additional cost to applicants over the existing rule. The applicant will be required to provide a map showing the route the proposed or existing effluent will take, from the point of discharge until the effluent discharges to a natural river or stream. Photographs showing the junction of each successive water way will be required. The applicant may need to consult with municipal public works staff if the discharge is to a municipal storm sewer drainage system. The Oregon Water Resources Department or U.S. Geological Survey will have to be contacted to determine the stream flow for the ultimate receiving stream. The documentation costs should generally be less than \$500. If the natural receiving stream does not have flow data (no stream gauge data available), then there would be an additional cost to hire a consultant to estimate or measure the stream flows.

**Study cost for demonstrating an overall environmental benefit**

- The costs will vary significantly, depending on the discharge and receiving stream, and how much is known about each. For the minimum study required, a consultant providing similar studies estimates the cost to range from \$80,000 to \$205,000. If additional studies (such as on-site biological surveys) are required, the cost could increase by up to \$65,000. This is an optional alternative, for dischargers to smaller streams who wish to try to maintain a discharge. Because of the high cost and uncertainty of outcome, it is unlikely that very many small businesses will pursue this alternative for keeping a discharge in a small receiving stream.

**Cost for mitigation measures**

- The proposed rule allows the applicant to institute mitigation measures to "offset" the negative impact of the discharge, if the applicant wishes to keep a discharge into a smaller stream. The extent and type of mitigation measure will vary widely, depending on the site location, the receiving stream, and the characteristics of the effluent. Some possible mitigation measures and their approximate cost are described below:

**Purchase of water rights to increase instream flows** - A recent study of current prices shows an average of about \$360 per acre-foot, to be used over the irrigation season each year. The price will vary depending on scarcity of water, seniority of the water right, and willingness to sell. For a discharge of 50,000 gallons per day, it would require 276 acre-feet to provide a 10 to 1 dilution, for a cost of about \$100,000 assuming the water rights holder would be willing to sell.

**Fencing off stream to protect from livestock, and creation of stock watering pond (including getting electricity to pump)** - Materials and labor for the fencing are estimated to cost about \$5000 per mile. Building the pond and providing the pump (and power) will vary, mostly based on the distance to an available power source, but may double the cost of this mitigation measure. The length of stream protected, and the water quality benefits derived will vary depending on location. The amount of



stream to be fenced in order to offset the impact of a discharge will vary depending on the effluent and receiving stream.

**Riparian zone restoration, through planting** - The cost will vary depending on soil types, native vegetation, and size of the stock being planted. Assuming a 30 foot wide strip on each side of the stream, and at \$1000/acre, this measure would cost about \$7300 per mile of stream riparian area restored. As with fencing, the water quality benefit derived/needed to offset a discharge will vary.

**Constructing stream "structures" for fish habitat** - This measure involves "creating" pools for young salmonids and other aquatic life to feed and shelter, thereby increasing numbers/size/chance of survival. The cost will depend on the accessibility of the site, and how elaborate the structure is, and typically varies from \$200 to \$1000 or more for each structure, including materials, equipment and labor.

There are numerous other mitigation measures that could be undertaken, at the choice of the applicant. Some example additional measures include removing tide gates in estuaries, stabilizing stream banks to minimize erosion and sediment loads, repairing culverts to allow fish passage, de-commissioning roads in logged areas, and providing setbacks from streams for farming operations.

**Elimination of discharge, or change of location/timing of discharge** - Under the existing court interpretation of the existing rules, most dischargers to smaller streams would be required to eliminate their discharge. Therefore, the cost of eliminating the discharge is not a "new" cost associated with the proposed rules, but would have been required anyway under the existing rules. This discussion is included for informational purposes only.

For those discharges that cannot qualify for an extended mixing zone, and must change their point or time of discharge, there are a number of alternatives. The cost of each will be site specific. The common alternatives are described below:

**Connection to a sanitary sewer** - Most dischargers affected by this rule are located within urban areas, where a sanitary sewer may be available. The cost of connection, if allowed by the municipality, will vary widely. Many municipalities charge a connection fee. In addition, the property owner is responsible for installing the plumbing on site. The cost of this will vary depending on the distance to the sanitary sewer, site conditions, and characteristics of the effluent. Municipalities also charge a fee for treating wastes discharging to their system. Two example municipal fees for commercial and industrial customers - \$2.27/month/100 cubic feet, plus \$.85/pound of BOD and \$.25/pound suspended solids; and \$17.75/month plus \$3.75/100 cubic feet, plus \$.59/pound of BOD and \$.378/pound of suspended solids above normal sewage

strength. This cost would be offset by the savings on not having an NPDES permit and doing the required monitoring and reporting.

**Construction of an outfall to a larger, acceptable receiving stream** - This alternative will vary widely in cost depending on site conditions and distance to acceptable receiving stream, but will often be very expensive. The cost includes purchase of property or easements for the pipeline, construction of the pipeline, and construction of pumps. In addition to the initial construction costs, there will be on-going power costs and operation and maintenance costs. As an example of the possible cost, a medium sized municipality has explored piping the effluent from their sewage treatment plant approximately eight miles, at a projected construction cost of \$3.25 million.

**Storage in winter, spray irrigation in the summer** - Most effluent could be used beneficially as irrigation water with minimal treatment, provided that appropriate sites are available nearby. Many smaller municipal sewage treatment plants have already switched over to irrigation, at least for their summer flows when receiving streams are the lowest. Generally speaking, provided that wastewater is applied at or less than the rate that the plant crop can take it up, groundwater contamination is not a concern. This will probably not be a practical alternative in urban locations, where the large space required for storage would not be reasonably available. The cost of this alternative will depend on the volume of effluent, the annual rainfall, the availability and cost of land for storage and irrigation, and treatment costs (in any) required prior to irrigation.

**Spray irrigation in the summer, discharge in the winter** - Particularly in Western Oregon, stream flows are much higher in the winter than the summer. For some discharges to some receiving streams, it may be possible to allow a winter but not a summer discharge. This alternative is considerably less expensive than the previous alternative, because of the much reduced storage requirements.

**Additional treatment, so that all instream water quality standards are met at the end of pipe** (no mixing zone is required) - The cost of the additional treatment will be dependent on the effluent. It will probably not be achievable at any reasonable cost for most discharges.

### Large Business

There will be an estimated 100 to 150 large businesses affected by the proposed rules. The impacts will be the same as discussed above for small businesses.

## Local Governments

Local governments with sewage treatment plants discharging to smaller streams will be affected by this rule. Over the past twenty years, most of these types of discharges have been eliminated, but some remain. There may be up to 40 municipalities which may be affected by the proposed rule. The discussion under the Small Business section above also applies to local governments. In addition, one possible alternative to discharge available to municipalities is the use of large on-site drainfields. This alternative may be available, however it is difficult to find enough area with adequate soils. Extensive groundwater studies and a concentration limit variance may be required for this option, and it may not be allowed because of unacceptable groundwater impacts.

## State Agencies

- DEQ - This proposed rule would require additional staff time in the permit review and issuance process. As an estimate, each permit coming up for renewal over the next five years will require an average of two additional hours, providing the discharge is to a stream where the discharge can be allowed (either to a large stream, or to a constructed waterway, or is in the category of insignificant discharges). There are approximately 1000 active NPDES permits in Oregon that would be affected by this rule, so at 200 permits per year this will be an additional 400 hours per year of DEQ staff work.

For those applicants who choose to get a larger mixing zone by demonstrating an "overall environmental benefit", it is estimated that on average 80 DEQ staff hours for each application will be required for meetings, review of reports, and correspondence. Assuming five requests per year, this will total about 400 hours per year.

For those applicants who will be required to either eliminate their discharge, or re-locate the discharge point, it is likely that an order will be negotiated with a schedule for coming into compliance for most of them. In addition, there may be some review of engineering plans and specifications, and some review of engineering feasibility plans. It is estimated that there could be up to 25 of these per year for the next five years, at an estimated 100 hours each. This totals about 2,500 staff hours per year.

In summary, it is estimated that the proposed rule will take about an additional 3,300 hours per year for the next five years for DEQ staff if the rule is fully implemented. It is unlikely that additional staff to work on permits will be available for this work, and therefore there will be no net monetary cost to DEQ. The additional work will be absorbed by existing staff, as competing priorities allow, and less critical work will not be done. It is also likely that the additional work to implement this rule will result in larger permit backlogs.

- Other Agencies. The Water Resources Department may be contacted by applicants requesting stream flow information. It is not known how many contacts will be made, or how much time will be required. The total time required is not expected to be significant.

In addition, several state agencies hold NPDES permits with the Department, that could potentially be affected. These agencies include Oregon Department of Fish and Wildlife (for fish hatcheries), Oregon Department of Transportation (for rest areas) and Oregon Parks (for park restrooms and shower facilities). Almost all of these discharges are from fish hatcheries and are to larger streams, and so would not be affected by the proposed rule.

### **Assumptions**

The assumptions used are described above.

### **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.

ATTACHMENT B

**ATTACHMENT B**  
State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking Proposal  
for  
Modification of Water Quality Rules Relating to Mixing Zones for Point Source Discharges

**Land Use Evaluation Statement**

**1. Explain the purpose of the proposed rules.**

A recent court ruling on the current rules restrict mixing zones to the immediate area of the discharge. For most discharges, even with a high degree of treatment, some mixing with the receiving stream flows are necessary to meet the instream water quality standards. The Department has allowed some larger mixing zones, which are no longer allowed under the court ruling. The proposed rules allow larger mixing zones, under specified conditions, where larger mixing zones would be allowed without harming the overall integrity of the receiving stream.

**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:**

The rules affect the National Pollutant Discharge Elimination System permit program, which is included in OAR 340-45. In addition, the rules affect in stream water quality and are included in OAR 340-41.

Current DEQ policy requires that the land use planning official from the affected local government review and approve a "Land Use Compatibility Statement" for each permit application before DEQ issues the permit.

**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):

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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 B

## 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?**

Yes. The Clean Water Act requires that point source dischargers of wastewater must obtain a National Pollutant Discharge Elimination System (NPDES) permit, and further specifies that effluent limits must be set to insure that instream water quality standards not be violated as a result of the discharge. The Clean Water Act also allows delegated states to permit mixing zones for point source dischargers, where the effluent mixes with the receiving stream prior to being required to meet instream water quality standards. The proposed rules modify the existing Oregon rules relating to mixing zones.

In developing the proposed rules, federal guidance was used. The federal guidance was designed for use by delegated state agencies, and describes possible approaches to mixing zone rules that are consistent with the Clean Water Act.

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

The federal requirements are performance based.

- 3. Do the applicable federal requirements specifically address the issues that are of concern in Oregon? Was data or information that would reasonably reflect Oregon's concern and situation considered in the federal process that established the federal requirements?**

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. Under a recent court interpretation of Oregon rules, almost all discharges to smaller streams would not be allowed. These proposed rules will allow some of the discharges to continue, under specified conditions.

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

There are a number of permits that cannot be renewed with the existing assigned mixing zones, without placing the dischargers in violation. This issue needs to be resolved so that the affected dischargers can proceed with whatever actions will be needed to come into compliance with the mixing zone rules.

**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)**

The proposed rules will have different costs to comply, based on the location, nearest receiving stream, and effluent characteristics.

**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?**

No.

**10. Is demonstrated technology available to comply with the proposed requirement?**

Yes, although it may be costly.

**11. Will the proposed requirement contribute to the prevention of pollution or address a potential problem and represent a more cost effective environmental gain?**

The proposed rules allow the flexibility to keep a discharge in a stream by the applicant carrying out mitigation measures. This allows the discharger to find the most cost effective way to meet environmental requirements.



ATTACHMENT D

**DRAFT LANGUAGE, MIXING ZONE RULE RELATING  
TO ALTERNATE REQUIREMENTS**

(g) **Alternate requirements for mixing zones:** For some existing or proposed discharges to some receiving streams, it may not be practicable to treat wastewater to meet instream water quality standards at the point of discharge or within a short distance from the point of discharge. Some of these discharges could be allowed without significantly impairing the overall ecological integrity of the receiving streams, or may provide an overall benefit to the receiving stream. This section specifies the conditions and circumstances under which a mixing zone may be allowed by the Department that extends beyond the immediate area around a discharge point, or that extends across a stream width. An alternate mixing zone may be approved if the applicant demonstrates to the Department's satisfaction that the discharge (A) creates an overall environmental benefit, or (B) is to an constructed water course, or (C) is insignificant. The three circumstances under which alternate mixing zones may be established are described further below. In the event that the receiving stream is water quality limited, the requirements for discharges to water quality limited streams supersede this rule.

(A) **Overall environmental benefit.** In order to qualify for an alternate mixing zone based on a finding of overall environmental benefit, the discharger must demonstrate to the Department's satisfaction the following:

(i) that all practical strategies have been or will be implemented to minimize the pollutant loads in the effluent, and

(ii) the discharge is either an existing discharge, or is an increased discharge from an existing discharger, and

(iii) for proposed increased discharges, the current discharge and mixing zone does not meet the requirements of a standard mixing zone, and

(iv) either that, on balance, an environmental benefit would be lost if the discharge did not occur, or that the discharger is prepared to undertake other actions that will mitigate the effect of the discharge to an extent resulting in a net environmental benefit to the receiving stream.

(v) For the purposes of this rule, the term "practical" shall include environmental impact, availability of alternatives, cost of alternatives, and other relevant factors.

(vi) In order to demonstrate that, on balance, an environmental benefit will result from the discharge, the following information shall be provided by the applicant:

(a) The effluent flow and pollutant loads that are detected or expected in the effluent, by month, both average and expected worst case discharges. The parameters to be evaluated include at a minimum temperature, biochemical oxygen demand, total suspended solids, total dissolved solids, pH, settleable solids, e. coli bacteria, oil and grease, any pollutants listed in Table 20 of this rule division, and any pollutant for which the receiving stream has been designated by the Department as water quality limited; and

(b) Receiving stream flow, by month; and

(c) The expected impact of the discharge, by month, on the receiving stream for the entire proposed mixing zone area for all of the pollutants listed above. Included in this analysis shall be a comparison of the receiving stream water quality with the discharge and without the discharge; and

(d) A description of fish and other vertebrate populations that reside in or are likely to pass through the proposed mixing zone, including expected location (if known), species identification, stage of development, and time of year when their presence is expected. For existing discharges, the applicant shall provide the same information for similar nearby streams that are unaffected by wastewater discharges; and

(e) The expected impact of the discharge on aquatic organisms and/or fish passage, including any expected negative impacts from the effluent attracting fish where that is not desirable; and

(f) A description of the expected environmental benefits to be derived from the discharge or other mitigation measures proposed by the applicant, including but not limited to improvements in water quality, improvements in fish passage, and improvements in aquatic habitat. If the applicant proposes to undertake mitigation measures designed to provide environmental benefits (e.g., purchasing water or water conservation rights to increase stream flows or establishing stream cover to decrease temperature), the applicant shall describe the mitigation measures in detail, including a description of the steps it will take to ensure that the benefits of the mitigation measures are attained and are not lost or diminished over time.

(vii) Some or all of the above study requirements may be waived by the Department, if the Department determines that the information is not needed. In the event that the Department does waive some or all of the above study requirements, the basis for waiving the requirements will be included in the permit evaluation report upon the next permit renewal or modification relating to the mixing zone.

(viii) Upon request of the Department, the applicant shall conduct additional studies to further evaluate the impact of the discharge, which may include whole effluent toxicity testing, stream surveys for water quality, stream surveys for fish and other aquatic organisms, or other studies as specified by the Department.

(ix) In evaluating whether an existing or proposed increase in an existing discharge would result in a net environmental benefit, the applicant shall use the native biological community in a nearby, similar stream that is unaffected by wastewater discharges. The Department shall consider all information generated as required in this rule and other relevant information. The evaluation shall consider benefits to the native aquatic biological community only.

(x) Upon determination by the Department that the discharge and mitigation measures (if any) will likely result in an overall environmental benefit, the Department shall include appropriate permit conditions to insure that the environmental benefits are attained and continue. Such permit conditions may include but not be limited to:

- (a) Maximum allowed effluent flows and pollutant loads;
- (b) Requirements to maintain land ownership, easements, contracts, or other legally binding measures necessary to assure that mitigation measures, if any, remain in place and effective;
- (c) Special operating conditions;
- (d) Monitoring and reporting requirements.

**(B) Constructed water course:** A mixing zone may be extended through a constructed water course and into a natural water course. For the purposes of this rule, a constructed water course is one that was constructed for irrigation, site drainage, or wastewater conveyance, and has the following characteristics:

- (i) Irrigation flows, stormwater runoff, or wastewater flows have replaced natural streamflow regimes;
- (ii) An irrigation canal must have effective fish screens in place to qualify as a constructed water course;

- (iii) The channel form is greatly simplified in lengthwise and cross sectional profiles;
- (iv) Physical and biological characteristics that differ significantly from nearby natural streams; and
- (v) A much lower diversity of aquatic species than found in nearby natural streams.

**(C) Insignificant discharges:** Insignificant discharges are those that either by volume, pollutant characteristics, and/or temporary nature are expected to have little if any impact on beneficial uses in the receiving stream, and for which the extensive evaluations required for discharges to smaller streams are not warranted. No discharge that is acutely toxic for any pollutant parameter may qualify as an insignificant discharge. For the purposes of this rule, filter backwash discharges and underground storage tank cleanups are considered insignificant. Other discharges may be designated by the Department as insignificant based upon the temporary nature or de minimus impact of the effluent.

**(D) Other requirements for alternate mixing zones:** The following are additional requirements for dischargers requesting an alternate mixing zone:

- (i) Most discharges that qualify for an alternate mixing zone will extend through the receiving stream until a larger stream is reached, where thorough mixing of the effluent can occur and where the edge of the allowed mixing zone will be located. The portion of the mixing zone in the larger stream must meet all of the requirements of the standard mixing zone, including not blocking aquatic life passage; and
- (ii) An alternate mixing zone shall not be granted if a municipal drinking water intake is located within the proposed mixing zone, and the discharge has a significant adverse impact on the drinking water source; and
- (iii) The discharge will not pose an unreasonable hazard to human health or the environment.

**ATTACHMENT C**  
**HEARINGS OFFICER REPORT AND**  
**LIST OF COMMENTERS**

State of Oregon  
Department of Environmental Quality

Memorandum

Date: April 9, 1997

To: Environmental Quality Commission

From: Thomas J. Lucas

Subject: Presiding Officer's Report for Rulemaking Hearing  
Hearing Date and Time: March 28, 1997, beginning at 1:00 p.m.  
Hearing Location: Conference Room 3A, DEQ Headquarters, 811  
S. W. Morrison, Portland, Oregon

Title of Proposal: Modification of Water Quality Rules Relating to  
Mixing Zones for Point Source Discharges

The rulemaking hearing on the above titled proposal was convened at 1.10 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.

Five people were in attendance, One person signed up to give testimony.

Tom Stow, Unified Sewerage Agency  
John Koreny Geo Engineers  
Michael Campbell, Stoel Rives  
Gerit Hull, NWSL, Lewis and Clark College  
Jim Denham, Wah Chang

Prior to receiving testimony, Barbara Burton, Western Region Water Quality Program Manager, briefly explained the specific rulemaking proposal, the reason for the proposal, and responded to questions from the audience.

Summary of Oral Testimony

Michael Campbell, Stoel Rives, 900 S.W. Fifth Avenue, Portland, Oregon. Mr. Campbell testified on behalf of Associated Oregon Industries (AOI). AOI participated extensively in the committee process, and strongly supports the concept of the proposed amendments to the mixing zone rule. AOI will be submitting written testimony. AOI recognizes that DEQ reinterpreted the rule in response to a court decision so the amendments amount to very narrow exceptions. The net effect of the amendments is to make application of the rule much more stringent.

Written Testimony

Memo To: Environmental Quality Commission

\_\_\_\_\_(date of memo)\_\_\_\_\_

Presiding Officer's Report on

\_\_\_\_\_, 19\_\_ Rulemaking Hearing

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No written testimony was received at the hearing. Attendees were advised that the comment period would close on April 21, 1997.

There was no further testimony and the hearing was closed at 1:40 p.m..

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## **List of Persons Providing Written Comments**

Donald B. Potter

John Williams, United Association of Plumbers and Fitters Local # 290

Nina Bell, Northwest Environmental Advocates

Bart Brush, Northwest Environmental Defense Center

John Ledger, Associated Oregon Industries

Kevin Godbout, Weyerhaeuser

Gerald W. Breazeale, City of Madras

Linda Drishill, Grant County Conservationists

Sally Brough, EPA Region X

Patrick D. Curran, Curran-McLeod, Inc. Consulting Engineers

Kristine Holm, Northwest Pulp & Paper Association

David Zeponi, Northwest Food Processors Association



## ATTACHMENT D

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State of Oregon  
Department of Environmental Quality Memorandum

**Date:** September 3, 1997

**To:** Environmental Quality Commission  
**From:** Barbara Burton  
**Subject:** Summary of Comments Received and Department Response, Proposed Mixing Zone Rule Revision

The initial public comment period was from February 28 to April 21, 1997. A second brief public comment period was from August 15 to August 25, 1997. The purpose of the second public comment period was to receive important late comments from the first period, and to allow further comments. During the public comment periods, twelve people submitted written comments. In addition, one person testified at the public hearing held on March 28, 1997. The following summarizes the comments received, and the Department's response.

### **Comments Relating to the Proposed Rule as a Whole**

**Comment:** Extended mixing zones should not be allowed under any circumstances. Many small streams are already in trouble, and Oregon should be moving towards no discharges into any stream.

**Response:** The Department believes that some discharges to small streams can cause significant detrimental impacts on water quality. Over the years, the Department has worked with many permittees to find alternatives to discharges when there is a significant impact on the stream. There are still some "problem" discharges that should be removed from the receiving stream. However, the Department believes that there also are a number of minor discharges to smaller streams, including storm sewer systems, that can be allowed without affecting the overall biological integrity of the receiving stream. The proposed rule is aimed at allowing discharges to small streams where there is little if any impact on water quality, but not allowing those discharges that are having an unacceptable impact.

**Comment:** The rule is generally supported, however it should be expanded to include more discharges. Relatively few of existing discharges to smaller streams would be allowed under the proposed rule.

**Response:** The Department believes that some additional discharges could be allowed without significantly affecting water quality. These will be discussed in more detail in the following sections. The Department disagrees, however, with the assertion that relatively few discharges will be allowed under the proposed rules. In urban areas particularly, there are numerous minor industrial discharges (typically non contact cooling water and boiler blowdown) to storm sewer systems which could be allowed under the “constructed water course” section of the rule. There are also approximately 100 discharges that could be allowed to continue to discharge under the “insignificant discharges” portion of the rule (filter backwash water and groundwater cleanup discharges from underground storage tank remedial actions). There will probably not be very many other discharges that will be able to qualify under the “overall environmental benefit” portion of the rule.

**Comment:** Extended mixing zones in larger receiving streams should be allowed also. For example, some larger streams are configured such that a plume may not mix for a long distance from the point of discharge.

**Response:** The discussion memo and other information put out with the proposed rules indicates that the rule is aimed at relatively large discharges to relatively small streams. This is because discharges to larger streams do have reasonable options to achieving a fairly small mixing zone, including installing diffusers and relocating outfalls to the mainstream where mixing is more vigorous. Neither the Department nor the advisory committee discussed or considered discharges to larger receiving streams. However, there is nothing in the proposed rule that would prevent a discharge to a larger stream from attempting to get an extended mixing zone, provided the discharger could qualify.

**Comment:** Extended mixing zones violates the intent of the Clean Water Act, and violates EPA guidelines to states relating to establishing mixing zone rules. Extended mixing zones also violate Oregon’s anti-degradation policy.

**Response:** EPA rules allow states to adopt rules relating to mixing zones. The EPA guidance on mixing zone rules includes three key concepts: mixing zones should not impair the integrity of the water body as a whole; there should be no lethality to organisms passing through the mixing zone; and there should be no significant health risks. The Department believes that the proposed rule revision meets these three criteria, and the rule revision is consistent with the guidance document.

Regarding Oregon’s anti-degradation policy, the policy requires that unnecessary degradation of water quality be prevented, and water quality is protected. The Department believes the proposed rule is consistent with the policy.

**Comment:** Existing discharges to smaller streams rarely have a significant impact on water quality. The proposed rule is a good start, but does not achieve a reasonable balance between cost to dischargers versus environmental benefit.

**Response:** There is no question that finding an alternative to discharge can be very expensive. However, in the Department's experience discharges to relatively small streams can be very significant. Most of the water quality limited streams, where point source discharges are a primary contributor to the pollutant load, are polluted because the stream is relatively small compared to the discharge. While the Department has worked with dischargers having the most impact to find discharge alternatives, there are still a number of dischargers causing significant impacts.

**Comment:** Extended mixing zones are opposed. However, if they are allowed, there should be restrictions as to the type of pollutant discharged (no toxics, no total dissolved solids, only temperature), the ownership of the discharger (no privately owned), and the size of the company (big companies should not be allowed extended mixing zones).

**Response:** The Department cannot legally distinguish in rule making between publicly owned and privately owned, nor large versus small company. Regarding limiting the pollutants in the discharge, total dissolved solids and pollutants listed as toxic at certain concentrations are limited in the proposed rules - the effluent cannot be acutely toxic. Pollutants such as metals are common and present in most waters and wastewaters, and a complete prohibition against their discharge at any concentration would effectively eliminate all discharges. Such a prohibition is not necessary to protect the overall integrity of the receiving stream.

**Comment:** Extended mixing zones are opposed. The rule is contrary to the Clean Water Act goal of eliminating all discharges to surface waters. We should be moving towards a goal of no mixing zones at all. If there are mixing zones, they should be limited to 10% of the width of the stream and 100 feet.

**Response:** The elimination of mixing zones would be in most cases extremely expensive, with little overall improvement of water quality. The Department believes that the proposed rule and the existing mixing zone rule provide protection of the overall biological integrity of all streams. The goal of eliminating all discharges may be a worthy one. However, nonpoint source pollution such as urban, agricultural, and forestry runoff are much more significant contributors for some pollutants than the point source discharges regulated under this rule, and it does not seem a reasonable balance to further restrict point source discharges.

**Comment:** The small chance of an environmental benefit from the proposed rule does not justify the significant expense to the Department in terms of staff resources to implement the rule.

**Response:** The fiscal impact statement included with the rule package may not have been clear enough that most of the staff time listed would be required regardless of whether the new rule is implemented or not. That is, most of the staff time would be needed to work with dischargers to get them out of smaller receiving streams, and additional review time for applications in light of the receiving stream characteristics. There would be some

additional time required for those applicants trying to qualify by showing an overall environmental benefit. The Department intends to “re-coup” some or all of the additional time through either cost recovery under the new receipts authority law, or additional permit fees for applicants wishing to pursue an alternate mixing zone by showing an overall environmental benefit.

**Comment:** The key consideration in setting a mixing zone is protecting the overall integrity of the waterbody.

**Response:** The Department agrees. The EPA guidance for mixing zones includes three concepts: 1) the mixing zone does not impair the overall integrity of the water body as a whole; 2) no lethality to organisms passing through; and 3) no significant health risks. These concepts were included in parts of the draft rule. The Department is proposing to revise and make all three concepts apply to all alternate mixing zones.

**Comment:** Acute toxicity should be allowed if the discharge does not cause environmental or harm to human health.

**Response:** The draft rule prohibited acute toxicity for insignificant discharges, and it was implied or likely that a discharge would not qualify for an overall environmental benefit if the discharge was acutely toxic. In response to other comments received and upon further review, the Department now believes that the prohibition of acute toxicity should apply to all discharges qualifying for an alternate mixing zone. The Department is therefore proposing to revise the rule accordingly.

For discharges to larger streams, acute toxicity can be allowed on a case by case basis, by assigning a zone of immediate dilution (typically 10% of the size of the entire mixing zone). ZID's typically are very small, 10 to 25 feet, extend only a small distance across the receiving stream, and any mobile aquatic species are expected to either avoid the ZID or get through it very quickly with little effect. In either case, the expectation would be that the ZID would not be acutely toxic to organisms in the receiving stream, although the discharge would be acutely toxic as measured by a controlled bioassay test (test organisms are held in solutions containing the effluent for 48 hours).

For discharges to smaller streams, where an alternate mixing zone is assigned, the mixing zone is likely to extend across the width of the receiving stream and for some long distance downstream. Mobile aquatic organisms could not get around the mixing zone, and would likely take some hours to pass through it. If the discharge were allowed to be acutely toxic, then there would likely be some lethality to the organisms present in the mixing zone.

**Comment:** If the Department wishes to either change the designated beneficial uses, or change the instream water quality standards, then there are specified procedures for doing this including use attainability analyses and changing rules relating to instream water quality standards.

**Response:** The Department agrees that if we were proposing to change the beneficial uses or instream water quality standards, that the proposed mixing zone rule would not be an appropriate mechanism. However, the Department is not proposing to do either of these. Mixing zones are basically an exception to the requirement that designated beneficial uses be protected and water quality standards attained. In a mixing zone, by definition some water quality standards are exceeded. It is assumed that this means there may also be some impact on beneficial uses. The Department believes that the proposed mixing zone rule as amended is fully consistent with EPA's guidance on mixing zones.

**Comment:** Alternate mixing zones should only be assigned to permittees with a responsible compliance record.

**Response:** The Department disagrees. Our enforcement program is sufficient to bring all dischargers into compliance, and any disagreements that may have occurred over time should not be a consideration.

**Comment:** Pollutants that bioaccumulate should not be permitted in discharges to alternate mixing zones.

**Response:** The Department agrees in concept, except that an absolute ban on any level of a pollutant does not seem reasonable. There is no national agreement on sediment reference levels, and predicting future sediment levels is both extremely difficult and likely not very accurate. The Department is proposing to add language that bans substances that bioaccumulate to levels that adversely affect human health or aquatic life or other beneficial uses.

**Comment:** There should be an opportunity for public comment if an alternate mixing zone is proposed.

**Response:** All mixing zones are specified in NPDES permits, and the NPDES permit program has mandatory public participation including soliciting written comments and public hearings if requested by 10 or more people.

**Comment:** It would be helpful if the Department defined the minimum stream flows necessary for all discharges to qualify for a standard mixing zone.

**Response:** We agree it would be useful to do this, however it is not possible to do so. The determining factors as to how big a mixing zone is required for dilution purposes are: volume of the effluent relative to the volume of the receiving stream; and concentration of each pollutant in the effluent relative to the instream water quality standard. No matter the size of the receiving stream, there will be some discharges either because of volume or pollutant characteristics that will not be able to have a standard mixing zone. For example, some pulp mills discharging to the Willamette River could not qualify for a

standard mixing zone for dioxin, and were required to institute control measures to reduce dioxin.

**Comment:** Those permittees with an extended mixing zone should pay substantial fees to the Department, so that the Department can do in-depth studies as to the impacts of the discharge.

**Response:** The Department will consider this comment the next time that a revision of the permit and compliance fee schedule is undertaken.

**Comment:** If a permittee gets two Notices of Noncompliance in a two year period, the extended mixing zone should be revoked.

**Response:** The Department routinely issues NON's for a variety of permit violations, including minor reporting violations. If there are violations resulting in significant water quality impacts, the Department both takes escalating enforcement actions and requires corrections which could include relocating or stopping a discharge. The Department believes that the existing enforcement rules are sufficient for correcting unacceptable discharges, and that revoking an extended mixing zone is not warranted for minor permit violations.

**Comment:** The U.S. Fish and Wildlife and Oregon Department of Fish and Wildlife should have veto power over any proposed extended mixing zone.

**Response:** Neither federal nor state rules allow another entity other than EPA to have veto power over NPDES permit actions. However, the Oregon Department of Fish and Wildlife (ODFW) is on the mailing list for all proposed permit actions, and the Department takes seriously their comments. If there should be concerns by ODFW about a single permit action or a series of permit actions, there are many avenues for requiring further discussion resolution of issues between the agencies.

**Comment:** The proposed rule basically states that rules relating to water quality limited streams must all be met too, and that the proposed mixing zone rule should not be interpreted as allowing discharges to water quality limited (WQL) streams that would not otherwise be allowed. The comment is, this requirement should be re-located to Section D of the rule, and should be limited to waste load allocations only.

**Response:** The Department agrees with the re-location suggestion. The reference to WQL streams should not be limited to waste load allocations, however. There are a number of standards that have specific requirements for water quality limited streams (for example the temperature standard which requires best management practices for existing point source discharges on WQL streams). All these various requirements for WQL streams should be referenced.

**Comment:** Extended mixing zones should not be allowed in streams that are WQL.

**Response:** It is likely that most small streams, particularly intermittent streams, violate at least the temperature standard during some portions of the year, whether or not they have been officially designated as WQL. Municipal stormwater drainage systems may also violate for some other pollutant parameters, as a result of the pollutants commonly found in urban runoff. If this suggestion were followed, very few extended mixing zones would likely be allowed. The Department believes that the proposed rule will allow a number of discharges with little or no impact on the beneficial uses of the receiving streams, and that the additional restriction requested is not warranted.

The one exception would be if the discharge includes the pollutant for which the stream is WQL. In that case, the other protective rules relating to discharges to WQL streams will apply.

**Comment:** Extended mixing zones should only be allowed on a site specific basis, not on a general basis.

**Response:** The only general categories of allowed discharges are the filter backwash and groundwater cleanup discharges. These are very minor discharges. For all other dischargers requesting an extended mixing zone, they will be evaluated on a case by case basis, depending on the characteristics of the effluent and receiving stream, as required in this rule.

**Comment:** In the fiscal impact statement which was part of the rule package, it was estimated that approximately 3300 hours/year of Department staff time would be required. The Department should clarify that most of these hours of effort are required to implement the existing rule, under the new stricter interpretation (standard mixing zones must be in the immediate area of the outfall). The commenter believes that the proposed rule may actually reduce staff time required, since most of staff time listed is to work with dischargers to find other non-discharge alternatives. That is, it will take less time to allow an extended mixing zone in a constructed water course than it would take for the Department to get the discharger out of the stream.

**Response:** The Department agrees. Staff anticipates a significant amount of time for those few facilities attempting to show an overall environmental benefit, however there are not likely to be very many of these. For extended mixing zones approved because of the insignificance of the discharge or the receiving stream is a constructed water course, the staff time on average should be less than if the facility had to eliminate the discharge.

**Comment:** The Department should not include language referring to and interpreting the standard mixing zone rule [“...mixing zone may be allowed ...extends beyond the immediate area around a discharge point, or that extends across a stream width.”]. The commenter prefers a simple reference to the standard mixing zone rule by rule number.

**Response:** The term “immediate area around a discharge point” is identical in meaning to the language in standard mixing zone rule, specifically “immediate area of a wastewater discharge”. It is true that the standard mixing zone rule could potentially allow some mixing zones across a stream width, but in practice very few can be allowed as they usually block the passage of aquatic life which is not allowed. Regardless of whether the language is precisely what is in the standard mixing zone rule, the passage cited is not strictly a reference to the other rule. The proposed rule does not say “The existing mixing zone rule requires ....”. Instead, the proposed rule will allow stream wide mixing zones and mixing zones that extend a distance from the point of discharge.

In drafting rules, the Department strives to be legally accurate and precise, but also to be understandable to those who use the rules. Most of the Department’s staff and permittees are not attorneys, and have to deal with a large volume of rules and statutes. The language referring to longer mixing zones and across streams was put in at the request of Department staff to clarify what the rule is about.

**Comment:** For extended mixing zones, the mixing zone will extend along a stream until there is enough dilution to provide for good mixing. The mixing zone then would extend into the area of good mixing, which will typically be the next large stream. The commenter objects to the requirement that the mixing zone in the larger stream meet the standard mixing zone requirements (not impede fish passage, and so on).

**Response:** This portion of the rule was included to provide protection of beneficial uses in the larger stream. Although it may be acceptable to have “bank to bank” discharges in a storm sewer, which are often likely waters of the US, it is generally not desirable in streams with abundant aquatic life. Discharges to larger streams should be treated well enough that the standard mixing zone requirements can be met.

**Comment:** Numerous wording suggestions and requests for clarification were offered by a number of commenters.

**Response:** All suggestions were considered, and changes made where deemed appropriate.

### **Comments Relating to Section (A), Overall Environmental Benefit**

**Comment:** This section should not be restricted to existing facilities only. Proposed new dischargers should be allowed to try for an extended mixing zone under this provision. If a new facility can show the effluent will benefit the stream, why not allow it?

**Response:** The Department agrees, and will be proposing to the Commission that the proposed rule be revised to allow new dischargers under this section.

**Comment:** Existing dischargers to smaller streams, that are currently able to discharge with a standard mixing zone, should not be prevented from expanding production that



might require an alternate mixing zone. If the applicant can demonstrate an overall environmental benefit with the increased discharge, why shouldn't they be allowed to get an alternate mixing zone?

**Response:** Oregon rules establish as a policy that expanding facilities should increase treatment efficiencies, so as to be able to stay within existing pollutant waste loads. The Department believes that it is reasonable to expect expanding facilities to improve treatment efficiencies, so as to retain the same mixing zone configuration. However, the Department recognizes that there may be some existing discharges that have standard mixing zones included in the NPDES permits, that do not correspond with the actual discharge. The Department is proposing to modify the rule language to make it clear that existing discharges that are not able to meet water quality standards within the area of a standard mixing zone at the time of this rule being adopted, can qualify for an alternate mixing zone.

**Comment:** This section should be further restricted, to disallow expanding facilities.

**Response:** This would create a significant financial hardship on many facilities. If the expanded facility can demonstrate an overall environmental benefit, staff believe it should be allowed to expand.

**Comment:** Relatively few discharges will be able to show an overall environmental benefit. However, many should be able to demonstrate that there is no impact on beneficial uses. The rule should be changed to allow an extended mixing zone if the discharge causes no harm.

**Response:** It is likely that few dischargers will be able to demonstrate an environmental benefit. If a discharger can demonstrate no impact on beneficial uses, then it should not be difficult to provide mitigation measures to tip the balance to showing a benefit.

**Comment:** The rule does not specify that cumulative impacts be considered, and they should be.

**Response:** The proposed rule does require that the stream water quality be evaluated, including the impact of the discharge on the entire proposed mixing zone. Any other discharges located within the proposed mixing zone would presumably be part of the study. In practical terms, there are usually not multiple point source discharges to small streams.

**Comment:** All aquatic species should be protected, not just vertebrates as is implied by the study requirements. In addition, any threatened or endangered species that could be potentially affected should be identified and the impact of the proposed discharge evaluated.

**Response:** The Department agrees that all aquatic species should be protected. Our intent in the rule was to limit the study requirements to vertebrates, since they should give a good feel for the overall populations of the stream. We have added macroinvertebrates to the populations studied, to give additional information. We have also added threatened and endangered species in the list of study requirements.

**Comment:** The species to be considered as part of the environmental benefit analysis should be extended beyond just native aquatic organisms. Native riparian species, and native, threatened, or endangered species [presumably terrestrial and amphibious] should be considered.

**Response:** It is true that water quality is to be protected to provide for all beneficial uses, which can include non-aquatic wildlife and riparian vegetation. However, the Clean Water Act does give preference to protecting in-stream uses. The Department does not agree that the other species listed should be considered.

**Comment:** The Department does not have the legal authority to trade water quality benefits. That is, the Department cannot approve a discharge that causes an unacceptable level of water quality impact, just because the discharger has improved water quality or habitat somewhere else.

**Response:** Mixing zones are allowed under federal and state rules, and by their nature do allow water quality standards to be exceeded at some points in a stream. The over-riding concern is whether the overall biological integrity of the stream is protected. The proposed rule requires that an overall environmental benefit should be demonstrated to exist, and the Department believes that this is consistent both with the Clean Water Act and state rules.

**Comment:** Excessive withdrawals of water cause significant water quality problems. This rule should focus more closely on flow quantity issues. Specifically, only flow augmentation should be allowed as a mitigation measure, and flow augmentation should be mandatory unless it is demonstrated as impossible. The Department should take steps to insure that effluent flows are not taken out downstream.

**Response:** The Department agrees that over-withdrawal does cause significant detrimental impacts on water quality for some Oregon streams. However, there are other methods for improving water quality and/or habitat that can be significantly helpful, and these should be allowed. It does not seem reasonable to require water purchases if they are not needed to show an overall benefit. Regarding restricting downstream withdrawals, the Department does not have the legal authority to do that.

**Comment:** The study requirements listed should not be waived under any circumstances. Department staff will either choose to circumvent the intent of the rule by waiving study requirements, or will be pressured and forced to do so by dischargers. All the listed study requirements are necessary to provide the information needed for an informed decision. In

fact, there may be additional types of studies (such as sediment and fish tissue) that should be mandatory.

**Response:** When drafting rules, the Department staff attempt to identify all possible combinations of circumstances that may occur. In a complex rule such as this, and with the extensive studies listed, the Department believes that it is prudent to allow a waiver of some study requirements for unusual circumstances. The rule also requires that the Department describe the basis for any such study waiver, and include it in the permit evaluation report (a public document). If the commenters see what they perceive to be abuses by the Department, there are numerous avenues to re-open this issue.

**Comment:** The Department should not be listed as the decision maker as to whether an overall environmental benefit has been demonstrated.

**Response:** The Department disagrees. The Department has the day to day responsibility in overseeing Oregon's water quality, including the permit program. A decision to allow an extended mixing zone will be part of the permit review process, and is appropriately the responsibility of the Department.

**Comment:** The Department should only require additional studies if it is reasonable to do so.

**Response:** The Department always tries to be reasonable, and it is not necessary to put it into rule form.

**Comment:** If there is no similar stream nearby, then there should be no requirement to look at the possible impact on aquatic life in similar streams.

**Response:** The Department disagrees. The nearest similar, unaffected stream should be used, even if it is some distance away. If no stream at all is used for comparison, how could the native aquatic species and habitat be determined, and the impact on aquatic life be determined?

**Comment:** The entire section of the rule is objected to. Removing effluent from a stream will never harm it, dischargers cannot be relied upon to reduce pollutants, the rule has loopholes, and some portions of the rule are too vague.

**Response:** The Department disagrees. The rule has a number of very specific requirements, although it does allow some flexibility for differing circumstances. NPDES permits are enforceable documents with specific conditions, and the Department believes the rule as drafted will also achieve the intended results of only allowing discharges if an overall environmental benefit is achieved.

**Comment:** Mitigation measures should be developed in consultation with state and federal resource agencies.

**Response:** The Department does consult with other resource agencies through our nonpoint source program and watershed council efforts. However, our preference is to not include this in the rule. Rather, the Department will add the resource agencies to our mailing lists for NPDES permits. If staff from other agencies indicate interest, we would be happy to include them in the review process.

**Comment:** Mitigation measures should be evaluated for effectiveness, and this requirement should be incorporated into the NPDES permit.

**Response:** The Department agrees, and has added this.

### **Comments Relating to Section (B), Discharges to Constructed Water Courses**

**Comment:** The loss of wetlands and degradation/channelization of intermittent streams has been severe in Oregon. This section of the rule should not apply to areas that were historically wetlands. In addition, the rule should be changed to NOT encourage the creation of more constructed water courses.

**Response:** There is no question that there has been significant alteration of waterways, particularly wetlands in Oregon. For urban areas in particular, many streams and drainage areas have been channelized or the flows diverted into culverts and storm sewers. Restricting discharges to these "streams" because they may have been a wetland fifty years ago does not seem reasonable or effective.

The Department does not believe the proposed rule would encourage the creation of constructed water courses. Oregon has in place rules to regulate alterations of streams, under the Division of State Lands. Any destruction of wetlands, for example, is regulated by permit and the construction of more/better mitigation wetlands are required for mitigation.

**Comment:** The Clean Water Act does not distinguish between constructed and natural waterways, and the Department is prohibited from this also.

**Response:** It is true that the Clean Water Act does not distinguish between constructed and natural waterways. However, mixing zones can be allowed which suspend water quality standards, provided the overall integrity of the water way as a whole is protected. The Department believes the proposed rule is consistent with this guidance.

**Comment:** Even constructed water courses are deserving of protection.

**Response:** The Department agrees, depending on the water course in question. Some channelized streams may contain significant numbers and diversity of aquatic species, and those would not be able to qualify for the extended mixing zone under this section. Storm sewers, on the other hand, could have extended mixing zones under the proposed rule.

**Comment:** This part of the rule does not protect out of stream uses such as waterfowl and other wildlife, and does not protect against hazards to public health.

**Response:** Section (D) of the proposed rule includes requirements that apply to all alternate mixing zones, including those in constructed waterways. One the requirements is that the discharge does not pose “an unreasonable hazard to human health or the environment.” This language is broad enough to protect both out of stream uses and public health.

**Comment:** Discharge of noncontact cooling water to constructed water courses should be encouraged, as the water course provides a cheap and efficient cooling mechanism prior to the discharge reaching a natural stream. Noncontact cooling water should be included in the types of water listed as a partial definition of a constructed water course.

**Response:** Noncontact cooling water is a type of “wastewater”, and therefore is already included in the rule. Regarding the use of the water course as a treatment device, these water courses still should be protected, and the rule as drafted reflects this.

**Comment:** The requirement for fish screens should be removed or modified, since there is no technology available to screen all sizes of fish.

**Response:** Fish screens are available to screen down to salmonid fry size, and would comply with the requirements in the proposed rule.

**Comment:** Irrigation canals or ditches are used (legally or not) by some residents for domestic purposes during hot summer months when residential wells may dry up. Consideration should be given to requiring a higher level of treatment/disinfection for treated sewage discharges.

**Response:** There is no question that discharges of even highly treated effluent could be a hazard if used directly for drinking by humans. Disinfection in wastewater treatment plants is not intended to totally sterilize the effluent, and does not do so. However, there are other sources of both pathogens and harmful chemicals that are present in surface waters, including giardia (from warm blooded wildlife such as beavers), cryptosporidium (mostly from cattle), and herbicides and pesticides. Surface waters should never be used as a drinking water supply without treatment. Oregon’s water quality standards protect for drinking water supplies, assuming treatment, but are not set to allow human use without treatment.

### **Comments to Section (C), Relating to Insignificant Discharges**

**Comment:** This section of the rule is opposed. If a discharge violates water quality standards, by definition it is significant.

**Response:** The Department believes that the listed insignificant discharges usually meet all water quality standards, or exceed a standard by a small amount. These types of discharge are expected to have little, if any impact on receiving streams.

**Comment:** The rule specifies only filter backwash and groundwater cleanup discharges as insignificant. There are many other types of discharges that are insignificant, and should be allowed under this section. Also, discharges to smaller receiving streams are almost all insignificant.

**Response:** Staff do not believe that there are other categories of dischargers currently under permit that are insignificant.

**Comment:** The Department should not be allowed to designate additional discharges as insignificant. This is a big loophole that could be used to allow many discharges that are really significant.

**Response:** This portion of the rule has been deleted. If the Department becomes aware of categories of discharges that are insignificant that warrant a rule change, we will initiate new rule making.

**Comment:** These discharges should be limited to conventional pollutants only.

**Response:** Almost all natural waters as well as treated wastewaters include some trace levels of some metals. The proposed restriction would effectively eliminate all discharges in this section. The Department does not agree this is reasonable.

**Comment:** The rule does not address the problem of cumulative small increases in temperature.

**Response:** The Department is proposing to revise this portion of the rule, to limit the types of discharges considered to be insignificant to only filter backwash and groundwater cleanup discharges. There are relatively few filter backwash facilities scattered over the state, and relatively few groundwater cleanup discharges that further are of very short duration. The Department does not expect that there will a cumulative impact from these along any stream reach, because there will not be that many of them.

**Comment:** Filter backwash discharges may not be insignificant, particularly if the discharge does not have the required settling ponds. Pollutants would include turbidity, chlorine, and possibly temperature.

**Response:** It is true that untreated filter backwash water contains significant amounts of solids, and some chlorine from the treated drinking water that is most commonly used to backwash the filters. However, the Department requires that all filter backwash be treated to meet a limit of 0.1 ml/L settleable solids, and that the discharge is to a stream with enough flow to provide a minimum of 30 to 1 dilution of the effluent. A settling basin is

required that has sufficient detention time to settle out almost all of the solids. The Department does not have information about the chlorine levels in effluent from the settling ponds. However it is likely that there will be low levels of chlorine in the settling basin overflow, due to volatilization (evaporation) of the chlorine during the time in the ponds, and combination of the chlorine with the solids which will tie up some of the chlorine. In addition, at least a 30 to 1 dilution is required. The Department has not in the past required chlorine monitoring on the treated backwash water, but chlorine monitoring is required in the general permit just issued for filter backwash. If elevated levels of chlorine are detected, then the Department will re-evaluate either the level of treatment required, or the inclusion of this category of sources in the rule. At this time, however, the Department does expect the discharge of filter backwash to be a very insignificant source of pollutants provided that the terms of the permit are complied with.

## ATTACHMENT E

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State of Oregon  
Department of Environmental Quality

Memorandum

Date: September 3, 1997

To: Environmental Quality Commission

From: Barbara Burton

Subject: Description of Changes to Original Rulemaking, Made in Response to Public Comment

**Proposed change:** Add language in Section D of rule that would prohibit discharges from qualifying for alternate mixing zones, if the discharge would be acutely toxic to organisms passing through the mixing zone.

**Reason for change:** "Acute toxicity" refers to a condition of a wastewater that would result in some die-off of test organisms in a 48 hour standard bioassay test. Fathead minnows, water fleas, and an algae are the three common test aquatic organisms used in freshwater bioassays. Acute toxicity can be allowed in a standard mixing zone in a larger stream, on a case by case basis, in a very small area around the discharge point referred to as a zone of immediate dilution. These small zones are typically 5 to 25 feet in length. Discharges allowed these small zones are still required to achieve all water quality standards, including not being chronically toxic, at the edge of the full mixing zone. The reason that these small zones can be allowed is that: 1) organisms can avoid or swim around the small area; and 2) the organisms pass through the area very quickly, possibly in seconds or minutes, and are unlikely to be affected.

For alternate mixing zones, however, the mixing zone is likely to extend "bank to bank", and may extend for long distances. Organisms would not be able to avoid the effluent, and might be carried in it for hours. U.S. Environmental Protection Agency guidance to states adopting mixing zone rules lists "no lethality to organisms passing through the mixing zone" as one of the key considerations. In order to be consistent with this guidance, the Department is proposing to add a requirement in Section D prohibiting alternate mixing zones for discharges exhibiting acute toxicity.

The rule put out for public comment did prohibit acute toxicity for "insignificant discharges", and it is likely that a discharge with acute toxicity could not qualify as demonstrating an overall environmental benefit. The proposed change makes it clear that "no acute toxicity" applies to all discharges wishing an alternate mixing zone.

The biggest impact of this change will be to discharges to constructed waterways, such as ditches or storm sewers. The argument could be made that it does not make sense to allow acute toxicity



to a “live” stream such as the Rogue River, but not allow acute toxicity to a storm sewer. However, most ditches and storm sewers are considered waters of the state and as such we are legally required to protect for the beneficial uses listed for the basin. This protection includes prohibiting acute toxicity where immediate and significant mixing cannot occur.

**Proposed change:** Rule language prohibiting hazard to the environment or public health has been revised, to be more consistent with EPA guidance.

**Discussion:** This is a minor wording change, and not substantive.

**Proposed change:** Discharges with pollutants that bioaccumulate to unacceptable levels are not allowed to qualify for alternate mixing zones.

**Discussion:** The rule language added is a paraphrase of existing rule language included in the water quality narrative standard for toxic pollutants, and is added here for clarity.

**Proposed change:** Only filter backwash and groundwater cleanup discharges (covered by general permits) are to be considered as “insignificant discharges”. Under the proposed rule, “insignificant discharges” can qualify for alternate mixing zones without the lengthy studies required in other sections of the proposed rule.

**Discussion:** The original draft rule also allowed Department staff to designate additional discharges as insignificant, which was objected to as too vague and subject to abuse. The Department is proposing to drop the discretionary part of the rule. There are no other categories of discharges now thought to qualify as “insignificant”. If there are other categories determined in the future to warrant designation as insignificant, then the Department will initiate further rule making.

**Proposed change:** The original draft rule required that vertebrates only be studied as part of the demonstration of “overall environmental benefit”. The Department is proposing to add macroinvertebrates (mostly aquatic insects such as stoneflies), and threatened or endangered species present in the area of the receiving stream.

**Discussion:** Staff agrees that these changes would give a better picture of potential impacts of a proposed discharge.

**Proposed change:** Under the “overall environmental benefit” portion of the rule, some NPDES permit conditions were specified for those discharges qualifying for an alternate mixing zone. The Department is proposing to add a requirement that mitigation measures, if any, are to be evaluated for effectiveness.

**Discussion:** Staff agrees that this is important.

**Proposed change:** Under the “overall environmental benefit” portion of the rule, new discharges as well as existing discharges would be allowed to qualify.

**Discussion:** Staff agree that new discharges should be allowed to qualify too. This portion of the rule is particularly important to Eastern Oregon, where there may not be an “adequately sized” receiving stream for many miles. If a new discharger can demonstrate an overall environmental benefit, then they should be allowed to qualify for an alternate mixing zone.

**Proposed change:** Several minor changes relating to clarification or re-arrangement of sections of the rule were made.

**Discussion:** None of these changes were substantive.

## **ATTACHMENT F**

### **ADVISORY COMMITTEE MEMBERS**

#### **Technical Advisory Subcommittee Members**

Bill Gaffi, Unified Sewerage Agency

Jim Whitty, Association of Oregon Industries

Bob Gilbert, James River Corporation

Nina Bell, Northwest Environmental Advocates

#### **Attended many meetings, served as alternates or otherwise active in process:**

Craig Johnston, Chair of Triennial Standards Review Policy Advisory Committee

Michael Campbell, Stoel Rives, chair of AOI subcommittee on mixing zone rule

Steve Carter, Pulp and Paper Industry

James Ollerenshaw, City of Eugene

# ATTACHMENT G

## State of Oregon DEPARTMENT OF ENVIRONMENTAL QUALITY

### Rulemaking Proposal for Modification of the Mixing Zone Rule for Point Source Discharges

#### Rule Implementation Plan

#### **Summary of the Proposed Rule**

The proposed rule specifies under what conditions a mixing zone can be allowed, particularly to smaller receiving streams. Longer or full stream width mixing zones may be allowed if the discharge and mitigation measures create an overall environmental benefit; or if the discharge is insignificant; or if the discharge is to a constructed water way; and provided that other conditions are met.

#### **Proposed Effective Date of the Rule**

The rule modification will become effective upon filing with the Secretary of State, expected in early October, 1997.

#### **Proposal for Notification of Affected Persons**

All persons testifying during the public comment period will be informed of the Commission's action. NPDES permit holders will be notified upon permit renewal.

#### **Proposed Implementing Actions**

The new rule will apply to NPDES permit holders. It will be implemented as new permits are applied for, or renewal applications filed. The following guidance documents or other documents will need to be prepared:

1. By 12/1/97 - Supplemental permit application to include additional information on the receiving stream, and guidance to applicants on how to locate and provide the required information. This will be sent out with permit application packets.
2. By 3/1/98 - Guidance to applicants relating to study requirements for qualifying for an alternate mixing zone based on the discharge and mitigation measures providing an overall

environmental benefit. This will be made available to applicants wishing to qualify for a mixing zone under this provision of the new rule.

3. By 3/1/98 - New permit language needs to be developed.
4. By 3/1/98 - Guidance for both staff and applicants as to how to determine estimated stream flows where there are no flow monitoring stations.

**Proposed Training/Assistance Actions**

1. By 6/1/98 - Guidance and training needs to be provided as to what constitutes a constructed water course.
2. By 6/1/98 - Guidance, a checklist and training needs to be provided to evaluate study results from applicants trying to demonstrate that the discharge and any proposed mitigation measures provide an overall environmental benefit to the stream.
3. By 6/1/98 - Guidance and training from either the DEQ lab or ODFW as to likely impacts on aquatic life from discharges and various pollutant levels.
4. By 6/1/98 - Training from the Water Resources Department or knowledgeable staff relating to estimating flows where no flow gauge information is available.

State of Oregon  
Department of Environmental Quality

Memorandum

Date: September 24, 1997

**To:** Environmental Quality Commission

**From:** Langdon Marsh, Director

**Subject:** Agenda Item D, Petition by JELD-WEN, Inc. for Declaratory Ruling Concerning Availability of Sewer as Defined in OAR 340-71-160(5)(f), EQC Meeting: October 3, 1997

At the Commission's August 22, 1997 meeting, the Commission decided to accept a petition for declaratory ruling interpreting OAR 340-71-160(5)(f), as requested by JELD-WEN, Inc. At that time, the Commission allowed interested parties until September 12, 1997 to petition for intervention in the matter. The Commission agreed to rule on any petitions for intervention at this meeting. Notice was sent to potentially affected and interested parties on August 26, 1997 and no petitions for intervention were received for interested or affected parties.

Also at the August meeting, the Commission determined that they wished a Presiding Officer to conduct the hearing on the matter and to present the Commission with a proposed order. The Department has contracted with Lawrence Smith, an Administrative Law Judge with the Employment Department to conduct the hearing. The Commission will, most likely, be making a final ruling at the Commission meeting scheduled for January 8<sup>th</sup> and 9<sup>th</sup>, 1998.

**Attachments**

Letter to Jay Waldron, dated August 26, 1997

Report Prepared By: Susan Greco  
Phone: (503) 229-5213

August 26, 1997

Jay T. Waldron  
Schwabe, Williamson & Wyatt  
PacWest Center, Suite 1600  
1211 S.W. 5<sup>th</sup> Avenue  
Portland OR 97204-3795

RE: Petition for Declaratory Ruling regarding OAR 340-71-160(5)(f)

Dear Mr. Waldron:

This letter is to confirm that the Environmental Quality Commission has decided to issue a declaratory ruling interpreting OAR 340-71-160(5)(f), as requested by Jeld-Wen Inc. Since the petition did not list any persons or entities that would be interested in the requested ruling, the Department has determined the following persons to be interested parties:

- (1) Janet Gillaspie  
Association of Clean Water Agencies  
25 N.E. 11<sup>th</sup> Avenue #200  
Portland OR 97232
- (2) Gordon Fultz  
Association of Oregon Counties  
P.O. Box 12729  
Salem OR 97309-0729
- (3) Joni T. Low  
League of Oregon Cities  
1201 Court Street N.E.  
P.O. Box 928  
Salem OR 97308
- (4) Kent Colahan  
South Suburban Sanitary District  
2201 Laverne  
Klamath Falls OR 97603



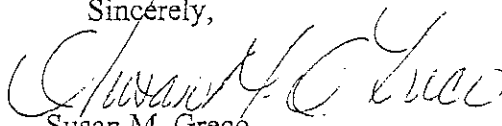
- (5) James Keller  
City of Klamath Falls  
500 Klamath Avenue  
Klamath Falls OR 97601
- (6) Jeff Webber  
DLCD  
1175 Court Street N.E.  
Salem OR 97310
- (7) Harry Richmond  
1000 Friends of Oregon  
300 Willamette Building  
534 S.W. 3<sup>rd</sup> Avenue  
Portland OR 97204

Any of the parties above may petition for intervention in this matter. Petitions will be accepted by the Environmental Quality Commission until September 12, 1997. Petitions should be served on: Environmental Quality Commission, c/o Susan Greco, 811 S.W. 6<sup>th</sup> Avenue, Portland, Oregon, 97204. Copies should also be served on each of the parties listed above. A petition for intervention must be in writing and contain the items referenced in OAR 137-02-025, a copy of which is attached.

The Environmental Quality Commission will be ruling on any petitions for intervention at its October 3<sup>rd</sup>, 1997 meeting which will take place in La Grande, Oregon. The Commission will also be determining other procedural issues at that meeting. Once the exact location and time of the meeting is determined, I will let each of you know.

If you should have any questions or need further assistance in the matter, please feel free to call me at (503) 229-5213.

Sincerely,

  
Susan M. Greco  
Rules Coordinator

Enclosures (Petition from Jeld-Wen, Inc.; OAR Chapter 340, Division 11; OAR Chapter 137, Division 02)

cc: Dick Nichols, ER  
Walt West, ER  
Larry Knudsen, DOJ  
Michael Huston, DOJ



DIVISION 2

**MODEL RULES OF PROCEDURE  
APPLICABLE TO PROCEEDINGS FOR  
AGENCY DECLARATORY RULINGS**

**Institution of Proceedings for Declaratory Rulings**

137-02-000 [1AG 14, f. & ef. 10-22-75;

Repealed by JD 2-1986,

f. & ef. 1-27-86]

[ED. NOTE: OAR 137-02-010 to 137-02-060 were adopted by the Attorney General as required by ORS 183.410. Agencies must apply these rules without further adoption or amendment.]

**Petition for Declaratory Ruling**

137-02-010 The petition to initiate proceedings for declaratory rulings shall contain:

- (1) The rule or statute that may apply to the person, property, or state of facts;
- (2) A detailed statement of the relevant facts; including sufficient facts to show petitioner's interest;
- (3) All propositions of law or contentions asserted by petitioner;
- (4) The questions presented;
- (5) The specific relief requested; and
- (6) The name and address of petitioner and of any other person known by petitioner to be interested in the requested declaratory ruling.

Stat. Auth.: ORS Ch. 183

Stats. Implemented: ORS 183.410

Hist.: 1AG 14, f. & ef. 10-22-75; JD 2-1986, f. & ef. 1-27-86; JD 5-1989, f. 10-6-89, cert. ef. 10-15-89

**Service of Declaratory Ruling Petition**

137-02-020 (1) The petition shall be deemed filed when received by the agency.

(2) Within 60 days after the petition is filed the agency shall notify the petitioner in writing whether it will issue a ruling. If the agency decides to issue a ruling, it shall serve all persons named in the petition by mailing:

- (a) A copy of the petition together with a copy of the agency's rules of practice; and
- (b) Notice of any proceeding including the hearing at which the petition will be considered. (See OAR 137-02-030 for contents of notice.)

(3) Notwithstanding section (2) of this rule, the agency may decide at any time that it will not issue a declaratory ruling in any specific instance. The agency shall notify the petitioner in writing when the agency decides not to issue a declaratory ruling.

Stat. Auth.: ORS Ch. 183

Stats. Implemented: ORS 183.410

Hist.: 1AG 14, f. & ef. 10-22-75; 1AG 17, f. & ef. 11-25-77; 1AG 1-1981, f. & ef. 11-17-81; JD 2-1986, f. & ef. 1-27-86; JD 5-1989, f. 10-6-89, cert. ef. 10-15-89

**Intervention in Declaratory Rulings**

137-02-025 (1) Any person or entity may petition the agency for permission to participate in the

proceeding as a party.

(2) The petition for intervention shall be in writing and shall contain:

(a) The rule or statute that may apply to the person, property, or state of facts;

(b) A statement of facts sufficient to show the intervenor's interest;

(c) A statement that the intervenor accepts the petitioner's statement of facts for purposes of the declaratory ruling;

(d) All propositions of law or contentions asserted by the intervenor;

(e) A statement that the intervenor accepts the petitioner's statement of the questions presented or a statement of the questions presented by the intervenor;

(f) A statement of the specific relief requested.

(3) The agency may, in its discretion, invite any person or entity to file a petition for intervention.

(4) The agency, in its discretion, may grant or deny any petition for intervention. If a petition for intervention is granted, the status of the intervenor(s) shall be the same as that of an original petitioner, i.e. the declaratory ruling, if any, issued by the agency shall be binding between the intervenor and the agency on the facts stated in the petition, subject to review as provided in ORS 183.410

(5) The decision to grant or deny a petition for intervention shall be in writing and shall be served on all parties.

Stat. Auth.: ORS Ch. 183.410

Stats. Implemented: ORS 183.410

Hist.: JD 5-1989, f. 10-5-89, cert. ef. 10-15-89; JD 6-1995, f. 8-25-95, cert. ef. 9-9-95

### **Notice of Declaratory Ruling Hearing**

**137-02-030** The notice of hearing for a declaratory ruling shall:

(1) Be accompanied by a copy of the petition requesting the declaratory ruling and by a copy of any petition for intervention if copies of these petitions have not previously been served on the party;

(2) Set forth the time and place of the proceeding; and

(3) Identify the presiding officer.

Stat. Auth.: ORS Ch. 183

Stats. Implemented: ORS 183.410

Hist.: 1AG 14, f. & ef. 10-22-75; 1AG 1-1981, f. & ef. 11-17-81; JD 2-1986, f. & ef. 1-27-86; JD 5-1989, f. 10-6-89, cert. ef. 10-15-89

### **Declaratory Ruling Procedure**

**137-02-040** (1) The proceeding shall be conducted by and shall be under the control of the presiding officer. The presiding officer may be the chief administrative officer of the agency, a member of its governing body or any other person designated by the agency.

(2) No testimony or other evidence shall be accepted at the hearing. The petition will be decided on the facts stated in the petition, except that the presiding officer may agree to accept, for consideration by the agency, a statement of alternative facts if such a statement has been stipulated to in writing by all parties to the proceeding, including any intervening parties.

(3) The parties and agency staff shall have the right to present oral argument. The presiding officer may impose reasonable time limits on the time allowed for oral argument. The parties and agency staff may file briefs in support of their respective positions. The presiding officer shall fix the time and order of filing briefs and may direct that the briefs be submitted prior to oral argument. The presiding officer may permit the filing of memoranda following the hearing.

(4) The proceeding may be conducted in person or by telephone.

(5) As used in this rule, "telephone" means any two-way electronic communication device.

Stat. Auth.: ORS 183.410

Stats. Implemented: ORS ORS 183.410

Hist.: IAG 14, f. & ef. 10-22-75; IAG 1-1981, f. & ef. 11-17-81; JD 2-1986, f. & ef. 1-27-86; JD 5-1989, f. 10-6-89, cert. ef. 10-15-89; JD 6-1993, f. 11-1-93, cert. ef. 11-4-93; JD 6-1995, f. 8-25-95, cert. ef. 9-9-95

### **Presiding Officer's Proposed Declaratory Ruling**

**137-02-050** (1) Except when the presiding officer is the decision maker, the presiding officer shall prepare a proposed declaratory ruling in accordance with OAR 137-02-060 for consideration by the decision maker.

(2) When a proposed declaratory ruling is considered by the decision maker, the parties and agency staff shall have the right to present oral argument to the decision maker.

Stat. Auth.: ORS Ch. 183

Stats. Implemented: ORS 183.410

Hist.: IAG 14, f. & ef. 10-22-75; JD 2-1986, f. & ef. 1-27-86; JD 5-1989, f. 10-6-89, cert. ef. 10-15-89

### **Issuance of Declaratory Ruling**

**137-02-060** (1) The agency shall issue its declaratory ruling within 60 days of the close of the record.

(2) The ruling shall be in writing and shall include:

(a) The facts upon which the ruling is based;

(b) The statute or rule in issue;

(c) The agency's conclusion as to the applicability of the statute or rule to those facts;

(d) The agency's conclusion as to the legal effect or result of applying the statute or rule to those facts;

(e) The reasons relied upon by the agency to support its conclusions;

(f) A statement that under ORS 183.480 the parties may obtain judicial review by filing a petition with the Court of Appeals within 60 days from the date the declaratory ruling is served.

(3) The ruling shall be served by mailing a copy to the parties.

Stat. Auth.: ORS Ch. 183

Stats. Implemented: ORS 183.410

Hist.: IAG 14, f. & ef. 10-22-75; IAG 1-1981, f. & ef. 11-17-81; JD 2-1986, f. & ef. 1-27-86; JD 5-1989, f. 10-6-89, cert. ef. 10-15-89

### **Effect of Agency Ruling**

**137-02-070** [IAG 14, f. & ef. 11-22-75;

Repealed by JD 2-1986,

f. & ef. 1-27-86]

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BEFORE THE ENVIRONMENTAL QUALITY COMMISSION  
FOR THE STATE OF OREGON

In re JELD-WEN, Inc.,  
Petitioner. )  
No. \_\_\_\_\_ )  
PETITION FOR A DECLARATORY  
RULING )

JELD-WEN, Inc., through its attorneys Schwabe, Williamson & Wyatt petitions the Environmental Quality Commission for a declaratory ruling pursuant to OAR Chapter 137, Division 2. In support of its petition, JELD-WEN relies on the following statement of issues, statement of facts, legal argument and other information required under OAR 137-02-010.

**APPLICABLE RULE**

The issue in this case is an interpretation of OAR 340-71-160(5)(f). DEQ claims this regulation requires JELD-WEN to abandon its existing method of sewage disposal [an on-site sewage disposal system (a drainfield)]. DEQ also claims that the regulation requires connection to the City of Klamath Falls' sanitary sewer system, even though the City of Klamath Falls requires annexation of the JELD-WEN property by the City before it will allow a connection. JELD-WEN's property is located in Klamath

1 County. The City stated that it must annex JELD-WEN's property before JELD-WEN can  
2 connect to the City sewer system. Despite these physical and legal impediments, DEQ has  
3 determined that the City of Klamath Falls' sewer is "physically available" and "legally  
4 available" as those terms are defined in the regulation.

5 In part, the applicable regulations state that no person shall cause or allow  
6 construction, alteration, or repair of an on-site sewerage disposal system, without first  
7 applying for and obtaining a permit. OAR 340-71-160(1). Under the regulations, DEQ  
8 "shall" deny the permit if "a sewerage system which can serve the proposed sewage flow is  
9 both legally and physically available." OAR 340-71-160(5)(f). A sewerage system shall be  
10 deemed legally available if the system is not subject to a DEQ connection permit  
11 moratorium, and "the sewerage system owner is willing or obligated to provide sewer  
12 service." OAR 340-71-160(5)(f)(13). A copy of the applicable rule is attached to this  
13 Petition as Exhibit A.

#### 14 STATEMENT OF ISSUES

15 Whether DEQ can consider a sewerage system to be "legally available" under  
16 its regulations if the owner of the sewer system requires the landowner to become annexed  
17 in order to be connected?

18 Whether DEQ is justified in denying JELD-WEN's application for repair of  
19 an existing and previously permitted septic tank drainfield system?

#### 20 STATEMENT OF FACTS

21 Since approximately 1950, JELD-WEN Inc. has operated and maintained a  
22 septic tank/drainfield system at its door and cutstock manufacturing facilities located in  
23 Klamath County. The system is used primarily to treat and dispose of domestic wastes  
24 generated at the facility.

25 In 1978, JELD-WEN retained an engineering firm to design upgrades to and  
26 repair the existing system. DEQ approved the 1978 design and granted JELD-WEN a

1 permit to install the upgrades. As a condition of the 1978 plan approval letter from DEQ,  
2 JELD-WEN was required to leave undeveloped areas contiguous to the drainfield for use as  
3 future drainfield. The JELD-WEN system has been included in the facility's NPDES  
4 permit in the past. The system has operated successfully since 1978 (and before) without  
5 any environmental or public health problems. There have been no regulatory violations at  
6 the system.

7 The JELD-WEN facility is located (and was in 1978) within the  
8 unincorporated jurisdiction of Klamath County, outside of the Klamath Falls city limits, but  
9 within the urban growth boundary. The Klamath Falls city boundary abuts the JELD-WEN  
10 property line, separated by Lakeport Boulevard. There was no available County sewer  
11 system in 1978, nor is there today. The City of Klamath Falls, on the other hand, does  
12 maintain a City sewer system. However, the City is unwilling to allow a connection to its  
13 sewer without annexation of the property to be hooked up.

14 On May 2, 1997, JELD-WEN discovered that its drainfield system was  
15 potentially failing. Jeld-Wen immediately notified Walt West and Dick Nichols of the  
16 Eastern Region Water Quality Management program of DEQ's Eastern Region office in  
17 Bend, as well as Bob Bagget of the onsite sewer program in Pendleton. Pursuant to  
18 OAR 340-71-160, JELD-WEN requested appropriate permits in order to repair the existing  
19 drainfield. DEQ informed JELD-WEN that it was necessary first to conduct a Site  
20 Evaluation of the system. On May 6 and 13, 1997, DEQ staff traveled to Klamath Falls  
21 and conducted the evaluation, after which JELD-WEN completed an application and  
22 submitted a \$1,200 application fee.

23 On May 22, 1997, DEQ informed JELD-WEN through a memorandum that  
24 the area surveyed was satisfactory for a new system if it included a recirculating gravel  
25 filter, and if the soil was allowed to dry before installation. See May 22, 1997 DEQ  
26 Memorandum, attached as Exhibit B. However, the memorandum went on to state that

1 DEQ staff would deny JELD-WEN's permit application because it considered the City of  
2 Klamath Falls sewer system to be "legally available" even though the City would require  
3 annexation.

4 JELD-WEN disagrees that the City's sewer system is "legally available." The  
5 City lacks the authority to annex JELD-WEN without JELD-WEN's consent and JELD-  
6 WEN has no intention of voluntarily consenting to annexation since JELD-WEN already  
7 receives all necessary public services from other sources and annexation would cost JELD-  
8 WEN significant sums of money.<sup>1</sup> JELD-WEN has received some or all of its water  
9 supply from the City system for at least the last 25 years.

10 JELD-WEN disagreed with DEQ's position in a June 2, 1997 letter to  
11 Richard Nichols, attached as Exhibit C. DEQ responded by letter on June 3, 1997, and  
12 stated that it agrees that the area proposed by JELD-WEN is acceptable for the replacement  
13 drainfield. Despite the acceptability of the replacement drainfield, DEQ said it was unable  
14 to issue the permit because it feels the City of Klamath Falls sewer system is physically and  
15 legally available. As a result, DEQ is precluded from issuing a permit to construct a  
16 replacement drainfield. June 3, 1997 Letter from DEQ to Stanley K. Meyers, attached as  
17 Exhibit D. The letter also suggested that JELD-WEN petition the EQC for a declaratory  
18 ruling on this issue. JELD-WEN is working on a temporary solution with DEQ while the  
19 EQC reviews this petition.

#### 20 LEGAL ANALYSIS

21 JELD-WEN's property is close to the Klamath Falls sewer system which  
22 makes the City system arguably "physically available" to JELD-WEN, as defined in OAR  
23 340-71-160(5)(f)(A). However, the physical availability of a sewerage system is just one  
24

---

25 <sup>1</sup>Through conversations with City personnel, Jeld Wen anticipates that annexation would  
26 result in a property tax assessment equal to approximately \$250,000 to \$300,000, plus  
substantial connection fees and monthly user fees.

1 prong of a two-prong test. DEQ must also establish that the City's sewerage system is  
2 "legally available" before it can deny JELD-WEN's permit.

3 As previously mentioned, a sewerage system is legally available if "the  
4 system is not under a Department connection permit moratorium, and the sewerage system  
5 owner is willing or obligated to provide sewer service." OAR 340-71-160(5)(f)(B). The  
6 system is not under a Department connection permit moratorium. However, at issue is  
7 whether the City of Klamath Falls (i.e., the sewerage system owner) is "willing or  
8 obligated" to provide sewer service to JELD-WEN. Since there is no caselaw interpreting  
9 the meaning of "willing or obligated" as these words are used in OAR 340-71-160(5)(f)(B),  
10 an analysis of this language is limited to an examination of other statutory and regulatory  
11 authority and consideration of the plain meaning of the language.

12 Pursuant to ORS 454.215(1), "(a)ny municipality may own, acquire,  
13 construct, equip, operate and maintain, either within or without its statutory or corporate  
14 limits, in whole or in part, disposal systems with all appurtenances necessary, useful or  
15 convenient for the collection, treatment and disposal of sewage." The Oregon legislature  
16 made it clear in ORS 454.215(2) that the authority it granted to municipalities over disposal  
17 systems in ORS 454.215(1) is "in addition to, and not in derogation of any power existing  
18 in the municipality under any constitutional, statutory or charter provisions now or hereafter  
19 existing." In other words, Oregon Revised Statutes enables municipalities to provide  
20 disposal systems, but it does not mandate that they provide such services. Moreover,  
21 municipalities have the rights, powers and privileges to determine in which manner they  
22 shall provide such services.

23 Under its City charter, Klamath Falls is "obligated" to provide a sewer  
24 system to all who are within city limits. Since JELD-WEN is not within city limits,  
25 Klamath Falls is not obligated to provide sewer services to JELD-WEN. Accordingly, the  
26 only way Klamath Falls sewer system is "legally available" to JELD-WEN, is if Klamath



1 Falls is "willing" to provide such services. In JELD-WEN's case, Klamath Falls is willing  
2 to provide sewer services to JELD-WEN if, and only if, JELD-WEN is annexed to the city.  
3 In other words, Klamath Falls' "willingness" to provide sewer services is contingent upon  
4 JELD-WEN's annexation to the City. Unless the condition of being annexed to the city is  
5 satisfied, Klamath Falls is not willing to deliver sewer services to JELD-WEN. JELD-  
6 WEN strenuously opposes annexation.

7 The power of a municipality to annex territory is entirely a legislative  
8 function, granted to the municipality through express authority by the state legislature, and  
9 subject only to constitutional restrictions. McQuillan, Municipal Corporations § 7.10 (3rd  
10 ed. 1996). In other words, municipalities have no inherent power to annex territory, unless  
11 that right is granted by the state legislature. McQuillan at § 7.13. The methods of  
12 annexation must specifically be authorized by legislation. McQuillan at § 7.14. Thus,  
13 DEQ has no authority to mandate annexation unless that power is expressly granted by the  
14 legislature, which it has not done.

15 ORS Chapter 222 describes seven types of proceedings to annex  
16 non-boundary commission territory to a city. These proceedings may be initiated by the  
17 city, on its own motion, or by a petition of the landowners in the territory to be annexed.  
18 ORS 222.111(2). Since JELD-WEN does not intend to petition for annexation, any  
19 annexation proceedings initiated would be done at the city's initiative. Of the seven types  
20 of proceedings to annex non-boundary commission territory, five require consent. The five  
21 consent annexations are as follows:

- 22 1. The general annexation method requires the city council to submit an  
23 annexation proposal to the electors of the territory proposed for annexation  
24 and to the electors of the annexing city. If a majority of both groups vote in  
25 favor of annexation, the territory may be annexed. ORS 222.111(5).
- 26 2. Another annexation method involves holding an election in the territory to be  
annexed and, instead of holding a vote of the electorate, having a public  
hearing on the annexation. ORS 222.120(2).

- 1           3.     The third method of annexation requires the written consents of 100% of the  
2           property owners and more than 50% of the electors residing in the territory  
3           to be annexed. Such consent dispenses with the need to take a vote of the  
4           property owners and electors in the territory. Again, as in the second  
5           method, the citizens are given the opportunity to approve or disapprove of  
6           the annexation via a public hearing. ORS 222.125.
- 7           4.     The *triple majority method of annexation*, which the court of appeals has  
8           determined is unconstitutional, requires the written consents of more than  
9           half of the landowners in the territory, who also own more than half of the  
10          land in the territory, which represents more than half of the assessed value of  
11          all real property in the territory proposed to be annexed. The city council  
12          must either hold a public hearing for the city on the annexation or put it to a  
13          vote of the city's electorate. ORS 222.170(1).
- 14          5.     The *double majority annexation* is initiated by filing with the city council  
15          written consents to annex from a majority of the electors in a territory and  
16          from the owners of more than half of the land in the territory. The city  
17          council must either hold a public hearing for the city or have a city election  
18          on the annexation. ORS 222.170(2).

19     Despite the subtle and intricate differences between these annexation methods, a common  
20     thread runs throughout all of them. Under each method, the three parties at issue (the  
21     landowners in the territory, the electorate in the territory and the electorate in the city) have  
22     a voice in the process. Whether by voting, written consent or public hearing, Oregon's  
23     legislature mandated that the three groups with a vested interest be heard. Moreover, a  
24     landowner's ability to give or withhold consent for annexation of his own land is considered  
25     a "privilege" under the privileges and immunities clause of Oregon's constitution. Mid-  
26     County Future v. Port. Metro. Area LGBC, 82 Or App 193, 728 P2d 63 (1986). "The  
landowners can neither bring about an annexation that the electorate might oppose . . . nor  
unilaterally prevent an annexation that the electorate might favor." Mid-County Future v.  
Port. Metro. Area LGBC, 106 Or App 647, 653, 809 P2d 1354 rev. denied, 312 Or 80  
(1991).

          There are only two very limited circumstances in which a city may annex a  
territory without the landowner's consent. First, the city may annex territory which is  
surrounded by the corporate boundaries of the city ("island annexation"). Although this

1 type of annexation may be done without the consent of the land owners in the territory or  
2 the residents in the territory to be annexed, such type of annexation is subject to  
3 referendum. ORS 222.750. The only other circumstance where a city may annex a  
4 territory without consent is if conditions within a territory have caused a danger to the  
5 public health as determined by the Division of Health and such conditions may be alleviated  
6 by the services provided by the annexing city. ORS 222.855. ORS 222.840 through  
7 222.910 sets forth a detailed and comprehensive process for allowing health hazard  
8 annexations and provides such authority only to the Division of Health. The Oregon  
9 legislature has not granted DEQ the authority similar to that granted to the Division of  
10 Health to require annexation on a finding of a health hazard. Other than these two specific  
11 and limited situations, a city must obtain consent before annexing a territory.

12 The fact that these two situations are so specific, and would leave little doubt  
13 as to whether a particular territory may be annexed under these particular provisions, only  
14 demonstrates, at great length, the caution the Oregon legislature took in limiting those  
15 situations where a city could act unilaterally. Since the JELD-WEN facility is not an island  
16 surrounded by the corporate boundaries of Klamath Falls, and because the Division of  
17 Health has not determined a health hazard pursuant to ORS 222.840 through 910, the  
18 JELD-WEN property may be annexed to the City of Klamath Falls only with the consent of  
19 JELD-WEN. As previously stated, JELD-WEN has no intention of consenting voluntarily.

20 In the event DEQ does not grant JELD-WEN a permit to repair the existing  
21 drainfield, and such inability to repair results in violations of water quality regulations,  
22 JELD-WEN may be forced to "consent" to annexation in order to have a disposal system in  
23 compliance with the law. Forcing a party's consent to annexation has been regarded as the  
24 equivalent of forcing a party to vote a certain way. Pursuant to Hussey v. City of Portland,  
25 64 F.3d 1260 (9th Cir. 1995), such coercion is unconstitutional.

26

1 In Hussey, the Environmental Quality Commission ordered the City of  
2 Portland to provide sewer services to residents of an unincorporated area of East  
3 Multnomah County (known as "Mid-County"). The EQC also required the residents to  
4 hook up to the sewer system once available. Although the EQC forbade the City from  
5 requiring annexation as a condition of hooking up to the sewers, the City passed an  
6 ordinance which provided a subsidy in the form of reduced sewer connection charges in  
7 exchange for landowners signing an irrevocable consent to annexation. 64 F3d at 1262.  
8 Those landowners who failed to consent to annexation would not receive reduced sewer  
9 connection charges. Id.

10 A group of landowners sued for declaratory and injunctive relief, arguing  
11 that imposing financial distress only on electors who opposed annexation was a violation of  
12 their personal right to equal protection under the Fourteenth Amendment. The landowners  
13 argued, and the court of appeals agreed, that obtaining the consent of electors is the  
14 constitutional equivalent of voting. Even though there is no federal or state constitutional  
15 right to vote on annexation of territory by a City, once that right is granted through a  
16 statute, the right to vote becomes constitutionally protected. 64 F.3d at 1263. Coercing  
17 the landowners to consent to annexation (by imposing financial distress on them if they did  
18 not consent) was unconstitutional because it abrogated the landowners' right to vote and  
19 therefore failed to survive strict scrutiny.

20 Here, the situation is similar. DEQ's position requires JELD-WEN to give  
21 up its constitutionally protected right to consent (i.e., vote) on annexation by Klamath Falls.  
22 Rather than the subsidy provided to the landowners in Hussey v. City of Portland,  
23 however, the economic coercion in this case is DEQ's denial of JELD-WEN's repair of its  
24 drainfield. Without a satisfactorily-repaired drainfield, JELD-WEN runs the risk of  
25 violating several water quality regulations. By denying issuance of the permit, DEQ forces  
26

1 JELD-WEN to consent to annexation to the City. Such coercion distorts the political  
2 process and is unconstitutional under Hussey v. City of Portland.

3 **CONCLUSION AND RELIEF REQUESTED**


4 Klamath Falls is willing to provide sewer services only to those parties  
5 annexed to the City. JELD-WEN is not presently annexed to the City. It is not willing to  
6 voluntarily consent to annexation and it cannot be forced to consent to annexation. Thus,  
7 Klamath Falls is not willing to provide sewer services to JELD-WEN.

8 The sole reason for DEQ's denial of JELD-WEN's permit is because DEQ  
9 believed the sewerage system of Klamath Falls was both legally and physically available.  
10 Although Klamath Falls system may be physically available, it is not legally available  
11 because Klamath Falls is not willing or obligated to provide such services. For these  
12 reasons, DEQ is required to issue the Division 71 permit to JELD-WEN.

13 Respectfully submitted,

14 SCHWABE, WILLIAMSON & WYATT

15  
16 By:



Jay T. Waldron, OSB #74331  
Neal A. Hueske, OSB #91319  
Of Attorneys for Plaintiff

17  
18  
19  
20 **NAME AND ADDRESS OF PETITIONER:**

21 JELD-WEN, INC.  
22 3250 Lakeport Blvd.  
23 Klamath Falls, OR 97601  
24 Attention: Rod Wendt  
25  
26

OREGON ADMINISTRATIVE RULES  
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that the property owner will receive a permit to construct a system on that property provided procedures and conditions for permit issuance found in OAR 340-71-160 are met.

(4) Approval or Denial:

(a) In order to obtain a favorable site evaluation report the following conditions shall be met:

(A) All criteria for approval of a specific type or types of system, as outlined in OAR 340, Division 71 shall be met;

(B) Each lot or parcel must have sufficient usable area available to accommodate an initial and replacement system. The usable area may be located within the lot or parcel, or within the bounds of another lot or parcel if secured pursuant to OAR 340-71-130(11). Sites may be approved where the initial and replacement systems would be of different types, e.g., a standard subsurface system as the initial system and an alternative system as the replacement system. The site evaluation report shall indicate the type of the initial and type of replacement system for which the site is approved.

**EXCEPTION:** A replacement area is not required in areas under control of a legal entity such as a city, county, or sanitary district, provided the legal entity gives a written commitment that sewerage service will be provided within five years.

(b) A site evaluation shall be denied where the conditions identified in subsection (4)(a) of this rule are not met;

(c) Technical rule changes shall not invalidate a favorable site evaluation, but may require use of a different kind of system.

(5) Site Evaluation Report Review. A site evaluation report issued by the Agent shall be reviewed at the request of the applicant. The application for review shall be submitted to the Department in writing, within 30 days of the site evaluation report issue date, and be accompanied by the review fee. The review shall be conducted and a report prepared by the Department.

Stat. Auth.: ORS Ch. 454

Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 5-1982, f. & ef. 3-9-82; DEQ 8-1983, f. & ef. 5-25-83; DEQ 9-1984, f. & ef. 5-29-84; DEQ 15-1986, f. & ef. 8-6-86

### Existing System Evaluation Report

340-71-155 (1) Any person, upon application, may request an evaluation report on an existing on-site sewage disposal system. The application shall be on a form provided by the agent and approved by the Department.

(2) The application is complete only when the form, on its face, is completed in full, signed by the owner or the owner's legally authorized representative, and is accompanied by all necessary exhibits including the fee. A fee shall not be charged for an evaluation report on any proposed repair, alteration or extension of an existing system.

(3) The agent shall:

(a) Examine the records, if available, on the existing system; and

(b) Conduct a field evaluation of the existing system; and

(c) Issue a report of findings to the applicant.

Stat. Auth.: ORS Ch. 454

Hist.: DEQ 8-1983, f. & ef. 5-25-83

### Permit Application Procedures — General Requirements

340-71-160 (1) No person shall cause or allow construction, alteration, or repair of a system, or any part thereof, without first applying for and obtaining a permit.

**EXCEPTION:** Emergency repairs as set forth in OAR 340-71-215.

(2) Applications for permits shall be made on forms provided by the Agent and approved by the Department.

(3) An application is complete only when the form, on its face, is completed in full, is signed by the owner or the owner's legally authorized representative, and is accompanied by all required exhibits and fee. Except as otherwise allowed in OAR 340-71-400(6), the exhibits shall include:

(a) Favorable site evaluation report;

(b) 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;

(c) Plans and specifications for the on-site system proposed for installation within the area identified in the favorable site evaluation report. The Agent shall determine and request the minimum level of detail necessary to insure proper system construction;

(d) Any other information the Agent finds is necessary to complete the permit application.

(4) The application form shall be received by the Agent only when the form is complete, as detailed in section (3) of this rule.

(5) Upon receipt of a completed application the Agent shall deny the permit if:

(a) The application contains false information;

(b) The application was wrongfully received by the Agent;

(c) The proposed system would not comply with these rules;

(d) The proposed system, if constructed, would violate a Commission moratorium as described in OAR 340-71-460;

(e) The proposed system location is encumbered as described in OAR 340-71-130(8);

(f) A sewerage system which can serve the proposed sewage flow is both legally and physically available, as described below:

(A) Physical Availability. A sewerage system shall be deemed physically available if its nearest connection point from the property to be served is:

(i) For a single family dwelling, or other establishment with a maximum projected daily sewage flow of not more than 450 gallons, within 300 feet;

(ii) For a proposed subdivision or group of two to five single family dwellings, or equivalent projected daily sewage flow, not further than 200 feet multiplied by the number of dwellings or dwelling equivalents;

(iii) For proposed subdivisions or other developments with more than five single family dwellings, or equivalents, the Agent shall make a case-by-case determination of sewerage availability.

**EXCEPTION:** A sewerage system shall not be considered available if topographic or man-made features make connection physically impractical.

(B) Legal Availability. A sewerage system shall be deemed legally available if the system is not

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under a Department connection permit moratorium, and the sewerage system owner is willing or obligated to provide sewer service.

(6) A permit shall be issued only to a person licensed under ORS 454.695, or to the owner or easement holder of the land on which the system is to be installed.

(7) No person shall construct, alter or repair a system, or any part thereof, unless that person is licensed under ORS 454.695, or is the permittee.

(8) The Agent shall either issue or deny the permit within 20 days after receipt of the completed application.

**EXCEPTION:** If weather conditions or distance and unavailability of transportation prevent the Agent from acting to either issue or deny the permit within 20 days, the applicant shall be notified in writing. The notification shall state the reason for delay. The Agent shall either issue or deny the permit within 60 days after the mailing date of such notification.

(9) A permit issued pursuant to these rules shall be effective for one year from the date of issuance for construction of the system. The construction-installation permit is not transferable. Once a system is installed pursuant to the permit, and a Certificate of Satisfactory Completion has been issued for the installation, conditions imposed as requirements for permit issuance shall continue in force as long as the system is in use.

(10) Renewal of a permit may be granted to the original permittee if an application for permit renewal is filed prior to the original permit expiration date. Application for permit renewal shall conform to the requirements of sections (2) and (4) of this rule. The permit shall be issued or denied consistent with sections (5), (6), (8), and (9) of this rule.

Stat. Auth.: ORS Ch. 454  
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 19-1981, f. 7-23-81, ef. 7-27-81; DEQ 8-1983, f. & ef. 5-25-83; DEQ 15-1986, f. & ef. 8-6-86

#### Permit Denial Review

340-71-165(1) A permit denied by the Agent shall be reviewed at the request of the applicant. The application for review shall be submitted to the Department in writing, within 30 days of the permit denial notice from the Agent, and be accompanied by the denial review fee. The denial review shall be conducted and a report prepared by the Department.

(2) Permit denials for systems proposed to serve a commercial facility, intended to be used in a commercial activity, trade, occupation or profession, may be appealed through the contested case hearing procedure set forth in ORS Chapter 183 and OAR Chapter 340, Division 11.

(3) If the Agent intends to deny a permit for a parcel of ten acres or larger in size, the Agent shall:

(a) Provide the applicant with a Notice of Intent to Deny;

(b) Specify reasons for the intended denial; and

(c) Offer a contested case hearing in accordance with ORS Chapter 183 and OAR Chapter 340, Division 11.

Stat. Auth.: ORS Ch. 454  
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 5-1982, f. & ef. 3-9-82

#### Pre-Cover Inspections

340-71-170 (1) When construction, alteration or repair of a system for which a permit has been issued is complete, except for backfill (cover), or as required by permit, the system installer shall notify the Agent. The Agent shall inspect the installation to determine if it complies with the rules of the Commission, unless the inspection is waived by the Agent in accordance with section (2) of this rule or in accordance with the provisions of OAR 340-71-400(6).

(2) The Agent may, at his own election, waive the pre-cover inspection provided:

(a) The installation is a standard subsurface system installed by a sewage disposal service licensed pursuant to ORS 454.695; and

(b) The inspecting jurisdiction and the Department have developed an impartial method of identifying those installers who have a history of proper installations without excessive numbers of corrections; and

(c) Inspections waived are for installations made by installers identified as having a good history of proper installation; and

(d) A list of installers whose inspections may be waived is available to the public and the Department; and

(e) A representative number of each installer's systems has been inspected, regardless of installation history; and

(f) After system completion the installer certifies in writing that the system complies with the rules of the Commission, and provides the Agent with a detailed as-built plan (drawn to scale) of the installation.

(3) Pre-cover inspection details shall be recorded on a form approved by the Department.

Stat. Auth.: ORS Ch. 454  
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 15-1986, f. & ef. 8-6-86

#### Certificate of Satisfactory Completion

340-71-175 (1) The Agent shall issue a Certificate of Satisfactory Completion, if, upon inspection of installation, the system complies with the rules of the Commission and the conditions of the permit.

(2) If inspected installation does not comply with the rules of the Commission and the conditions of the permit, the permittee shall be notified in writing or a Correction Notice shall be posted on the site. System deficiencies shall be explained and satisfactory completion required. Follow-up inspections may be waived by the Agent. After satisfactory completion a Certificate shall be issued.

(3) If the inspection is not made within seven days after notification of completion, or the inspection is waived, a Certificate of Satisfactory Completion shall be deemed to have been issued by operation of law. In such cases, a modified Certificate shall be issued to the owner.

(4) A system, once installed, shall be backfilled (covered) only when:

(a) The permittee is notified by the Agent that inspection has been waived; or

(b) The inspection has been conducted by the Agent and a Certificate of Satisfactory Completion has been issued; or

State of Oregon  
Department of Environmental Quality

Memorandum

Date: May 22, 1997

To: File - JELD-WEN, inc.  
BEN FAB Division, IW-File  
Klamath County

From: Walt West, IW - WQ

Through: Dick Nichols, Eastern Region WQ Manager

Subject: Drainfield Replacement

On May 2, 1997, JELD-WEN, inc., (JWI) notified our Department that sewage was surfacing from their existing drainfield. I met with Karen Olsen at the facility on May 6, 1997, and observed where the effluent was surfacing. The facility's septic tank was being pumped on a regular basis to reduce flow into the drainfield system and to prevent sewage from reaching a nearby drainage ditch and to protect human health. On May 13, 1997, Lawrence Brown of the Department's On-Site program conducted a site evaluation for possible repair. The site is located in Klamath Falls at T38, R9, S19; Tax Lot 400 lots 4 & 5. The evaluation report findings are summarized below.

The soil in the area proposed to install a replacement drainfield was found to be a silty clay. Permanent Groundwater is predicted to rise to within 48 and 53 inches from the ground surface in both areas evaluated.

The rules for standard drainfield systems require that a permanent water table shall be four feet or more from the bottom of the absorption facility. With trench depths of 18 inches, minimum, the water table could be no closer than 66 inches from the ground surface. [OAR 340-71-220 (1) (b)].

The rules for capping fill systems require that a permanent ground water shall be 4 feet below the bottom of the absorption facility, however, capping fills are limited to soils no finer than silty clay loam. A silty clay is finer than a silty clay loam, therefore, capping fill is not an option. Even with 4 feet of separation and 12 inch trench depths, minimum, the permanent water table shall be no closer than 60 inches from the ground surface. OAR 340-71-265 (1)(c) and (f). Again, at this site the permanent water table is predicted to rise to within 48 and 53 inches from the ground surface.



With these two options eliminated, by rule, a pretreatment device would be required. We believe that with the flows of this facility a recirculating gravel filter would be the only appropriate treatment device. Since the effluent quality is similar to that of sand filter effluent 50 linear feet of disposal trench would be required per 150 gallons per day of flow. Technical specifications for a recirculating gravel filter are attached for your information.

The site conditions are not conducive for installing a system at this time. The sidewalls were smeared in test holes 1 through 8 and in the opinion of this Agent damage would occur to the system operation if installed at this time. Test Holes 9 and 10 were drier but area is limited due to the site's limitations. Should a drainfield system be allowed in conjunction with a recirculating gravel filter, installation would need to be delayed until soil dries sufficiently to prevent smearing of the sidewalls of the drainfield trench during construction.

Observations in the test holes dug between drainlines of the original drainfield indicated blackening and moisture extending to at least 30 inches from the drainline. The drainlines were spongy and very soft. Also, the distribution boxes which were uncovered were completely full indicating that the drainlines were saturated. The person who dug the test holes in the original drainfield drove overtop of the existing drainlines and sank about 6 to 10 inches. Damage to the perforated pipe in these areas is expected.

With respect to system repair, OAR 340-71-160 (5)(f) states that upon receipt of a completed application the Agent shall deny the permit if : A sewerage system which can serve the proposed sewage flows is both legally and physically available. Physical Availability is defined by its nearest connection point from the property to be served expressed in feet. For developments with more than 5 single family equivalents projected daily sewage flow, the Agent shall make a case-by-case determination of sewerage availability. A single family dwelling would be required to connect if the sewer is within 300 feet. At this site, the sewer is less than 50 feet running down Lakeport Blvd.

A sewerage system shall be deemed legally available if the system is not under a Department connection permit moratorium, and the sewerage system owner is willing or obligated to provide sewer service.

At this time with the available information, it would seem to us that our rules will dictate that a repair permit not be issued and that you must connect to the City of Klamath Falls sewerage facility. We know that you have done some initial investigation of this option and found that City policy requires annexation which, in turn, involves a significant increase in your property taxes. Nevertheless, the rules governing this type of situation do not consider the potential financial burden of connection as a basis to allow a repair when sewer is deemed available. Further, we believe that the Environmental Quality Commission (EQC) has ruled in the past that annexation is not

# JELD-WEN

MANUFACTURER OF SUPERIOR BUILDING PRODUCTS  
WINDOWS • DOORS • MILLS • RA

June 2, 1997

Mr. Richard Nichols  
Eastern Region WQ Manager  
Department of Environmental Quality  
2146 NE 4<sup>th</sup> Street, Suite 104  
Bend, Oregon 97701

## JELD-WEN's Klamath Falls On-Site Drainfield

Dear Mr. Nichols:

This letter will confirm receipt of the Department of Environmental Quality's ("DEQ") Memorandum dated May 22, 1997 addressed to Ben-Fab, and will also serve to address the analysis upon which the DEQ bases its preliminary conclusion that JELD-WEN, inc. ("JWI") "must connect to the City of Klamath Falls sewerage facility." First of all, let me thank you for your courtesy and candor in providing us with the DEQ's preliminary opinions, as we will incur significant civil engineering charges before we even begin the permit process. However, Bill Fagan, myself, and others here at JWI have carefully reviewed the Memorandum and while we agree that the soils would support a properly engineered on-site drainfield, we respectfully (and strenuously) disagree with your annexation conclusion. As the DEQ's preliminary conclusion may be a dispositive issue to moving forward and properly correcting the current problems, and in as much as we currently have the good fortune of not operating under an emergency situation, I was hoping you would be available to meet with me at your convenience, tomorrow, June 3, in your office to discuss this further.

EXHIBIT C

PAGE 1 OF 2

an unreasonable requirement for connection to sewer. Our staff is researching past EQC meeting minutes to find the record of such a ruling. If and when we find it, we will provide you a copy.

Enclosures (2)

June 3, 1997

Oregon

Mr. Stanley K. Meyers, P.E.  
Vice President, Engineering  
JELD-WEN  
PO Box 1329  
Klamath Falls, OR 97601-0268

RECEIVED

JUN 13 1997

Schwabe, Williamson & Wyatt

DEPARTMENT OF  
ENVIRONMENTAL  
QUALITY

EASTERN REGION  
Bend Office

Mr. Meyers:

This letter will summarize our telephone conference today. Included in the call were you, Messrs. Charlie Taylor and Bill Fagan of JELD-WEN and Walt West and myself representing DEQ.

The issue discussed relates to the failing on-site sewage disposal system that serves your Klamath Falls wood products complex. The Department has concluded that the City of Klamath Falls sewer is physically and legally available and, as a result, we cannot provide you approval to construct a replacement drainfield. You, on the other hand, disagree that it is available because the City will not allow you to connect unless you annex into the City.

The Department does agree that you have an acceptable area to put a replacement drainfield although because groundwater levels are somewhat shallow, a recirculating gravel filter must be used to pretreat the sewage prior to discharge into the drainfield.

As we concluded in our meeting, the Department believes you should file a petition for declaratory ruling with the Environmental Quality Commission if you wish to pursue construction of a replacement drainfield. I have enclosed the Oregon's Model Rules of Procedure Applicable to Proceedings for Agency Declaratory Rulings for your information. The petition should be filed with the Environmental Quality Commission in care of the Director of DEQ, Langdon Marsh. His address is: 811 SW 6th Avenue, Portland, OR 97204. I have also enclosed a copy of the October 27, 1978 EQC meeting minutes and a supporting document which addresses an issue relative to on-site sewage disposal systems which may have some relevancy to this matter.

If you have questions or comments, please call me or Walt West in this office at (541) 388-6146.

Sincerely,



Richard J. Nichols, Manager  
Bend Water Quality Section  
Eastern Region

RJN/ns

Enclosures

cc: Susan Greco/Paul Burnet - DEQ - HQ  
Larry Knudsen - DOJ - Portland  
Stephanie Hallock/file - Bend

EXHIBIT D  
PAGE 1 OF 1



2146 NE 4th Street  
Suite 104  
Bend, OR 97701  
(541) 388-6146  
DEQ/CR-101 (1-91)

Essentially, I would like to discuss with you the language from the regulation cited in the Memorandum instructing the DEQ agent to deny a repair permit if "A sewerage system which can serve the proposed sewage flows is both legally and physically available." (Emphasis added). As you know, the JWI property and facilities serviced by the existing standard on-site drainfield for the past 20 years are located within and under the jurisdiction of Klamath County—not the City of Klamath Falls. The County sewerage system is located on the other side of the community. Accordingly, the County sewerage system is not "physically available". Furthermore, the City of Klamath Falls has indicated that it is not willing to allow a connection since we are not part of the City. As a result, the City's sewerage system is not "legally available" to JWI at the present time. We do not believe that OAR 340-71-160(5)(f), cited above, should impede our permit process.

I also note in the DEQ Memorandum a reference to possible prior Environmental Quality Commission rulings forcing a landowner to annex with a City to meet the "legal and physical availability" requisites. I am not aware of any such rulings but would appreciate you forwarding same so they can be reviewed by our legal department.

Again, I remain very hopeful that we can quickly resolve this issue and move forward with preventing an emergency situation. Please call me with your availability for tomorrow or if you have any questions. If I am not available when you call, please feel free to call Bill Fagan also. I look forward to meeting you.

Sincerely,



Stanley K. Meyers, P.E.  
Vice President, Engineering

# Environmental Quality Commission

- Rule Adoption Item
- Action Item
- Information Item

Agenda Item E  
October 3, 1997 Meeting

**Title:**

Establish Total Maximum Daily Loads (TMDLs) for the Grande Ronde River and Catherine Creek to Meet Water Quality Standards Including Establishment of Instream Criteria



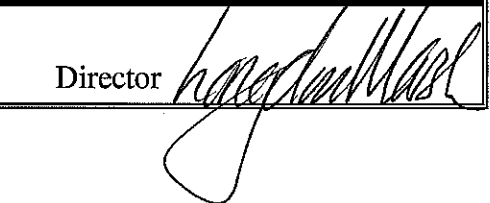
**Summary:**

This proposed rulemaking establishes the TMDL for the Grande Ronde River and Catherine Creek. The actions specified by this proposed rule will set instream concentrations for nutrients in the Grande Ronde Valley, establish a schedule for point sources to complete and construct facilities to meet the requirements of the new instream nutrient limits and set a time frame for developing water quality management plans to address nonpoint source pollution. The proposed rule also requires that an advisory committee be impaneled to advise DEQ on issues relative to nonpoint source water quality management plans.

The rule recognizes that improvement in water quality may not be realized until several years after nonpoint source management plans are implemented. Nonpoint source entities, however, shall be considered in compliance with this rule if they comply with the approved water quality management plan.

**Department Recommendation:**

It is recommended that the Commission adopt the rule regarding the establishment of Total Maximum Daily Loads for the Grande Ronde River and Catherine Creek as presented in Attachment A of the Department's Staff Report.

 Report Author	 Division Administrator	 Director
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State of Oregon  
Department of Environmental Quality Memorandum

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**Date:** September 3, 1997

**To:** Environmental Quality Commission

**From:** Langdon Marsh

**Subject:** Agenda Item E, October 3, 1997, EQC Meeting  
Rule Adoption: Establish Total Maximum Daily Loads (TMDLs) for the Grande Ronde River and Catherine Creek to Meet Water Quality Standards Including Establishment of In-Stream Criteria

**Background**

On April 22, 1997, the Director authorized the Eastern Region Division to proceed to a rulemaking hearing on proposed rules which would: 1) Establish in-stream nutrient concentration limits for the Grande Ronde River and Catherine Creek. 2) Establish a schedule for the Cities of La Grande and Union and for Boise Cascade Company to complete and implement facilities plans to upgrade municipal and industrial wastewater treatment facilities. 3) Establish a schedule and process for developing water quality management plans for the control of nonpoint source pollution from urban, agricultural, forestry, and other sources.

Pursuant to the authorization, hearing notice was published in the Secretary of State's Bulletin on July 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 June 30, 1997

A Public Hearing was held August 5, 1997 with Dan Lobato serving as Presiding Officer. Written comment was received through August 8, 1997. The Presiding Officer's Report (Attachment C) summarizes the oral testimony presented at the hearing and lists all the written comments received. (A copy of the comments is available upon request.)

Department staff have evaluated the comments received (Attachment D). Based upon that evaluation, modifications to the initial rulemaking proposal are being recommended by the Department. These modifications are summarized below and detailed in Attachment E.

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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, a summary of the significant public comments and the changes proposed in response to those comments, 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**

The Grande Ronde River (Wallowa River to Five Points Creek) is on the current 303(d) list for dissolved oxygen, pH, periphyton, phosphorus, water contact recreation, temperature, flow modification, habitat modification, and sediment. It is also one of the eleven listed waterbodies included in the 1987 TMDL Consent Decree between EPA and NEDC. Catherine Creek (mouth to Union Dam) is on the current 303(d) list for dissolved oxygen, pH, periphyton, phosphorus, temperature, flow modification, and habitat modification.

The oxygen, pH, periphyton and phosphorus problems result, in part, from excessive nutrients being contributed by a combination of point and non-point sources. The remaining issues are primarily non-point source in origin and are inter-related with the nutrient concerns.

It is necessary to establish TMDLs for the Grande Ronde River and Catherine Creek in order to provide a basis for point sources in the Grande Ronde River Valley to prepare facilities plans, reduce discharge levels, and meet in-stream water quality standards. Nonpoint sources will be addressed through an advisory committee and water quality management plans (Facility Plan equivalent). It is also necessary to establish schedules and expectations for the development and implementation of those plans. The Grande Ronde River, Catherine Creek, and their listed tributaries must have TMDLs established in order to restore beneficial use, comply with the Clean Water Act, and be removed from the 303(d) list.

### **Relationship to Federal and Adjacent State Rules**

The Federal Clean Water Act Section 303 requires that Total Maximum Daily Loads (TMDLs) be established for streams on the state's 303(d) list. 40 CFR Part 130 establishes the program that implements these requirements. Many stream segments in the Grande Ronde Basin are on the current 303(d) list.



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The Oregon Forest Practices Act and its implementing rules establish best management practices to prevent or reduce water pollution resulting from commercial forest operations statewide. The Oregon Department of Forestry is the agency responsible for administering the forest practice regulations.

Senate Bill 1010 provides authority to the Oregon Department of Agriculture to develop and implement, in cooperation with local agencies, agricultural water quality management plans to help reduce water pollution from agricultural sources and to improve overall conditions in specific areas.

#### **Authority to Address the Issue**

The Department of Environmental Quality's statutory authority to address point and nonpoint source water pollution are contained in ORS 468B.015 Policy; ORS 468B.030 Effluent Limitations; and 468B.035 Implementation of Federal Water Pollution Control Act.

#### **Process for Development of the Rulemaking Proposal (including Advisory Committee and alternatives considered)**

Department staff in consultation with staff of the Grande Ronde Model Watershed, the cities of La Grande and Union, EPA, and others developed the draft rule. The purpose of the public process and the public hearing was to gather additional comments and suggested revisions to the draft rule and draft water quality report prior to proposing a final draft for adoption. The text of the rule is patterned, in part, after similar rules for other TMDL basins in Oregon. The instream nutrient concentrations, however, are based on specific studies done on the Grande Ronde River and Catherine Creek and on scientific literature related to algae growth.

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**Summary of Rulemaking Proposal Presented for Public Hearing and Discussion of Significant Issues Involved.**

The Rulemaking proposal discussed what the proposed rulemaking would do: 1) set in-stream concentration limits for nutrients in the Grande Ronde Valley, 2) establish a schedule for point sources to complete plans and construct facilities to meet the requirements of the new in-stream nutrient limits, and 3) set a time frame for developing water quality management plans to address nonpoint source pollution. The water quality management plans envisioned in the rule are intended to contain the elements specified in the Department's Guidance For Developing Water Quality Management Plans That Will Function As TMDLs For Nonpoint Sources so that beneficial uses will be protected and the stream segments for which the plans are written can be removed from the 303(d) list. The rulemaking proposal included a Fiscal and Economic Impact Statement, a Land Use Evaluation Statement, and the text of the proposed rule.

Attachment F of the rulemaking proposal, Water Quality Report – Grande Ronde River, discussed the water quality concerns. It identified aquatic life and aesthetic quality as the beneficial uses most at risk. Both are currently identified as “not supported.” This means that water quality standards intended to protect those uses are being violated. The water quality report also identified the parameters for which Catherine Creek and/or the Grande Ronde River are listed on the state's 303(d) list: Dissolved oxygen, flow modification, habitat modification, periphyton (attached algae), pH, phosphorus, sediment, temperature, and water contact recreation. It discussed the large volume of monitoring data that has been collected over the past seven years and how that data shows that both point sources (two wastewater treatment plants and one industrial source) and nonpoint sources (agriculture, urban, and forestry) contribute to the identified problems. The report discusses the very low concentrations of nutrients that can be allowed if the periphyton growth, which drives the dissolved oxygen and pH standard violations, is to be controlled by reducing nutrients alone. It also discusses other factors that affect periphyton growth: availability of light, temperature, grazing by fish and insects, substrate characteristics, stream volume and velocity. Because of the difficulty of evaluating the combined effects of all of these factors, the report recommends an initial step of adopting nutrient concentration limits that would, by themselves, limit the algae growth: 5 micrograms per liter orthophosphate and 40 micrograms per liter dissolved inorganic nitrogen. The water quality report goes on to discuss the implications of these limits for point and nonpoint sources.

Because of the restrictive effluent limits that result for point sources the proposed rulemaking would likely result in a “no discharge” option during the summer months. Point sources will likely need to design and install facilities capable of producing effluent for land application and/or storage during the low river flow months. This will have the effect of completely removing point source

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contributions to water quality problems in Catherine Creek and the Grande Ronde River during the low flow season.

Water quality studies have shown that control of point sources alone will not resolve all of the water quality concerns in the Grande Ronde. Nonpoint sources have been shown to have significant effects on water quality in the basin. With reference to nutrients specifically, 44 to 50+ percent of the load within the valley originate from diffuse sources within the reach. Separating the total nonpoint source load into source categories (agriculture, urban, residential, forestry, etc.) and allocating available loads to different categories is neither practical nor necessary. Because of the very low target concentrations of nutrients only very small pollutant loads can be allowed (less than a pound per day of orthophosphorus and about 3 pounds per day inorganic nitrogen). Attempting to allocate this small loading capacity among the sources would result in individual nutrient loads that could not be measured. In addition the nonpoint sources also need to address the other parameters on the 303(d) list. The recommended approach for addressing nonpoint sources is to develop water quality management plans which strive to achieve the water quality standards and in-stream criteria without allocating specific pollutant loads by source category. This will allow greater flexibility and cooperation between sources and improve the likelihood of success.

### **Summary of Significant Public Comment and Changes Proposed in Response**

During the public comment period comments were received from eight persons. Two comments suggested that the Department should work closely with the local watershed council (Grande Ronde Model Watershed) and use existing planning and assessment documents in the development of the watershed management plans. The Department strongly agrees and intends to use that kind of cooperative approach.

The Cities of Union and La Grande requested assurance that existing wastewater treatment facilities planning documents would be acceptable. The Department has been in contact with staff from both cities and believes that both are on track toward producing documents that can be approved. The Department cannot, however, guarantee approval prior to submission of the final plans, public comment, and staff review. The cities also indicated a desire that the timing for ceasing discharge for the summer season be based on stream flow alone rather than on the month of the year. This would allow flexibility to discharge later into the season if stream flow remains relatively high. This is the Department's intent. As long as flows remain above the specified criteria (15 cfs for Catherine Creek, 200 cfs for the Grande Ronde River), and water quality standards are not being violated, discharge would be allowed to continue.

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The Oregon Department of Fish and Wildlife suggested that increased river flow could be a cost effective way of addressing some of the water quality issues and that DEQ should consider filing for an instream water right. The Department agrees that flow is an important component in managing water quality. The possibility of filing for instream rights will be discussed by the Department's Advisory Committee during the development of the water quality management plans.

The Oregon Department of Agriculture (ODA) commented that they, and potentially other management agencies, would not be addressing flow in water quality management plans. Flow modification is one of the parameters for which the Grande Ronde and Catherine Creek is on the 303(d) list. To resolve this issue, DEQ intends to meet with ODA, the Oregon Water Resources Department and other agencies to develop, over the next 18 months, a strategy for addressing issues of stream flow. Specific reference to flow modification in the rule was deleted, however, and replaced by a general reference to standards violations listed on the 303(d) list.

ODA also requested changes in the rule language relevant to development and approval of water quality management plans. They suggest that the rule include a sentence and clarifications indicating that agricultural water quality management plans will be developed consistent with ODA rules and procedures. Changes were made to the rule language to address these concerns. DEQ and ODA will need to work out specific procedures through interagency discussions over the next several months.

The Weyerhaeuser Company commented that they believe DEQ lacks the authority to require the Oregon Department of Forestry (ODOF) to 1) participate in development of water quality management plans, 2) review or approve forestry water quality management plans, 3) require compliance with a management plan. The Company believes that if a forest operator is complying with the forest practices regulations then they are considered to be in compliance with water quality regulations. It suggest that a memorandum of understanding (MOU) between DEQ and ODOF, which addresses procedures, be developed and signed prior to the adoption of this rule. The Department agrees that the Forest Practices Act (FPA), administered by ODOF, is the regulatory mechanism for control of forest activities related to water quality. Water quality management plans that will qualify as TMDLs, however, must be specific to particular segments or subbasins. The Department believes that ODOF should participate in the TMDL process, but that it must also be consistent with State law. In addition, it is also important for ODOF to participate along with the other management agencies so that opportunities for cooperation and basin specific tailoring of implementation are not lost. To address this issue, the proposed rule was modified to cite current statutory requirements relative to forest practices. In addition, the Department and ODOF will develop a Memorandum of Understanding (MOU) that will address how forest practices will be addressed in TMDLS. The Department does not, however, believe this MOU needs to be signed prior to adoption of this rule.

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One person commented that "even though it has been proved that the temperature standard cannot be met and that a new standard should be established ... the agency intends to persist." The Department has not received any information or documentation that has proved that the temperature standard cannot be met. The current proposed rulemaking does not address the temperature standard or revisions to it. The rule does include temperature in a list of eight parameters for which the Grande Ronde and Catherine Creek are listed on the 303(d) list. All of these parameters must be addressed in a TMDL in order to remove these streams from the 303(d) list. The Department has indicated a willingness to work cooperatively with other agencies/entities to consider possible alternatives to the temperature standard as long as beneficial uses are equally protected. The process of identifying alternatives has only just begun and will continue for many months to a few years. In any scenario, temperature or its replacement measure will need to be addressed in any TMDL for the Grande Ronde River and Catherine Creek.

As a result of discussions with the Attorney General's office concerning the public comments received, substantial rewriting of section (1) (a) and (b) of the draft rule was done in order to clarify intent. See Attachment E for detailed changes to the original proposed rule.

### **Summary of How the Proposed Rule Will Work and How it Will be Implemented**

Assuming the proposed rule is adopted as recommended, the Department will notify point sources by letter of their obligations under the rule. DEQ staff will also personally contact each source. Nonpoint source designated management agencies will be similarly contacted.

As soon as practicable, the Department will contact the Grande Ronde Model Watershed Council to begin the process of impaneling a nonpoint source advisory committee.

As necessary and as appropriate, the Department will meet with all agencies to provide technical assistance.

Concerning issues related to forestry and agricultural nonpoint source WQ management plans, the Department will begin negotiations with the Oregon Departments of Agriculture and Forestry. In addition, the Department will begin discussing with the Oregon Water Resources Department, the appropriate means for addressing flow modification.

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**Recommendation for Commission Action**

It is recommended that the Commission adopt the rule regarding establishment of Total Maximum Daily Loads (TMDLs) for the Grande Ronde River and Catherine Creek to meet Water Quality Standards including establishment of in-stream criteria for nutrients 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. Detailed Changes to Original Rulemaking Proposal in Response to Public Comment
- F. Rule Implementation Plan
- H. Water Quality Report – Grande Ronde River

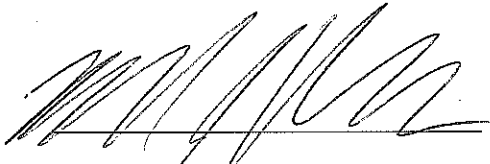
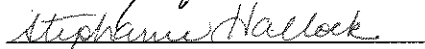
**Reference Documents (available upon request)**

Written Comments Received (listed in Attachment C)

Approved:

Section:

Division:

Report Prepared By: Mitch Wolgamott  
Phone: 541 278-4619 or 541 963-3177

Date Prepared: September 3, 1997

DMW

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Agenda Item E, October 3, 1997 EQC Meeting  
Attachment A: Rule Proposed for Adoption

Special Policies and Guidelines

340-41-745

(1) This rule establishes special policies and requirements for portions of Catherine Creek and the Grande Ronde River. These waterbodies are currently listed as water quality limited and these rules are intended to bring the waterbodies into compliance with standards for dissolved oxygen, pH, temperature, and bacteria. The rule provides for modification of waste water control facility plans, development of water quality management plans, and establishment of instream concentration limits. These measures are intended to control the growth of periphyton that is contributing to exceedances of the instream water quality standards for pH and dissolved oxygen. The growth of periphyton is also affected by other factors such as flow, temperature and sunlight.

(a) This rule applies to Catherine Creek from the City of Union to the Grande Ronde River (and all tributaries that enter this segment of the creek) and the Grande Ronde River from Five Points Creek to its confluence with the Wallowa River (and all tributaries that enter this segment of the river).

(b) Except as provided below, no wastewater discharge or other activity is allowed if the discharge or other activity will cause the following nutrient concentrations to be exceeded:

\* Orthophosphate Phosphorus (as P) 5ug/L

\* Dissolved Inorganic Nitrogen (ammonia + nitrite + nitrate, as N) 40ug/L

(i) The concentrations do not become effective until Department-approved wastewater control facility plans and water quality management plans are fully implemented or December 31, 2002, unless otherwise extended by the Environmental Quality Commission for good cause.

(ii) The Department can waive these nutrient concentration limits when the Department determines conditions are such that higher nutrient concentrations will not result in violations of Water Quality Standards.

(c) Within one year of adoption of this rule, the Cities of La Grande and Union shall submit to the Department a facilities plan describing how they will modify and upgrade their wastewater treatment facilities by December 31, 2002, to comply with this rule and all other applicable rules regarding the treatment and disposal of wastewater. This facilities plan shall include a description of the present physical and institutional infrastructure, all necessary intergovernmental agreements and approvals as appropriate, time schedules for accomplishing goals including interim objectives, and a financing plan.

(d) Within one year of adoption of this rule, Boise Cascade Corporation shall submit a facilities plan which describes how wastewater discharges will be controlled at the Island City particle board plant by December 31, 2002, to comply with this rule and all other applicable rules regulating waste discharge.

(e) In order to control nonpoint source pollution, the Department shall establish an advisory committee to develop a process and time schedule for addressing nonpoint source contributions to identified water quality standards violations in the stream segments identified in this rule and for meeting the in-stream nutrient criteria established in this rule. Within eighteen (18) months of the adoption of this rule, Union County, the incorporated cities within the Grande Ronde Valley, and the Oregon Departments of Agriculture shall submit a water quality management plan that describes how nonpoint source pollution will be controlled by December 31, 2002 to reduce in-stream nutrient concentrations to achieve the criteria established in this rule and to comply with in-stream water quality standards violations as listed on the 303(d) list. For Agricultural Water Quality Management Plans, plans shall be developed consistent with OARs 603-90-000 through 603-90-050. Silvicultural activities shall be addressed pursuant to a ORS



468B.110 and ORS 527.765 through 527.770 and consistent with a Memorandum of Understanding to be developed between the Oregon Department of Forestry and the Department of Environmental Quality.

(f) The Department shall review amended facility plans, water quality management plans and other measures undertaken in accordance with this rule to determine whether the plans and measures are reasonably likely to assure that relevant water quality standards will be achieved. If a facility plan is rejected, reasons shall be specified and a schedule for modification established. The Department shall provide an opportunity for public comment and a hearing before submitting plans or other measures to the Environmental Protection Agency

(g) The Commission recognizes that it may take several years after full implementation before water quality management plans become effective in reducing and controlling pollution. In addition, the Commission recognizes that technology for controlling nonpoint source pollution is, in many cases, in the development stages and that it may take one or more iterations before effective techniques are found. It is possible that after application of all reasonable best management practices, the in-stream criteria established in subparagraph (b) of this section cannot be achieved. In this regard, the Commission directs the Department to work cooperatively with those nonpoint source entities that act in good faith to meet the requirements of this rule. If a nonpoint source entity complies with its State-approved water quality management plan, it will be deemed to be in compliance with this rule.

<p>TMDLS SUBMITTED TO EPA</p> <p>North Coast Subbasins</p> <p>Yamhill Subbasin</p> <p>Klamath Basin, lost river subbasin</p> <p>Umpqua Subbasins</p> <p>Coos, coquille &amp; Lower Umpqua subbasins</p> <p>Umatilla subbasins</p> <p>Grande ronde subbasins</p> <p>mid coast subbasins</p> <p>pudding subbasin</p> <p>clackamas/sandy subbasin</p> <p>trout creak sprague,</p> <p>Williamson &amp; Upper Klamath subbasins</p> <p>Middle Rogue Applegate &amp; Illinois subbasins</p> <p>Sixes, lower rogue &amp; Chetco subbasins</p> <p>NF, MF John Day &amp; Lower John Day subbasins</p> <p>Powder subbasins,</p> <p>Bully creek subbasin</p>	<p>11-97</p>		
<p>COASTAL SALMON PLAN ELEMNTS</p> <p>From 3 page document</p>			

STATE WIDE EFFORTS WORKPLAN

OREGON PLAN

Activity	Project dates	Accomplished X	Lead
<p>STATEWIDE PUBLIC OUTREACH</p> <p>Letters to watershed councils, other local groups                      Regular information sheets biweekly                      Open House work sessions various locations                      WEB page set up                      WEB page maintenance volunteer identified                      Advisory committees established                      Science committee-Salmon plan                      HSP advisory committee</p>	<p>9-97                      9-97                      11-97</p>	<p>X</p>	
<p>STATE AGENCY STARTUP</p> <p>New staff hired/trained                      Initial State Agency coordination meeting                      Update state agency coordination meeting                      Guidance documents prepared                      DEQ NPS                      Ag Early Action Guidance for SWCD                      Regional coordination meetings/all players</p>	<p>10-97                      9-22-97                      10-98</p>		
<p>COORDINATION AGREEMENTS/EFFORTS</p> <p>MOA/DEQ - AGRI                      MOA/DEQ - ODF                      MOA/AGRI - OSU Extension                      Federal Agency commitment meeting                      MOV/DEQ - USFS                      MOA/DEQ &amp; AGRI - BLM                      MOA/AGRI-NRCS                      MOA/WRD - BUREAU OF REC</p>	<p>11-97</p>		
<p>RESOLUTION OF KEY ISSUES</p> <p>Flow Modification, who &amp; what                      Legacy issues ODOT, ODF, USFS, BLM, COE                      Subbasin advisory groups, relationships to existing                      watershed councils, SB1010 committees</p>			
<p>GWEB EFFORTS</p> <p>Listing of project by major category                      prioritization criteria established</p>			
<p>OTHER PARTNERS' REPORTS</p> <p>Cattlemen association membership outreach                      Oregonians for FS outreach efforts                      Environmental group outreach efforts</p>			

**NOTICE OF PROPOSED RULEMAKING HEARING**

Department of Environmental Quality

OAR Chapter 340-41-745

<b>DATE:</b>	<b>TIME:</b>	<b>LOCATION:</b>
August 5, 1997	6:00 PM	Union Soil and Water Conservation District, Conf. Rm. 10507 N McAlister Road, Island City, Oregon

**HEARINGS OFFICER(s):** Dan Lobato

**STATUTORY AUTHORITY:** ORS 468B.015 Policy, ORS 468B.030 Effluent Limitations, ORS 468B.035 Implementation of the Federal Water Pollution control Act

or **OTHER AUTHORITY:**

**STATUTES IMPLEMENTED:**

**ADOPT:** OAR 340-41-745

**AMEND:**

**REPEAL:**

**RENUMBER:**

(prior approval from Secretary of State REQUIRED)

**AMEND & RENUMBER:**

(prior approval from Secretary of State REQUIRED)

- 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:**

This proposed rule would: 1) Establish in-stream concentration limits for nutrients in the Grande Ronde River from the confluence with the Wallowa river upstream to Five Points Creek. 2) Establish a schedule for the cities of La Grande and Union to complete and implement facilities plans to upgrade municipal wastewater treatment plants. 3) Establish a schedule and process for developing water quality management plans for the control of nonpoint source pollution from urban, agricultural, forestry, and other sources.

**LAST DATE FOR COMMENT:** August 8, 1997

<b>AGENCY RULES COORDINATOR:</b>	Susan M. Greco, (503) 229-5213
<b>AGENCY CONTACT FOR THIS PROPOSAL:</b>	Mitch Wolgamott
<b>ADDRESS:</b>	700 SE Emigrant, Suite 330, Pendleton, OR 97801
<b>TELEPHONE:</b>	(541) 278-4619/1-800-452-4011

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.

*Susan M. Greco* 6/12/97  
 \_\_\_\_\_  
 Signature Date

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking Proposal  
for

Rule Adoption to Establish In-stream Criteria for Nutrients in the Grande Ronde River and Catherine Creek and Establish Schedules for the Development and Implementation of Facilities Plans and Water Quality Management Plans.

## Fiscal and Economic Impact Statement

### Introduction

The proposed rule does three things that will have varying fiscal impact. First, the proposed rule would establish instream nutrient concentration limits for the Grande Ronde River and Catherine Creek. Second, it would require the Cities of La Grande and Union, and Boise Cascade Corporation to develop facilities plans describing how they will modify and/or upgrade waste water treatment facilities to comply with the rule. There are costs associated with development of these facilities plans and there will be significant costs associated with construction of the modifications or upgrades. It is impossible to accurately predict what the final costs will be at this point because the cities have not completed the facilities planning process and selected alternatives to construct. It is likely that the costs will be in the millions of dollars. These costs will likely result in higher rates for wastewater treatment services being charged to residents connected to the system. The cities facilities plans, when completed, will include a financing plan that will provide more definitive information on the costs.

Third, the proposed rule would require the cities, county, and agriculture and forest industries to develop and implement water quality management plans to address nonpoint source pollution contributions to water quality standards violations. Costs will be associated with the implementation of these plans. It is difficult to estimate what those costs will be at this point because the plans have not yet been developed. It seems likely that nonpoint source control will rely heavily on vegetation management and may result in the development of buffers along the river and streams. In that case, the most significant costs in rural areas would likely be related to loss of agricultural production within those buffers.

One can get a rough idea of the magnitude of these costs by calculating the value of a 25 foot buffer on both sides of the Grande Ronde River and Catherine Creek from La Grande and Union to Elgin. That area includes about 80 miles of mainstem stream, which equates to approximately 490 acres of buffer. If one assumes that half of these acres are currently in irrigated agriculture and the remaining acres are

equally split between pasture and non-irrigated agriculture, and further assume that the entire value of the land would be lost, then we can calculate a conservative estimate (or over estimate) of the cost. The calculation results in a value of \$612,500 for the mainstem buffer from La Grande to Elgin.

Increasing the width of the buffer would obviously result in a proportionate increase in cost. There are, of course, many more miles of tributary streams that are not accounted for here. On the other hand, many miles of mainstem and tributary streams already have adequate vegetation and would not need to be converted from current use.

In the cities, purchase of easements and increased ditch sizing and maintenance to allow for vegetation growth and sediment trapping will be significant costs.

### **General Public**

The most obvious fiscal impact of this rule on the general public in urban areas would be increased sewer rates. The cities of La Grande and Union will need to pass bonds to pay for treatment plant upgrades. Predicting the amount of those bonds prior to completion of facilities planning is not possible but they are likely to be several million dollars. In order to repay these bonds sewer rates will likely increase by 10 to 25 percent. In La Grande the current rate is \$17.70. This would mean an increase of \$1.70 to \$4.40. This would generate from \$80,000.00 to \$210,000.00 dollars per year for repayment of debt. Residents of the City of Union would likely face similar increases and potential larger increases because of a smaller number of rate payers and participation in grant programs that could result in sewer rates as high as \$30.00 per month.

In other cities facing similar TMDL challenges implementation of nonpoint source controls to improve the quality of urban runoff has required the establishment of surface water management fees of \$3.00 to \$4.00 per month. This is in addition to the sewer fees.

### **Small Business**

Small businesses that use city sewer services would see similar fiscal effects as those described for the general public: Increased sewer rates and potential surface water management fees.

Agricultural operations will need to implement best management practices to reduce nonpoint source pollution. The water quality management plan, which will more clearly define what those practices will be, will not be developed until after the adoption of the proposed rule (which sets a schedule for developing the management plans). The practices are likely to involve improvement of riparian vegetation along the river and tributaries as needed. One way to estimate costs is to calculate the value of near stream land and assume the entire value is lost and is therefore a cost to the operator. In fact, there are alternative crops, riparian pastures, and intrinsic values so that the entire productive capacity and value of the land would not be lost. But assuming a complete loss provides a simple, conservative

estimate. A 25-foot buffer on both sides of a one-mile long stream segment amounts to approximately 3 acres of land. At average fair market value the cost of that buffer would be:

For irrigated cropland	\$5400 per mile
For non-irrigated cropland	\$2700 per mile
For pastureland	\$1500 per mile

### Large Business

Large businesses that discharge effluent to streams may need to treat or eliminate those discharges. The Boise Cascade particleboard plant in Island City is the only business expected to be affected in this way. Large businesses that generate stormwater runoff are already required to comply with stormwater permits and will not likely incur any significant additional cost.

### Local Governments

The cities of La Grande and Union have already begun development of facilities plans for upgrading their wastewater treatment plants. This process involves both staff time and consulting fees. La Grande has already spent approximately \$155,000 in anticipation of this rulemaking and expects to need another \$15,000 to \$35,000 to complete the process. Both cities will then have to construct the necessary treatment plant upgrades with costs in the millions of dollars. These costs may be partially offset by grants and loans but substantial amounts of money will undoubtedly need to be raised through bonds. The cost of repaying these bonds will likely be passed on to the ratepayers as discussed under general public above.

City and Union County staff will need to participate in an advisory committee to develop the water quality management plans for nonpoint source control. It is anticipated that this could take as much as 100 hours over the next 18 months. Staff from the Union Soil and Water Conservation District and from the Grande Ronde Model Watershed Program are also anticipated to be involved in this effort.

County road ditches may be transporting significant amounts of sediment and nutrients to waters of the state. It's anticipated that changes in road ditch maintenance, vegetation maintenance, and road shoulder maintenance may be necessary as a result of the water quality management plan. This could lead to increases in these costs. On the other hand, maintaining vegetation along and in ditches by doing less frequent "cleaning" and spraying could lead to cost savings. Union County estimates that current spending on ditch maintenance varies from \$25,000 to \$50,000 dollars per year depending on the weather.

## State Agencies

DEQ – The Department will be staffing the advisory committee working on the water quality management plan, revising permits for point sources, working with City of La Grande on its surface water management technical committee, and working with the Department of Agriculture on development of rules for control of nonpoint source contributions from agricultural sources. This effort could amount to nearly a full time equivalent (FTE) over the next year and a half. It is anticipated that this need can be covered with existing staff and assistance from new positions resulting from the Governor's Healthy Streams Initiative.

Other Agencies – The Oregon Department of Agriculture (ODA) will need to use a large portion of an FTE in the development of rules implementing SB 1010 to control agricultural nonpoint source pollution. This need will be covered by one of the new positions ODA is receiving through the Governor's Healthy Streams Initiative. Some assistance will also likely be sought from the Oregon Department of Forestry and the Oregon Department of Fish and Wildlife. There is some concern that ODFW may need to identify additional resources to cover this need.

There will also likely be some fiscal effect on two federal agencies: Natural Resource Conservation Service and US Forest Service.

## Assumptions

Sewer rates in La Grande may increase by 10% to 25%

There are approximately 4000 rate paying households in La Grande

1 mile = 5280 feet

1 square foot =  $2.3 \times 10^{-5}$  acres

Approximate average fair market value, per acre, of agricultural land in Union County:

Irrigated cropland	\$1800
Non-irrigated cropland	\$800 - \$1000
Pasture	\$400 - \$500

Establishment of buffer areas results in complete loss of land value to operator.

## 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. There could be an increase in the systems development charge for sewer hookup.



State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking Proposal

For

Rule Adoption to Establish In-stream Criteria for Nutrients in the Grande Ronde River and Catherine Creek and Establish Schedules for the Development and Implementation of Facilities Plans and Water Quality Management Plans.

Land Use Evaluation Statement

**1. Explain the purpose of the proposed rules.**

The purpose of the proposed rule is to 1) Establish in-stream concentration limits for nutrients in the Grande Ronde River from the confluence with the Willowa River upstream to Five Points Creek. 2) Establish a schedule for the cities of La Grande and Union to complete and implement facilities plans to upgrade municipal wastewater treatment plants. 3) Establish a schedule and process for developing water quality management plans for the control of nonpoint source pollution from urban, agricultural, forestry, and other sources.

**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:**

The Clean Water Act Section 303, Oregon Revised Statutes Chapter 468, and Oregon Administrative Rules Division 41 contain provisions related to the development of Total Maximum Daily Loads (TMDLs) and implementation plans to achieve the TMDLs on water quality limited stream segments.

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

Yes X No \_\_\_\_\_ (if no, explain):

The TMDL implementation plan, or water quality management plan, may necessitate a change in land use activities or practices. A designated local government is generally responsible for coordinating the development of the plan with affected local comprehensive plans. Evidence that the management plan is, or will be, compatible with the local comprehensive plan must be provided before the Environmental Quality Commission approves the management plan.

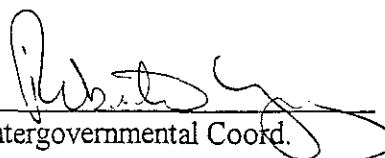
- c. If no, apply the following criteria to the proposed rules.

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.

6/12/97  
Date

**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?**

Yes. The Clean Water Act (CWA) Section 303 requires Total Maximum Daily Loads (TMDLs) be established as needed for streams on the state's 303(d) list of water quality limited waterbodies. 40 CFR Part 130 establishes the program that implements these requirements. Many stream segments in the Grande Ronde Basin are on the current 303(d) list. States or EPA can establish TMDLs. If the State fails to adopt TMDLs, EPA would be required to do so.

The rule being proposed by this action is not intended to impose more stringent requirements than would be otherwise imposed by federal rule. This rule is intended to implement federal requirements for TMDLs. In fact, the rule being proposed herein provides much more flexibility than would likely occur if the TMDL was established by EPA.

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

TMDLs are required when technology based controls on point sources are not sufficient, by themselves, to meet water quality standards. Nonpoint source controls are usually 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?**

The federal requirements were established to reduce waste discharges to surface waters where technology-based controls are insufficient to meet in-stream water quality standards. The federal requirements, therefore, provide the need to establish a TMDL, but are not specific to any water body. The Department is unaware if the process that developed the Clean Water Act and its implementing regulations considered specific Oregon issues.

**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 clarifies what the instream concentration targets for nutrients are. The resulting permit limits will give the point sources a level of certainty of what the requirements will be and that they will not become more stringent. This will allow them to complete facilities planning and construct the necessary facilities to meet the requirements of the permits. The proposed rule also clarifies which water quality standards the nonpoint sources need to address, what needs to be contained in an acceptable water quality management plan, and that an advisory committee process will be used in developing the management plan.

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

Not to our knowledge.

**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. One of the objectives of a TMDL is to equitably allocate solutions to pollution problems so that one, or a few, regulated sources do not bear the full burden. The proposed rule clearly establishes that the nonpoint sources in the basin must address their contributions to standards violations just as the permitted point sources do.

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

This rule is not more stringent than the federal requirements. In fact, it may provide more flexibility than would occur if the rule was established by EPA instead of DEQ.

**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?**

Yes, although in some cases the Best Management Practices (BMPs) for nonpoint source control are still evolving. As a result, implementation may be iterative.

**11. Will the proposed requirement contribute to the prevention of pollution or address a potential problem and represent a more cost effective environmental gain?**

Yes. The BMPs for nonpoint source control and stormwater treatment emphasize prevention by using alternatives to current practice or by intercepting pollution before it enters waters of the state. This is usually more cost effective than clean-up after the fact.

**State of Oregon  
Department of Environmental Quality**

**Memorandum**

**Date:** June 12, 1997

**To:** Interested and Affected Public

**Subject:** Rulemaking Proposal and Rulemaking Statements - Rule Adoption to Establish In-stream Criteria for Nutrients in the Grande Ronde River and Catherine Creek and Establish Schedules for the Development and Implementation of Facilities Plans and Water Quality Management Plans.

This memorandum contains information on a proposal by the Department of Environmental Quality (Department) to adopt new rules/rule amendments regarding Total Maximum Daily Loads (TMDLs) in the Grande Ronde River. 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: 1) Establish in-stream concentration limits for nutrients in the Grande Ronde River from the confluence with the Wallowa River upstream to Five Points Creek. 2) Establish a schedule for the cities of La Grande and Union to complete and implement facilities plans to upgrade municipal wastewater treatment plants. 3) Establish a schedule and process for developing water quality management plans for the control of nonpoint source pollution from urban, agricultural, forestry, and other sources.

The Department has the statutory authority to address this issue under Oregon Revised Statutes (ORS) 468B.015 Policy, ORS 468B.030 Effluent Limitations, and ORS 468B.035 Implementation of the Federal Water Pollution Control Act.

**What's in this Package?**

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

- Attachment A. The Legal Notice of the Rulemaking (required by ORS 183.335)
- Attachment B. The official statement describing the fiscal and economic impact of the proposed rule. (required by ORS 183.335)
- Attachment C. A statement providing assurance that the proposed rules are consistent with statewide land use goals and compatible with local land use plans.
- Attachment D. Questions to be Answered to Reveal Potential Justification for Differing from Federal Requirements.
- Attachment E. Proposed OAR 340-41-745, the actual language of the proposed rule.
- Attachment F. Draft Water Quality Report -- Grande Ronde River

Memo To: Interested and Affected Public  
June 12, 1997  
Page 2

### **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:** August 5, 1997

**Time:** 6:00 P.M.

**Place:** Union Soil and Water Conservation District, Conference Room  
10507 N McAlister Road  
Island City, Oregon

**Deadline for submittal of Written Comments:** August 8, 1997

Dan Lobato of DEQ's Eastern Region 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.: Dan Lobato, 700 SE Emigrant, Suite 330, Pendleton, Oregon 97801.

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

### **What 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 October 2-3, 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?**

The Grande Ronde River (Wallowa River to Five Points Creek) has been on the State's 303(d) List of Water Quality Limited Waterbodies for several years. It is on the current 303(d) list as a result of concerns for dissolved oxygen, pH, periphyton, phosphorus, water contact recreation, temperature, flow modification, habitat modification, and sediment. It is also one of the eleven listed waterbodies included in a 1987 TMDL Consent Decree between the U. S. Environmental Protection Agency (EPA) and the Northwest Environmental Defense Center (NEDC). Catherine Creek (mouth to Union Dam) is on the current 303(d) list for dissolved oxygen, pH, periphyton, phosphorus, temperature, flow modification, and habitat modification.

The oxygen, pH, periphyton and phosphorus problems result, in part, from excessive nutrients being contributed by a combination of point and non-point sources. The remaining issues are primarily non-point source in origin and are inter-related with the nutrient concerns.

It is necessary to establish TMDLs and waste load allocations (WLAs) for the Grande Ronde River and Catherine Creek in order to complete permit modifications and allow sources to complete facilities plans to address point source issues in the Grande Ronde Valley. Nonpoint sources will be addressed through an advisory committee and water quality management plan (Facility Plan equivalent). The rule establishes schedules and expectations for the development and implementation of those plans.



### How was the rule developed

Department staff in consultation with staff of the Grande Ronde Model Watershed, the cities of La Grande and Union, EPA, and others developed the draft rule. The purpose of this public process and the upcoming public hearing is to gather additional comments and suggested revisions to the draft rule and draft water quality report prior to final adoption. The text of the rule is patterned, in part, after similar rules for other TMDL basins in Oregon. The instream nutrient concentrations, however, are based on specific studies done on the Grande Ronde River and Catherine Creek and on scientific literature related algae growth.

Copies of the documents relied upon in the development of this rulemaking proposal can be reviewed at the Grande Ronde Model Watershed Office at 10901 Island Avenue, La Grande, Oregon, the Union Soil and Water Conservation Office at 10507 N McAlister Road, Island City, Oregon, the Department of Environmental Quality's office at 700 SE Emigrant, Suite 330, Pendleton, Oregon, or at the Department of Environmental Quality's office at 811 SW 6th Avenue, Portland, Oregon. Please contact Jackie Ray, at 541 278-4605, for times when the documents are available for review.

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

Cities, agricultural, industrial, and forestry operators in the Upper Grande Ronde River hydrologic unit (up stream of the Confluence of the Wallowa River), Federal, Tribal, State, and local agencies, citizens and activist groups concerned with water management in the Upper Grande Ronde River.

### How will the rule be implemented

The Department will draft permits for the wastewater treatment plants for the cities of La Grande and Union. A local advisory committee, made up of representatives of all the stakeholders (both point and nonpoint sources), will be established. The advisory committee will develop a process and schedule for addressing nonpoint source contributions and will provide advice and coordination on the development of water quality management plans

The advisory committee will include representation of municipalities, Union County, agriculture, forestry, tribes, environmental, community and business interests, state and federal government agencies. Establishment of the committee will be done cooperatively with the Grande Ronde Model Watershed that is already involved with watershed planning in the basin. There may be subcommittees that will address specific source categories or issues (i.e. agriculture, urban, forestry, SB 1010, point source facilities plans). The full committee will insure coordination of efforts so that practices

implemented across the valley are as complementary as feasible. The advisory committee will also help to insure that individual source categories management components fit together into a comprehensive, area-wide management plan that addresses all of the identified parameters prior to submission of the plan(s) for approval. The advisory committee may also make recommendations on a variety of issues such as which, if any, of the smaller communities in the area need to have their own management plans, what should be the boundaries of the overall management plan, how should point source controls relate to nonpoint controls.

**Are there time constraints**

As currently drafted the rule allows one year from adoption for the completion of facilities plans for point sources and 18 months for completion of water quality management plans for nonpoint sources. Implementation of plans to comply with the rule and with water quality standards is to occur by December 31, 2002.

**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:

Mitch Wolgamott at:  
Oregon Department of Environmental Quality  
700 SE Emigrant, Suite 330  
Pendleton, OR 97801  
(541) 278-4619

or Mitch Wolgamott at:  
c/o ODOT Region 5  
3012 Island Avenue  
La Grande, OR 97850  
(541) 963-3177

State of Oregon  
Department of Environmental Quality

Memorandum

Date: August 6, 1997

To: Environmental Quality Commission

From: Dan Lobato, Eastern Region, Water Quality Program

Subject: Presiding Officer's Report for Rulemaking Hearing  
Hearing Date and Time: August 5, 1997, beginning at 6:00 P.M.  
Hearing Location: Union County Soil and Water Conservation District, Conference Room, 10507 N. McAlister Road, Island City, OR.

Title of Proposal: Grande Ronde River Water Quality Rule

The rulemaking hearing on the above titled proposal was convened at 6:15 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.

9 people were in attendance, 2 people signed up to give testimony.

Prior to receiving testimony, Dick Nichols, Eastern Region Water Quality Manager, briefly explained the specific rulemaking proposal, the reason for the proposal, and responded to questions from the audience.

Summary of Oral Testimony

- Ms. Patty Perry, Executive Director of the Grande Ronde Model Watershed Program, testified in favor of the proposal. Ms. Perry testified that the Grande Ronde Model Watershed Program has requested "lead agency" status in coordinating the development of water quality management plans in the Grande Ronde basin. Specifically, the Watershed Program will work with DEQ to facilitate the formation of an advisory committee to develop a process and schedule for addressing nonpoint source contributions and provide advice on the water quality management plan for the basin.

In addition Ms. Perry recommended utilizing existing assessments and planning documents that are already in place to meet the criteria of a water quality management plan rather than beginning a new process.

Ms. Perry added that the Grande Ronde Model Watershed Board of Directors was prepared to be involved and committed to working with the Department of Environmental Quality on the development of a water quality management plan to address the TMDL's for the Grande Ronde River basin.

- The Honorable Sue Briggs, Mayor of the City of Union, testified in favor of the proposal. Mayor Briggs testified that the City of Union would want assurances from the DEQ that the planning documents previously prepared (i.e., the Wastewater Facilities Plan and Wastewater Facilities Plan Update) already meet the Draft Special Policies and Guidelines, OAR 340-41-745(1)(b), which require the submittal of wastewater facilities plan within one year of rule adoption. Mayor Briggs cited the "significant amount of time and money" already spent in developing the City of Union's planning documents.

In addition, Mayor Briggs requested that the early summer "transition period" in the Draft Water Quality Report be controlled solely by the Catherine Creek flow rate, irrespective of the month in which that flow occurs. Mayor Briggs cited the potential of the flows to be sufficient in July, but as the draft Water Quality

Memo To: Environmental Quality Commission  
August 6, 1997  
Presiding Officer's Report on  
August 5, 1997 Rulemaking Hearing  
Page 2

Report is currently written, the City of Union would not be allowed to discharge.

Mayor Briggs also testified that upon development of the TMDL's that they assume the TMDL's will be incorporated into the City's renewed NPDES permit. The city would like to reserve the right to offer comments on the specific items included in the draft NPDES permit when it is issued.

Both individuals who testified provided written copies of their testimony. (see attachments)

Written Testimony

The following people handed in written comments but did not present oral testimony:

None

There was no further testimony and the hearing was closed at 6:45 P.M..

Presiding Officer's Report on August 5, 1997 Rulemaking Hearing – Grande Ronde Water Quality Rule

Addendum: List of Persons Submitting Written Comments Prior to Close of Comment Period

The following persons submitted written comments on the Grande Ronde Water Quality Rule prior to the close of the Comment period at close of business on August 8, 1997. Copies of all written comments are available on request. Contact the DEQ Eastern Region Pendleton Office, 700 SE Emigrant, #330, Pendleton, OR 97801. 541-276-4063.

Joseph A. Cavalier, P.E.  
City Engineer  
City of La Grande 800 X Avenue  
La Grande, OR 97850

Scott Nebeker  
1901 N. Fir St.  
La Grande, OR 97850

Jeff Zakel  
District Fish Biologist  
Oregon Department of Fish and Wildlife  
107 20<sup>th</sup> Street  
La Grande, OR 97850

Ray Jandl  
Natural Resources Specialist  
Oregon Department of Agriculture  
635 Capitol Street NE  
Salem, OR 97310-0110

Kevin Godbout  
Oregon Environmental Affairs Manager  
Weyerhaeuser Company  
Corporate Headquarters  
Tacoma, WA 98477-0001

Sharon Beck  
64841 Imbler Rd  
Cove, OR 97824

State of Oregon  
Department of Environmental Quality

## Memorandum

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**Date:** August 26, 1997

**To:** Environmental Quality Commission  
**From:** Mitch Wolgamott, Eastern Region  
**Subject:** Department's Evaluation of Public Comment

As stated in the presiding officer's report (attached), two people gave oral testimony at the rulemaking hearing held on August 5, 1997. Prior to the close of the comment period six additional written comments were received. The Department's summary of issues raised during public comment and a response to each issue is provided below. The Department's response is in **bold**.

Response to Oral Testimony

Patty Perry, Grande Ronde Model Watershed Program (GRMWP), Executive Director.

Ms. Perry testified that GRMWP has requested "lead agency" status in coordinating the development of water quality management plans for control of nonpoint source (NPS) pollution from urban, agricultural, forestry, and other sources. **Several agencies will be involved in developing water quality management plans. Lead agency for some source categories is outside DEQ control. For example the Oregon Department of Forestry is the designated management agency (DMA) for forestry and the Oregon Department of Agriculture is the DMA for agricultural sources. These state agencies may, at their discretion, designate local agencies as the lead in developing subbasin specific plans. The Department has made a commitment to work cooperatively with the GRMWP in the establishment and staffing of the advisory committee that will provide coordination and advice on the development of the water quality management plan(s). This cooperative effort has already begun.** Ms. Perry also suggested using existing planning and assessment documents as a starting place in developing water quality management plans rather than starting over. **The Department strongly agrees with this approach and fully intends to make use of existing documents.**

The Honorable Sue Briggs, Mayor of the City of Union.

Mayor Briggs requested assurance from DEQ that planning documents already prepared would meet the requirements of the proposed rule for submittal of a wastewater facilities plan within one year of adoption. **Based on drafts and discussions with city staff and consultants, Department staff believe that Union's facilities planning is on track toward an approvable document. However, a final facilities plan has not been submitted, has not received public review, and has not been approved by the Department. The Department is not in a position to guarantee approval prior to public comment and staff review. Nevertheless, the Department intends to allow the city to rely on existing documents and past efforts to the maximum extent possible.** Mayor Briggs also requested that the early summer transition period, when wastewater treatment plant discharge to Catherine Creek would need to cease, be controlled by stream flow alone, irrespective of month. **That is the Department's intent. Discharge would be expected to cease when the flow falls below the stated criterion (15 cfs in this case). Available data indicates that this would usually, but may not always, occur sometime in June. Discharge could resume in the fall when the flow exceeds, and the temperature falls below, the stated criteria (15 cfs and 12 C in this case).**

### Response to Written Testimony

City of La Grande

The City of La Grande submitted comments very similar to those discussed from the City of Union above. They wanted assurance that work already completed on the City's facilities plan would be acceptable. **As with Union, DEQ staff discussions with City staff and consultants have been positive and appear to be leading to an approvable facilities plan. However, until the final plan has been received, opened to public comment and reviewed by DEQ staff, the Department cannot guarantee that it will be approved.** La Grande also questioned why July is identified as a no discharge month while no discharge periods for June are based on flow. **As with Union, the intent is that the beginning of the no discharge period is based on flow. For the Grande Ronde River the flow criterion is 200 cfs. Available data indicates that in most years the flow will fall below that level in June. If the flow remains above the criterion into July, and stream temperature remains low enough to allow discharge, then discharge could continue until river flow falls below 200 cfs. If flow falls below 200 cfs earlier than June, then discharge would be expect to cease at that time. It must be understood, however, that this discharge criteria is only intended to address periphyton growth and its resulting impacts on pH and dissolved oxygen. In achieving compliance with the temperature and ammonia-toxicity standard, the City of La Grande may have to further restrict periods and rates of discharge than is contemplated for the control of periphyton.**

Scott Nebeker

Scott Nebeker submitted comments in support of working with the Grande Ronde Model Watershed Program to form an advisory committee to provide advice on the water quality management plans for the basin. **This is the Department's intent and this cooperative effort has already begun.**

The Oregon Department of Fish and Wildlife

The Oregon Department of Fish and Wildlife(ODFW) pointed out that some forms of agricultural production are compatible with the use of buffers for water quality management, that there are potential economic benefits to restoring water quality and fishery resources, and that steelhead spawn in the mainstems of the Grande Ronde River and Catherine Creek in the valley in addition to the tributaries. **The Department concurs on all of these points.** ODFW also points out that increased flow could be a cost effective mechanism to address some water quality problems and suggests that DEQ consider filing for instream water rights for pollution control. **The Department agrees that flow is an important component in managing water quality. Taking advantage of opportunities to increase flow through efficiency improvements, conversion of existing water rights to instream use through purchase, lease or donation, or exchange of existing diversions for other water sources (e.g. municipal effluent), could well be a cost effective approach to improving water quality (in conjunction with source control). The Department is willing to consider application for an instream water right, but believes it would be useful to have input from the Water Quality Management Plan Advisory Committee on this issue before making application.**

The Oregon Department of Agriculture

The Oregon Department of Agriculture (ODA) suggests several changes to the rule language and asks questions to clarify intent. First, with regard to section (d) of the draft rule, they suggest deletion of the parenthetical statement in the second sentence which indicates that a water quality management plan could be made up of individual plans. **DEQ's intent with this statement was to indicate that, while it would be desirable to have one management plan that covers all source categories, it would still be acceptable for individual source categories (i.e. agriculture, forestry, urban) to develop separate plans that could be packaged together. The statement will be deleted, however.** They ask whether the December 2002 deadline refers to achievement of the criteria and water quality standards. **It does not. The date refers to the time by which a program to control nonpoint source pollution will be established and fully implemented. The Department recognizes that it may take additional time to achieve the water quality standards. The Department believes that paragraph (1)(f) of the proposed rule addresses this issue.**



The Department of Agriculture indicates that they will not address flow modification in their water quality management plans and suggests that the reference to flow be deleted from the rule. **Flow modification is one of the parameters for which the Grande Ronde River and Catherine Creek are placed on the 303(d) list. Therefore, flow must be addressed, to the extent practicable, in any acceptable TMDL if the segment is to be removed from the 303(d) list. To resolve this matter, DEQ will meet with ODA, the Oregon Water Resources Department and other agencies to develop, over the next 18 months, a strategy for addressing issues of stream flow. Specific reference to flow modification in the rule was deleted, however, and replaced by a general reference to standards violations listed on the 303(d) list. Finally, with regard to section (d), ODA suggests the addition of the following statement at the end of the section: "For Agricultural Water Quality Management Plans, plans shall be developed according to OARs 603-90-000 thru 603-90-050." The sentence will be added.**

With regard to section (e) of the draft rule, ODA believes the section, as originally drafted, is not consistent with existing law for agricultural plans and suggests alternative language that would indicate that the plans would be reviewed consistent with provisions of ORS 568.930(3) and ORS 568.930(4). **The concern appears to be with what agency approves plans for the purpose of compliance with the TMDL provisions of the Clean Water Act. Obviously the procedure used will need to be consistent with state law. Details of how the approval process will work to insure that a TMDL is acceptable prior to submission to the Environmental Protection Agency will be worked out over the next several months through discussion with ODA and DEQ management. Discussions between DEQ staff and Assistant Attorney General Larry Knudsen resulted in the following compromise language. Section (e), which becomes section (f) in the revised rule, will be revised as follows: "The department shall review amended facility plans, water quality management plans and other measures undertaken in accordance with this rule to determine whether the plans and measures are reasonably likely to assure that relevant water quality standards will be achieved. If a facility plan is rejected, reasons shall be specified and a schedule for modification established. The Department shall provide an opportunity for public comment and a hearing before submitting plans or other measures to the Environmental Protection Agency."**

With regard to section (f) of the draft rule, ODA suggests the word Department be replaced with the word State so that the last sentence of the section reads as follows: "If a nonpoint source entity complies with its State approved water quality management plan, it will be deemed to be in compliance with this rule." **The change will be made.**

Weyerhaeuser Company

Weyerhaeuser Company made comments focused on schedule and process for developing water quality management plans. Weyerhaeuser Company believes that DEQ lacks the authority to 1) require the Department of Forestry (ODOF) to participate in the development of water quality management plans, 2) review and approve forestry water quality management plans, and 3) require compliance with a water quality management plan. The Company points out that the Oregon Forest Practices Act (FPA) and its implementing rules, administered by ODOF, specify best management practices (BMPs) for forestry. If an operator is complying with those regulations they are considered in compliance with water quality regulations. Further, if DEQ believes the FPA to be insufficient, it must petition the Oregon Board of Forestry. Weyerhaeuser suggests that a memorandum of understanding (MOU) between ODOF and DEQ refining the regulatory process for inter-agency implementation of the forestry component for nonpoint source TMDLs needs to be signed prior to the adoption of the proposed rule.

**The Department agrees that it must petition the Oregon Board of Forestry if it finds that the FPA is inadequate to protect water quality. The Department's role in regulating water quality issues relative to forest operations is established in ORS 468B.110. In addition, the Department is negotiating a Memorandum of Understanding (MOU) with the Oregon Department of Forestry pursuant to ORS 468B.110. This MOU will define how forest operations will be addressed relative to the establishment of total maximum daily loads. Because of this, the Department has deleted the specific requirement that ODOF submit a water quality management plan and added the following language to the rule: "Silvicultural activities shall be addressed pursuant to ORS 468B.110 and ORS 527.765 through 527.770 and consistent with a Memorandum of Understanding to be developed between the Oregon Department of Forestry and the Department of Environmental Quality."**

Weyerhaeuser Company also was concerned that the proposed rule mandates that each water quality management plan contain the information specified in DEQ's water quality management plan guidance. Since this guidance was not adopted through an appropriate rule-making process, it has no enforceability. **DEQ discussed this issue with its legal counsel and agrees with this comment. The sentence has been deleted from the rule.**

Sharon Beck

Ms. Beck suggests that it is important to distinguish between nonpoint sources and background (natural) conditions. **This distinction is addressed in the water quality report. While the report does not quantitatively distinguish between the two, it clearly established the presence of nonpoint source contributions in the discussion of available monitoring data. In addition to documenting increasing pollutant concentrations with decreasing river mile with in the valley and measuring nutrient loading in seeps and groundwater drains along the river bank, estimates of nutrient**

loading showed more than 50 percent of nitrogen and 44 percent of phosphorus originated from diffuse sources within the study reach. Less than 50 percent of nitrogen and 32 percent of phosphorus originated from upstream. The remainder was from an identified point source. Because the land within the study reach is highly developed for agriculture and urban use, with no "natural condition" remaining, it would be difficult to argue that the diffuse loading within the valley is all natural.

An objection to the statement in the fiscal impact statement that agriculture will "need to implement best management practices" is raised because the statement assumes that agriculture causes pollution. **The purpose of the fiscal impact statement is to document that there will be costs associated with the implementation of the proposed rule. It is impossible to address the possible costs to agriculture without assuming that agriculture will participate in the program. The sources of pollution in the Grande Ronde are addressed in the water quality report and the mechanisms by which nonpoint sources, including agriculture, contribute are well documented in the literature.**

In reference to the discussion of fiscal impact on the Oregon Department of Agriculture (page 4 of the fiscal impact statement), Ms. Beck states that there is "no certainty that there is any pollution caused by agriculture." **Again, the fiscal impact statement is intended to discuss possible economic effects of the rulemaking. It is not the place for technical documentation of causes and effects of pollution. The sources of pollution in the Grande Ronde system are discussed in the water quality report. The mechanisms by which agriculture can contribute pollution to streams are well documented in the literature.**

In reference to the Land Use Evaluation Statement Ms. Beck states that planning and rulemaking should not proceed without "quality information about actual conditions in the watershed." **The purpose of the land use statement is to identify how the proposed rule may affect existing rules, programs or activities that are considered land use programs. This attachment is not the place where conditions are evaluated. The water quality report and its appendices contain information on the water quality concerns, the available monitoring data and what that data shows. The first element of the water quality management plans that will be developed as a result of this rulemaking is a condition assessment and problem description. This section of the water quality management plan will be based on existing information and assessments compiled by the Grande Ronde Model Watershed Program, the Union SWCD, the Watershed Health Program, and Forest Service planning documents.**

In reference to the draft rule it is stated that "even though it's been proved that the temperature standard cannot be met and that a new standard should be established ... the agency intends to persist." **This proposed rule does not address the temperature standard or revisions to it. The rule does include temperature in a list of eight**

parameters for which the Grande Ronde is listed on the 303(d) list. All of these parameters must be addressed in the water quality management plan if it is to qualify as a TMDL and result in removal of the river from the list. The Department has not received information or documentation that has proved that the temperature standard cannot be met. Nevertheless, the Department has agreed to work cooperatively with other agencies/entities to consider possible alternatives to the temperature standard as long as beneficial uses are equally protected. The process of identifying and evaluating such alternatives has only recently begun and will continue for many months. Temperature, or its replacement measure, in any case, would need to be addressed in the water quality management plans under any scenario.

With reference to the cover page of the water quality report, Ms. Beck requests that data be provided to her that supports and quantifies the identification of ag, grazing, urban and forestry as "known sources" of pollution. **Pollution sources are discussed in the text of the report and the appendices. As discussed in an earlier issue raised by Ms. Beck, data clearly shows in an increase in pollutant levels with decreasing river mile. It is the Department's judgment that these increases are, in part, human-induced. Quantification of the amount of pollution being contributed by each source category, however, was not attempted. Such an attempt would be extremely expensive and most likely futile. The Department's approach is to recognize an increase in pollutants, provide targets (in the form of in-stream nutrient criteria), and use the development and implementation of water quality management plans by appropriate agencies to reduced contributions of these pollutants to the river system. The Department has developed several graphs of data at various river locations that show the effect of increasing nutrients at various points along the river. This information will be forwarded to Ms. Beck.**

Finally, with respect to the Grande Ronde Water Quality Report, Ms. Beck states "This document is so filled with poorly phrased and unfounded statements of opinion, and general observations that do not apply to major parts of the watershed that I can only be glad it is a draft and hopefully not going to be used in any way as supplemental to any decision making process." **The Department disagrees. The report is based on several years of intensive monitoring within the Grande Ronde Basin, data analysis, computer modeling, and literature review. The report is specific to the Upper Grande Ronde Subbasin. With respect to the nutrient discussions, the report is specific to the Grande Ronde Valley portion of the subbasin. The general dissatisfaction with the report expressed in the comment provides no specificity as to what the objections are or how we might improve the report.**

\*\*\* DRAFT \*\*\*\* DRAFT \*\*\*\* DRAFT \*\*\*\* DRAFT \*\*\*\* DRAFT \*\*\*\* DRAFT \*\*\*

Redraft date: 9/16/97

Special Policies and Guidelines

340-41-745

~~(1) In order to improve water quality and comply with water quality standards for dissolved oxygen, pH, temperature, and bacteria in Catherine Creek from the City of Union downstream and in the Grande Ronde River from Five Points Creek to the confluence of the Wallowa (including their respective tributaries) the following special rules for total maximum daily loads, facilities plans, and water quality management plans are established:~~

~~(a) Unless otherwise approved by the Environmental Quality Commission, after the completion, and approval by the Department, of wastewater control facilities plans and water quality management plans required under this rule, but no later than December 31, 2002, no activities shall be allowed and no wastewater shall be discharged that cause the following in-stream nutrient concentrations to be exceeded in the Grande Ronde River or Catherine Creek unless the in-stream concentration of dissolved oxygen is consistently above, and bacteria are consistently below, the numeric criteria contained in the water quality standards and pH is within the range specified in the water quality standard:~~

~~\_\_\_\_\_ Low-Flow Season~~

~~\_\_\_\_\_ Approximately June 1 through October 31\*~~

~~\_\_\_\_\_ Orthophosphate Phosphorus (as P) 5 ug/L~~

~~\_\_\_\_\_ Dissolved Inorganic Nitrogen (ammonia + nitrite + nitrate, as N) 40 ug/L~~

~~\* These two in-stream concentrations are intended to control the growth of periphyton that is contributing to exceedances of the in-stream water quality standards for pH and dissolved oxygen in this segment of the Grande Ronde River. The growth of periphyton is affected by other factors such as river flow, temperature, and sunlight. The Department may consider these other factors in establishing conditions and limitations in individual permits, orders, or memorandums of understanding issued by the Department.~~

(1) This rule establishes special policies and requirements for portions of Catherine Creek and the Grande Ronde River. These waterbodies are currently listed as water quality limited and these rules are intended to bring the waterbodies into compliance with standards for dissolved oxygen, pH, temperature, and bacteria. The rule provides for modification of waste water control facility plans, development of water quality management plans, and establishment of instream concentration limits. These measures are intended to control the growth of periphyton that is contributing to exceedances of the instream water quality standards for pH and dissolved oxygen. The growth of periphyton is also affected by other factors such as flow, temperature and sunlight.

(a) This rule applies to Catherine Creek from the City of Union to the Grande Ronde River (and all tributaries that enter this segment of the creek) and the Grande Ronde River from Five Points Creek to its confluence with the Wallowa River (and all tributaries that enter this segment of the river).

(b) Except as provided below, no wastewater discharge or other activity is allowed if the discharge or other activity will cause the following nutrient concentrations to be exceeded:

\* Orthophosphate Phosphorus (as P) 5ug/L

\* Dissolved Inorganic Nitrogen (ammonia + nitrite + nitrate, as N) 40ug/L

(i) The concentrations do not become effective until Department-approved wastewater control facility plans and water quality management plans are fully implemented or December 31, 2002, unless

otherwise extended by the Environmental Quality Commission for good cause.

(ii) The Department can waive these nutrient concentration limits when the Department determines conditions are such that higher nutrient concentrations will not result in violations of Water Quality Standards.

~~(bc)~~ Within one year of adoption of this rule, the Cities of La Grande and Union shall submit to the Department a facilities plan describing how they will modify and upgrade their wastewater treatment facilities by December 31, 2002, to comply with this rule and all other applicable rules regarding the treatment and disposal of wastewater. This facilities plan shall include a description of the present physical and institutional infrastructure, all necessary intergovernmental agreements and approvals as appropriate, time schedules for accomplishing goals including interim objectives, and a financing plan.

~~(ed)~~ Within one year of adoption of this rule, Boise Cascade Corporation shall submit a facilities plan which describes how wastewater discharges will be controlled at the Island City particle board plant by December 31, 2002, to comply with this rule and all other applicable rules regulating waste discharge.

~~(de)~~ In order to control nonpoint source pollution, the Department shall establish an advisory committee to develop a process and time schedule for addressing nonpoint source contributions to identified water quality standards violations in the stream segments identified in this rule and for meeting the in-stream nutrient criteria established in this rule. Within eighteen (18) months of the adoption of this rule, Union County, the incorporated cities within the Grande Ronde Valley, and the Oregon Departments of Agriculture and Forestry shall submit a water quality management plan ~~(which may be made up of individual plans)~~ that describes how nonpoint source pollution will be controlled by December 31, 2002 to reduce in-stream nutrient concentrations to achieve the criteria established in this rule and to will comply with the in-stream water quality standards violations listed on the 303(d) list, for dissolved oxygen, pH, temperature, E. coli bacteria, and sediment and address flow and habitat modification. ~~To be acceptable under this rule water quality management plans must contain the information specified in the guidance adopted by the Department for developing water quality management plans to implement TMDLs. For Agricultural Water Quality Management Plans, plans shall be developed consistent with OARs 603-90-000 through 603-90-050. Silvicultural activities shall be addressed pursuant to ORS 468B.110 and ORS 527.765 through 527.770 and consistent with a Memorandum of Understanding to be developed between the Oregon Department of Forestry and the Department of Environmental Quality.~~

(ef) The Department shall review amended facility plans, water quality management plans and other measures undertaken in accordance with this rule to determine whether the plans and measures are reasonably likely to assure that relevant water quality standards will be achieved. If a facility plan is rejected, reasons shall be specified and a schedule for modification established. The Department shall provide an opportunity for public comment and a hearing before submitting plans or other measures to the Environmental Protection Agency. Facilities plans for point sources and water quality management plans for nonpoint sources shall be reviewed and approved or disapproved by the Department in accordance with Oregon Revised Statute. All plans shall be subject to public comment and hearing prior to consideration for approval by the Department. If the Department rejects a plan, an order specifying deficiencies and a schedule for modification of the plan shall be issued.

~~(fg)~~ The Commission recognizes that it may take several years after full implementation before water quality management plans become effective in reducing and controlling pollution. In addition, the Commission recognizes that technology for controlling nonpoint source pollution is, in many cases, in the development stages and that it may take one or more iterations before effective techniques are found. It is possible that after application of all reasonable best management practices, the in-stream criteria established in subparagraph ~~(ab)~~ of this section cannot be achieved. In this regard, the Commission directs the Department to work cooperatively with those nonpoint source entities that act in good faith to meet the requirements of this rule. If a nonpoint source entity complies with its ~~Department~~ State-approved water quality management plan, it will be deemed to be in compliance with this rule.

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking Proposal  
for

Rule Adoption: Establish Total Daily Loads (TMDLs) for the Grande Ronde River and Catherine Creek to Meet Water Quality Standards Including Establishment of In-Stream Criteria

Rule Implementation Plan

Summary of the Proposed Rule

The proposed action would do three things: 1) Establish in-stream nutrient concentration limits (ortho-phosphorus 5 ug/L and Inorganic nitrogen 40 ug/L). 2) Establish a schedule giving the point sources (cities of La Grande and Union and Boise Cascade Corp.) one year from rule adoption to complete facilities plans and until December 31, 2002 to complete upgrades. 3) Establish a schedule giving nonpoint sources 18 months from rule adoption to complete water quality management plans that address all of the parameters on the 303(d) list and until December 31, 2002 to have the plans fully implemented (this does not mean standards would all be achieved by 2003. It does mean that a program to achieve standards is in place and being implemented by that time.) Parameters to be addressed include: dissolved oxygen, pH, periphyton algae, phosphorus, sediment, temperature, water contact recreation, flow modification, habitat modification.

Proposed Effective Date of the Rule

Upon adoption.

Proposal for Notification of Affected Persons

Department staff have already been in contact with affected parties. After adoption of the rule Department staff will notify the Cities of La Grande and Union of the EQC action. Department staff will also notify agencies and other entities that will need to develop water quality management plans. The Department will be establishing an advisory committee to assist with the development of the management plans soon after adoption of the rule. The advisory committee will be made up of persons representing the responsible management agencies/entities as well as other affected interest groups. Letters of appointment will be written to the prospective advisory committee members.

## Proposed Implementing Actions

The Department will draft permits for the wastewater treatment plants for the cities of La Grande and Union. A local advisory committee, made up of representatives of all the stakeholders (both point and nonpoint sources), will be established. The advisory committee will develop a process and schedule for addressing nonpoint source contributions and will provide advice and coordination on the development of water quality management plans.

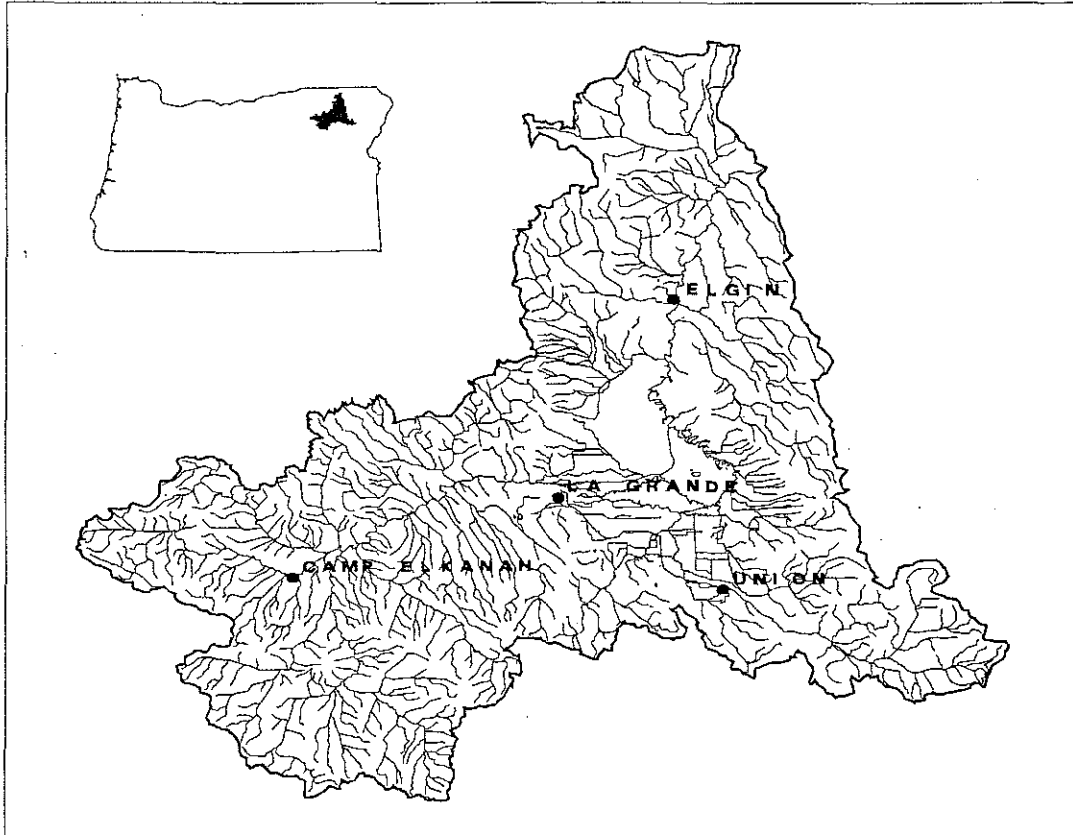
The advisory committee will include representation of municipalities, Union County, agriculture, forestry, tribes, environmental community and business interests, state and federal government agencies. Establishment of the committee will be done cooperatively with the Grande Ronde Model Watershed that is already involved with watershed planning in the basin. There may be subcommittees that will address specific source categories or issues (i.e. agriculture, urban, forestry, SB1010, point source facilities plans). The full committee will insure coordination of efforts so that practices implemented across the valley are as complementary as feasible. The advisory committee will also help to insure that individual source category management components fit together into a comprehensive, are-wide management plan that address all of the identified parameters prior to submission of the plan(s). The advisory committee may also make recommendations on a variety of issues such as what should be the boundaries of the overall management plan, and how should point source controls relate to nonpoint source controls.

## Proposed Training/Assistance Actions

Existing staff have experience with writing NPDES permits, orders, NPS management plans, and implementation of TMDLs. No additional training should be necessary unless there are staff changes. Department staff will provide assistance to the advisory committee during development of water quality management plans.



# Water Quality Report - Grande Ronde River



## WQ CONCERNS AT A GLANCE:

Water Quality Limited?	Yes
Segment Identifiers:	Grande Ronde River, 31=GRAN082 Catherine Cr. mouth to Union dam, 31D-CATH0
Parameters of Concern:	Dissolved Oxygen, Flow, Habitat, Periphyton, pH, Phosphorus, Sediment, Temperature, Water Contact Recreation
Uses Affected:	Anadromous Fish Passage, Salmonid Fish Rearing, Resident Fish & Aquatic Life, Aesthetics
Known Sources:	Point Sources -- Sewage Treatment Plants and Industries Nonpoint Sources -- Agriculture, Grazing, Urban, Forestry

# Water Quality Report - Grande Ronde River

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## 1. BACKGROUND INFORMATION

The Grande Ronde River Basin is located in northeastern Oregon and southeastern Washington. The river drains a total area of 5,300 square miles and is a major tributary to the Snake River. The area of concern here includes lands draining to the Grande Ronde River from its confluence with the Wallowa River upstream to Five Points Creek and Catherine Creek from its mouth to Union Dam. This includes the area commonly referred to as the Grande Ronde Valley, which covers approximately 360 square miles and is wholly contained within the Upper Grande Ronde River Hydrologic Unit Area in Union County, Oregon. The valley is surrounded by the Blue Mountains on the north, west and south, and the Wallowa Mountains to the east. The river originates in the Elkhorn Range (an extension of the Blue Mountains) and enters the valley from the west at the City of La Grande. An artificial channel, the State Ditch, captures the entire flow of the river at approximately river mile 150, flows five miles in a northerly direction and rejoins the river channel at approximately river mile 119.5. A major tributary, Catherine Creek, originates in the Wallowa Mountains, enters the valley at the town of Union, and enters the old Grande Ronde River channel at approximately river mile 140 in the middle of the valley. The creek then flows through the old river channel to its confluence with the State Ditch. The river leaves the valley at Rhinehart gap to the north (approx. RM 106).

Elevations in the valley vary between approximately 2,700 and 2,800 feet. Slopes within the valley are gentle but the surrounding mountains are quite steep. The climate of the Grande Ronde Valley is characterized by warm, dry summers and cold, moist winters. Average annual precipitation in the valley ranges from 12 to 25 inches and occurs mainly as rain or rapidly melting snow. Precipitation tends to be greater at the north end of the valley, relative to the south, due to prevailing winds from the southwest. Precipitation at higher elevations, upstream of the valley, is much greater and occurs primarily as snow. Rain-on-snow events at mid-elevations (3,000-5,000 ft.) can lead to large runoff events that increase peak flows, sediment input, and flooding in the valley.

The valley is almost entirely in private ownership. The rest of the basin is comprised mostly of public lands. While the valley constitutes less than seven percent of the land in the basin, it contains most of the human population (more than 60 percent) and the vast majority of the crop agriculture in the basin. Forestry and grazing land uses occur throughout the basin. The valley is surrounded by steep mountain slopes that are mostly forested except on the dry south facing slopes. The La Grande wastewater treatment plant, which also serves the City of Island City (combined population approx. 12,900) is the only major permitted point source of wastewater discharged to the Grande Ronde River. The City of Union (population 1915) also has a wastewater treatment plant (minor permit) that discharges into Catherine Creek. The City of Elgin has a wastewater treatment plant but it does not discharge during summer low flow months. There are four additional incorporated communities within the valley: Cove (pop. 545), Imbler (pop. 311), Island City (pop. 825), and Summerville (pop. 145). Management activities in both the urban and rural areas contribute nonpoint source pollutant loads to the river and tributaries within the valley.

## 2. WATER QUALITY CONCERNS

During the dry low flow season both the Grande Ronde River and Catherine Creek support excessive growth of periphyton (algae which are attached to the streambed). The growth of the algae, through photosynthesis and respiration, causes large daily fluctuations in both dissolved oxygen concentration and pH of the water. This effect is the result of the net consumption of carbon dioxide (leading to an increase in pH) and production of oxygen during the day as a result of photosynthesis. At night, when photosynthesis is not occurring, there is a net production of carbon dioxide and consumption of oxygen as a result of respiration and decay. This can lead to very high pH and supersaturation of the water with oxygen in the late afternoon. By morning the pH has returned to near normal but the dissolved oxygen

content of the water has often crashed to very low levels that are unhealthy for fish and other aquatic life. This has led to violations of the state's water quality standards for both pH and dissolved oxygen.

The abnormally high growth rate of the periphyton is influenced by a number of factors including water temperature, availability of sunlight, and availability of nutrients (primarily inorganic nitrogen and phosphorus). Grazing of the periphyton mat by invertebrates and fish also has an effect on biomass and production. Nutrients that enter the river from both point and nonpoint sources of pollution contribute to the excessive algae growth and therefore contribute to the water quality standard violations. In Catherine Creek, standards for ammonia toxicity are also violated when the temperature and pH are high.

### **Beneficial Uses Affected**

The designated beneficial uses of the waters of the Grande Ronde Basin are identified in Oregon Administrative Rules (OAR 340-41-722 Table 13). Oregon's 1994 Water Quality Status Assessment Report (305(b) Report) lists those streams where data indicates beneficial uses are not fully supported. The beneficial uses found to be most at risk in the Grande Ronde Valley are aquatic life and aesthetic quality. Both are listed as "not supported."

DEQ's 1994/1996 303(d) List Of Water Quality Limited Waterbodies lists Catherine Creek, mouth to Union dam, for the following parameters: Dissolved Oxygen (June through October), Flow Modification, Habitat Modification, Periphyton (summer), pH (summer), Phosphorus (summer), and Temperature (summer).

The Grande Ronde River, from the confluence of the Wallowa River to Five Points Creek, is listed for: Dissolved Oxygen, Flow Modification, Habitat Modification, Periphyton (summer), pH (summer), Phosphorus (summer), Sediment, Temperature (summer), and Water Contact Recreation (Fall through Spring). (This TMDL report focuses primarily on the portion of the river within the Grande Ronde Valley where the most severe water quality problems occur.)

Salmonid species of concern in the Grande Ronde Basin include anadromous populations of chinook salmon and steelhead, and resident bull trout. The spring chinook are currently listed as endangered under the Endangered Species Act. The bull trout was reviewed for listing by the U.S. Fish and Wildlife Service and was determined to be "warranted" in February of 1995. All of these species use the Grande Ronde River and Catherine Creek in the valley for rearing and migration corridors. Steelhead spawn in some of the smaller tributaries in the Grande Ronde Valley.

### **Applicable Water Quality Standards**

Water quality standards for the Grande Ronde Basin are specified in Oregon Administrative Rules (OAR 340-41-725)

Dissolved oxygen (or DO) is a critical parameter for the protection of salmonid spawning, rearing and distribution. DO was one of the first measures chosen for protecting water quality. Salmonid species, especially the juvenile stages, are the most sensitive beneficial use affected by DO. The current standard for dissolved oxygen in the Grande Ronde River Basin became effective July 1, 1996. The standard sets a concentration of 8.0 mg/L as an absolute minimum for waterbodies that provide cold-water aquatic life. When local conditions of barometric pressure, altitude, and temperature preclude attainment of 8.0 mg/L, DO shall not be less than 90 percent of saturation. In salmonid spawning areas, during the period of spawning, DO shall not be less than 11 mg/L or 95 percent of saturation when local conditions preclude attainment of 11 mg/L.

High pH levels cause increased fish mortality and can increase the toxicity of other pollutants. Spawning and rearing of salmonid fish species are the most sensitive beneficial uses affected by pH. Values of pH outside the range in which the species evolved can result in both direct and indirect toxic effects. Direct

effects interrupt ion transport across cell membranes. Indirect effects occur when fluctuations in pH affect the availability and toxicity of metals, ammonia and other ions in the water column. The pH standard for the Grande Ronde Basin is a minimum of 6.5 and maximum of 9.0.

Warm water temperature is detrimental to cold water adapted aquatic life. Compliance with the state water quality standard for temperature requires implementation of a water quality management plan to control human caused warming when the seven day average of the daily maximum temperature exceeds 64 degrees Fahrenheit. If an approved plan has been developed and is being implemented then the responsible parties are in compliance with the regulation even if the measured temperature continues to be above 64 degrees. Implementation is iterative, however, and plans may be modified over time as new information becomes available.

### **Additional Water Quality Concerns**

While violations of the dissolved oxygen and pH standards are the primary concerns for which Total Maximum Daily Loads (TMDLs) for nutrients will be set, there are additional concerns in the Grande Ronde Valley and the rest of the upper Grande Ronde subbasin. These include temperature, sediment, bank stability, fish habitat and bacteria. All of these concerns are related. For example, increased temperature leads to increased rates of algae growth. Exposure to full sun increases both temperature and photosynthesis. Sediment often carries associated nutrients. Decreased bank stability leads to increased sediment loads and often leads to wider, shallower channels which means less fish habitat and increased exposure to solar radiation. Good fish habitat is often associated with shade. Fecal bacteria is almost always associated with increased nutrient loads.

As a result of these relationships, it is the intent of the Oregon Department of Environmental Quality (DEQ) that implementation plans for achieving the TMDLs will give preference to practices that will lead to improvements in all of these concerns, rather than focusing on nutrient control alone (or any other single parameter). This is in keeping with the intent of the Clean Water Act to enhance biological integrity in addition to addressing chemical and physical measures of water quality.

### **Available Monitoring Data**

The Oregon Department of Environmental Quality has monitored ambient water quality in the Grande Ronde Valley for many years. Because of the concerns related to dissolved oxygen and pH, more focused monitoring studies were done in 1991 and 1993 and a more extensive study was done in 1992. When dissolved oxygen and pH problems occur simultaneously eutrophic conditions are suspect. For this reason, these studies focused on nutrient concentrations, establishing diurnal trends (water quality fluctuations in a 24 hour period), and productivity of algae.

Synoptic surveys were conducted. These studies collected water quality samples at numerous sites spread throughout the valley with samples collected on the same day to study how the water quality changed from upstream conditions as it traveled through the valley. Some sites were equipped with data recording equipment which monitored air temperature, water temperature, dissolved oxygen, pH, and depth (from which flow can be calculated) continuously for several days at a time. This provided information on how water quality changed throughout a single day and from one day to another. Mixing zone studies were done to determine how the effluent from sewage treatment plants in Union and La Grande mixed with the receiving water. Samples were taken from groundwater seeps in the river bank to determine the quality of the water entering the river from shallow groundwater. In all, DEQ has collected water quality data from more than 75 sites in the valley on the Grande Ronde River and Catherine Creek. This does not include additional monitoring data collected on smaller tributaries and sites upstream and downstream of the Grande Ronde Valley. Results of some of DEQ's monitoring efforts are presented in:

Appendix A, Baumgartner, 1993, Synoptic Survey 9/15/92, Grande Ronde River and Catherine Creeks, DEQ Memo to File

Appendix B, Baumgartner, 1993, Data Summary Grande Ronde Productivity, DEQ Memo to File

Appendix C, DEQ, 1993, Progress Report, 1992 Field Sampling Season ODEQ Grande Ronde River Study

Appendix D, Baumgartner, 1994, Grande Ronde Survey, 1993, DEQ Memo to File

The analyses presented in these Appendices document significant nutrient loading from both point and nonpoint sources. Point source loads can be measured directly. Their effect on in-stream concentrations is also relatively easy to demonstrate. The La Grande wastewater treatment plant, for example, clearly acts to increase both ortho-phosphorus and total phosphorus as can be seen by much lower concentrations immediately upstream as compared to downstream of the discharge. Violations of water quality standards for pH and dissolved oxygen occur upstream of the treatment plant discharge but become more frequent and severe downstream of the discharge.

In Catherine Creek the effect of the treatment plant discharge is very clear and is very much related to flow in the creek. In late summer of 1992 flow above diversions was measured at 21 cubic feet per second (CFS). Downstream of Union, below diversions, flow was measured near 1 CFS. This indicated little or no flow in some sections of the creek and provided very little dilution of Union's treatment plant effluent. Dissolved oxygen and pH standard violations do not occur above the treatment plant outfall and nutrient concentrations are low. Below the outfall nutrients increase and water quality standard violations occur.

Nonpoint source (NPS) contributions are usually demonstrated less directly. On the Grande Ronde River, increases in nitrate-nitrogen upstream of the La Grande wastewater treatment plant discharge, and again well below the discharge, indicate a NPS origin. Alkalinity, dissolved solids and five day biochemical oxygen demand (BOD<sub>5</sub>) all increased consistently with decreasing river mile from river mile 160 to river mile 130, again indicating a diffuse nonpoint origin. Measurement of nutrient concentration in seeps in the river bank, and in one case from an apparent groundwater drain, demonstrate in several cases incoming shallow groundwater with higher nutrient concentration than the river itself. This indicates a diffuse origin without identifying a specific source. In 1993, estimates of nutrient loading in the river reach from just above La Grande down to the treatment plant outfall found more than 50 percent of nitrate + nitrite-nitrogen loads were originating from diffuse sources within the reach. Less than 50 percent was coming into the valley from upstream and only a negligible amount was from a minor point source (Boise Cascade particle board plant). For ortho phosphorus, 44 percent originated from diffuse sources within the reach, 32 percent was coming from upstream, and 18 percent from the point source.

Diurnal variation in ambient nitrogen concentration indicates that nutrients are being consumed by periphyton during the day. Greater concentration of nutrients in the winter is consistent with the notion that reduced sunlight and temperature restrict the algae growth. The studies confirmed literature reports that very low concentrations of nutrients support increased periphyton growth. Literature indicates that the orthophosphate concentration needed to saturate a thick periphyton mat can be low; in the range of 10 to 20 ug/L (0.01 to 0.02 mg/L). Nitrogen saturation can occur at dissolved inorganic nitrogen concentrations as low as 75 ug/L. As a result of these low saturation concentrations even small sources of nutrients can result in significant increase in periphyton biomass. This makes it difficult, if not impossible, to limit periphyton biomass by manipulating permitted nutrient point sources alone.

In addition to DEQ's monitoring efforts, the City of La Grande has collected data from waters passing through the city and the Union Soil and Water Conservation District, in cooperation with the Grande Ronde Model Watershed Program, has begun collecting data from additional sites in the valley.

### 3. POLLUTION SOURCES

Water quality in the Grande Ronde Valley is affected by both point source and nonpoint source discharges. Point sources include municipal sewage treatment plants and industry. Nonpoint sources include non-permitted urban storm drain discharges and both surface and subsurface runoff from agriculture, forestry and urban activities.

#### Point Sources

Permitted point sources in the Grande Ronde River Basin are regulated by either individual or general National Pollutant Discharge Elimination System (NPDES) permits or by Water Pollution Control Facilities (WPCF) permits. WPCF permits do not allow direct wastewater discharge to surface waters. The City of La Grande wastewater treatment plant is the only major NPDES permitted point source discharging to surface water in the Grande Ronde Valley. In addition, there are five minor point source permits: The City of Union wastewater treatment plant, Boise Cascade (2 plants), Fleetwood Travel Trailers, and Union Pacific Railroad. There are no permitted point sources discharging effluent upstream of the Grande Ronde Valley.

The wastewater treatment plants (WTP) for the cities of La Grande and Union have been shown to be major contributors to nutrient loads in the Grande Ronde River and Catherine Creek, respectively. In the case of the La Grande plant, violations of water quality standards occur upstream of the effluent discharge, but violations are much more severe and frequent downstream of the outfall as a result of the nutrient load contributed by the plant. In the case of Union, violations of standards for dissolved oxygen and pH are generally not seen above the treatment plant discharge. Violations begin to occur immediately below the discharge and continue all the way to the confluence with the Grande Ronde. The Boise Cascade Particle Board plant has been shown to be a minor, but not insignificant, contributor to nutrients in the Grande Ronde River.

#### Nonpoint Sources

Because of their diffuse nature, nonpoint source loads are much more difficult to quantify. It has, however, been well demonstrated that nonpoint source nutrient loads have a significant effect on water quality in the Grande Ronde River. This is particularly true for the reach extending from approximately river mile 160 (just upstream of La Grande) down to the wastewater treatment plant discharge (Pierce Lane). Direct documentation of NPS effects downstream of the City of Union treatment plant discharge on Catherine Creek is more difficult because of the effects of the effluent discharges. But the existence of nonpoint source inputs is certain and existing data indicates that violations of water quality standards will continue to occur, even if point source loads are eliminated, unless nonpoint source loads are also reduced.

Nonpoint source discharges in the Grande Ronde Valley come from a variety of rural and urban sources. Some best management practices have been identified and/or implemented. The City of La Grande has begun work on a surface water management plan which should help to address nonpoint source loads from the city. The Grande Ronde Model Watershed Program and Union SWCD along with the Natural Resource Conservation Service have sponsored projects which will have some effect on reducing NPS pollution in rural portions of the valley. Not all nonpoint sources have been identified or addressed. Potential sources include erosion, removal of vegetative cover (especially deep-rooted, woody vegetation which can intercept nutrients mobilized in groundwater), bacteria and nutrients from animal and/or failing septic sources, excess fertilizers, and runoff from roads.



#### 4. NUTRIENT TARGETS

##### Periphyton Growth

Periphyton algae production is the principal cause of the pH and dissolved oxygen standards violations in the Grande Ronde River and Catherine Creek. Adverse water quality impacts include large diel fluctuations in pH and DO, resulting in pH values which exceed standards in the afternoon and DO concentrations which are less than minimum standards early in the morning.

Periphyton growth and its effect on pH and dissolved oxygen is complex and difficult to model. The rate of periphyton growth is limited by the availability of light, temperature and nutrients. If all of these are available in excess, dense mats of periphyton will grow, with the algal mass regulated by grazing, grazer predation, substrate characteristics, and hydraulic sloughing.

Since stream temperature and depth are functions of flow, flow also affects periphyton growth. Reductions in flow resulting from water withdrawals can result in increased stream temperatures, which can stimulate algae growth. Flow reductions also reduce stream depth and velocity. Depth reductions result in more light reaching the periphyton, which may stimulate growth. Depth and velocity reductions also result in reductions in water column volume per square area, as well as increased reaction time, which may result in greater Diel impacts on pH and dissolved oxygen.

Due to the complexity of periphyton systems, it is very difficult to develop models which can accurately evaluate the combined effects of light, temperature, nutrients and flow on in-stream pH and temperature. Traditionally, algae control has focused on nutrient control, since light, temperature, and flow were assumed to be not significantly affected by human activity. In the case of the Grande Ronde system, temperature and flow, and indirectly light, have all been significantly affected by human activity, due to water withdrawals, removal of riparian vegetation, land use changes, channel alterations, etc. However, without a detailed model of the system, it is very difficult to quantify the effects changes in stream shading, water withdrawals, etc., have on pH and dissolved oxygen in the system. Therefore, the traditional approach of reducing controllable nutrients is a reasonable initial step in controlling excess periphyton growth.

##### Acceptable Nutrient Concentrations

Periphyton growth is generally limited by the availability of the nutrients nitrogen and phosphorus. It has been observed that growth is not limited by nitrogen or phosphorus if water column concentrations for the reactive forms of the nutrients are present in concentrations which exceed five times the respective Michaelis-Menton half-saturation constants (Thomann and Mueller, 1987, pp. 449-460). From the literature, typical half-saturation constants for nitrogen and phosphorus are as follows (Bowie, et al, 1985, pp. 322-328):

Half-Saturation Constant		References
Nitrogen (ug/L)	Phosphorus (ug/L)	(see Bowie, et al., 1985, for references)
50 - 100	4 - 8	Tetra Tech (1980) Bowie et al. (1980) Porcella et al. (1983)
60 - 80	20	Grenney & Kraszewski (1981)
40 - 100	20 - 50	Smith (1978)
15 - 300	2.5 - 80	Grenney & Kraszewski (1981)

The constants are for the reactive forms of the nutrients, i.e., dissolved inorganic nitrogen (ammonia plus nitrate, as N) and dissolved inorganic phosphorus (orthophosphate, as P). Using the five times the half-

saturation constants shown in the first row above, saturation would occur for dissolved inorganic nitrogen (DIN) concentrations of 250-500 ug/L and orthophosphate concentrations 20-40 ug/L. Such nutrient saturation would result in the growth of large periphyton mats at the high temperatures and low flows observed in the summer in the Grande Ronde system.

In order to limit the growth of periphyton, it is recommended that at least one of the nutrients be limited to the lower end of the literature values for the half-saturation constants. For orthophosphate, a reasonable target value is 4 ug/L. The stoichiometric ratio of nitrogen to phosphorus in benthic algae is approximately 7 and, therefore, the corresponding target for DIN is 28 ug/L. As long as the dissolved inorganic phosphorus concentration is less than 4 ug/L or the dissolved inorganic nitrogen concentration is less than 28 ug/L, periphyton growth should be limited. While periphyton growth will still occur at these low concentrations, particularly since nitrogen and phosphorus entering via diffuse non-point sources will be readily utilized for algal growth and may not be reflected in water column concentrations, these concentrations will serve as reasonable targets for purposes of establishing load allocations.

Note that these targets are less than the Department's standard detection levels of 5 ug/L for orthophosphate and 40 ug/L for DIN (20 ug/L for ammonia, 20 ug/L for nitrite+nitrate). Therefore, the Department proposes to set the in-stream targets to 5 ug/L for orthophosphate and 40 ug/L for DIN.

### Limiting Nutrient

The nutrient which limits growth is the nutrient in lowest supply relative to algal cell requirements. Under nutrient saturated conditions algal stoichiometry is generally well represented by the Redfield ratios:

$$106\text{C}:16\text{N}:1\text{P (atomic basis)}$$

which results in a mass basis ratio of N/P of 7. Since these ratios may shift under conditions of nutrient limitation, it has been found that water bodies are generally nitrogen limited at N/P ratios of  $N/P \leq 5$  and phosphorus limited at  $N/P \geq 20$  (Thomann and Mueller, 1987). This assumes that the nutrients are not present in saturating concentrations (in which case no nutrient limitation would occur regardless of the N/P ratio).

Nitrogen is generally the limiting nutrient throughout the Grande Ronde system (Baumgartner, 1993). Historical monitoring shows that during the winter, when algal activity is suppressed due to temperature limitations, nitrogen and phosphorus levels in the Grande Ronde are relatively high. During the summer, when algae utilize the available nutrients, DIN concentrations frequently drop to less than the 40 ug/L detection level, and orthophosphate concentrations drop to near 20 ug/L. Under such conditions the N/P ratio would be less than 5, indicating that nitrogen is the limiting nutrient.

While the limiting nutrient appears to be nitrogen, it is necessary that phosphorus also be controlled. Nitrogen is often associated with diffuse sources and usually more difficult and costly to control through regulatory action than phosphorus. In addition, some particularly objectionable species of blue-green algae (cyanobacteria) can fix nitrogen in the atmosphere, and therefore are nutrient limited only at low phosphorus concentrations.

## 5. PROPOSED NUTRIENT TMDL

A phased approach for implementing this TMDL will be used. The first phase will focus on defining and implementing strategies to control nitrogen and phosphorus from the two municipal point sources and developing a nonpoint source (NPS) control strategy for the Grande Ronde Valley. Permit modifications to address the two wastewater treatment plants will be done immediately. A single minor industrial point

source will be addressed when its permit comes up for renewal. Future activities will include implementation of the NPS control strategy and address additional point sources and other issues as they are discovered.

The observed pH and dissolved oxygen criteria violations are primarily the result of photosynthesis and respiration by periphyton algae. Periphyton growth is influenced by many factors including stream flow, temperature, grazing by invertebrates and fish, light availability, and nutrient supply. Sediment, bank stability, habitat and bacteria concerns also exist in the Grande Ronde Valley and are interrelated with the pH and dissolved oxygen concerns. The concentrations of the nutrients nitrogen and phosphorus, which support the periphyton growth, are significantly influenced by both point and nonpoint sources within the valley. Other factors are influenced primarily by the nonpoint sources and will be addressed simultaneously with nutrients in the NPS control strategy.

Establishing waste load allocations (WLA) for the point sources and load allocations (LA) for the nonpoint sources, based on an effluent quality that would keep nutrient concentrations below thresholds for limiting algae growth, will result in very low effluent limits for two reasons: 1) The ambient concentrations needed to saturate growth requirements for periphyton are very low; and 2) because of low stream flows in the Grande Ronde Valley during dry weather months, little dilution is available.

Nutrient contributions of natural origin are difficult to quantify because changes in land use practices and stream conditions have altered nutrient budgets, cycling, and concentrations. Nitrogen concentrations during periods of high periphyton production are near detection levels upstream of identified sources. Phosphorus concentrations near periphyton saturation levels occur in the Grande Ronde River upstream of identified sources. Because nutrient concentrations in the river are near saturation when the water enters the valley there will be little opportunity for dilution of nutrient contributions within the valley. As a result very limited mass loads will be available.

#### **La Grande Wastewater Treatment Plant**

Upstream of the La Grande Wastewater Treatment Plant, nutrient concentrations in the Grande Ronde River exceed recommended targets of 5 ug/L orthophosphate and 40 ug/L dissolved inorganic nitrogen. These concentrations are significantly increased by the La Grande discharge. Since target concentrations are already exceeded upstream of the discharge, the river has no capacity to assimilate loads from La Grande and the discharge exacerbates already excessive pH and DO fluctuations and standards violations.

Several options exist for mitigating the impact of the La Grande discharge on the Grande Ronde. One option is setting wasteload allocations equal to the lowest levels achievable by available municipal wastewater treatment technology. Concentrations achievable using advanced treatment are <1 mg/L (<1000 ug/L) for orthophosphate and 3-5 mg/L (3000-5000 ug/L) for dissolved inorganic nitrogen (Metcalf & Eddy, 1991). Effluent concentrations of 1.0 mg/L for orthophosphate and 5 mg/L for DIN would result in the following in-stream concentrations (for the dry weather effluent flow of 4.2 cfs, the 7Q<sub>10</sub> river flow of 14 cfs, and background river concentrations equal to the targets of 5 ug/L for orthophosphate and 40 ug/L for DIN):

Orthophosphate: 235 ug/L  
Dissolved Inorganic Nitrogen: 1,185 ug/L

Clearly, even with advanced treatment, nutrient concentrations downstream of the discharge would far exceed target concentrations. Even with advanced treatment, nutrient loads due to the La Grande discharge would be 50-60 times greater than background loads (assuming that upstream concentrations equaled the targets).

A second option is to impose limits adequate to insure that the La Grande discharge does not increase nutrient concentrations in the river beyond the target concentrations. Wasteload allocations for this

option would be set equal to river target concentrations of 5 and 40 ug/L for phosphate and DIN, respectively. Since such stringent limits could not be met using available municipal wastewater treatment technology, this is equivalent to a "no discharge" allocation. This is the most conservative option and is the only option that will insure that nutrient concentrations are not increased by the La Grande discharge. This is the most desirable option from the standpoint of protecting the health of the river.

In the Grande Ronde basin, viable options to river discharge exist for effluent disposal. Non-river effluent disposal in this region is very cost-competitive with advanced treatment. Therefore, since the no discharge option is cost-competitive with advanced treatment and since it will result in the greatest improvement in water quality, no discharge during the critical summer time period is the recommended alternative.

This no discharge option would remove the effluent during periods of extended low flow when algae are expected to significantly influence water quality. The removal of the point source would not influence the algae growth problems occurring upstream of the discharge nor would it address nutrients which enter the river from NPS contributions either upstream or downstream of the discharge. The no discharge option would, however, eliminate any further exacerbation of algae growth problems resulting from nutrient contributions of the La Grande waste water treatment plant.

In order to determine the critical, no discharge, time period, water quality data were analyzed. This analysis is described in Appendix E (Schnurbusch, 1996, Grande Ronde River TMDL Analysis for the La Grande WWTP, DEQ Memo to File). The analysis demonstrates a critical compliance period during the months of July, August, and September. No discharge should be allowed during these months. The months of June and October are transitional periods. In June there is a relationship between flow and pH. Standard violations begin to occur in June when the river flow falls below 150 - 200 CFS. Therefore, discharge would need to be discontinued in June when the average daily flow falls below 200 CFS.

During October there is a strong relationship between temperature and pH. Violations of the water quality standard for pH cease when maximum daily stream temperature falls below 15 C. Therefore the wastewater treatment plant would be allowed to resume discharge to the river in October when the maximum daily stream temperature has dropped to the point where it is consistently below 15 C. Alternatively, direct measurement of late afternoon pH could be used as the criteria for resumption of discharge. In October, when the late afternoon pH downstream of the discharge point has reached a level that would provide confidence that no violations of the pH standard would occur, discharge could be resumed.

This "no discharge" option makes the establishment and adoption of WLA for the La Grande treatment plant irrelevant because the plant will contribute no nutrient load to the river during the critical low flow period.

Ammonia toxicity criteria are also exceeded in the Grande Ronde River during the summer months. This is related to the high pH and high water temperature that occurs in the river during these months. As a result, the permit limitations for the La Grande wastewater treatment plant will need to address ammonia and temperature limitations. Department recommendations for ammonia are included in Appendix F (Ammonia Toxicity - Grande Ronde River, Schnurbusch Memo to File, 1/24/96). Temperature is not addressed specifically in this report. The in-stream temperature criteria for the Grande Ronde River in the valley is 64 F. When the river water temperature is above 64 F, implementation of a management plan to control anthropogenic contributions to stream warming is required.

#### **Union Wastewater Treatment Plant**

The City of Union wastewater treatment plant discharges to Catherine Creek and, as with the La Grande discharge to the Grande Ronde, it significantly increases in-stream nutrient concentrations. A lack of adequate dilution is the primary problem facing summer in-stream discharge for the Union treatment

plant. The flow past Union is greatly influenced by irrigation withdrawal upstream. While minimum (7-day average) flows upstream of the irrigation withdrawal have varied from 10 - 35 cfs since 1930, flows past Union can be less than 1 cfs. Therefore, even though the Union discharge is only 0.47 cfs, which is small relative to many other treatment plants, it is the dominant source of nutrients to Catherine Creek.

In order to evaluate the impact of the Union discharge on Catherine Creek, a "mixing zone" analysis was performed (Appendix G: Baumgartner, Analysis of MZ data using QUAL2EU, DEQ Memo to File). The focus of the analysis was the derivation of wasteload allocations which would minimize the impact of the Union discharge on the stream. Included in the analysis was development of a preliminary water quality model.

As with La Grande, two principle options are available for mitigating the impact of the Union discharge on Catherine Creek. The first option is to allow continued discharge during the summer but with stringent advanced treatment wasteload allocations. The second is no discharge.

The mixing zone analysis indicated that the wasteload allocations described in the following table would confine excessive periphyton impacts to a limited area and would be sufficient to prevent ammonia toxicity:

Union Nutrient WLAs that would  
Limit but not Eliminate  
Periphyton Impacts

Upstream Flow	PO4P	PO4P WLA	DIN	DIN WLA
(cfs)	(mg/l)	(lbs/d)	(mg/l)	(lbs/d)
1	0.27	0.68	1.8	4.6
5	0.94	2.4	6.6	16.9
10	1.79	4.6	12.7	32.2
15	2.64	6.7	18.7	47.6

These nutrient limits were estimated from the uptake rates described in Appendix G, Analysis of MZ data, using the water quality model QUAL2E. The upstream dissolved orthophosphate concentration was assumed to be 20 ug/L, and the dissolved inorganic nitrogen concentration was assumed to be 30 ug/L. The in-stream concentrations predicted downstream of the discharge were 100 ug/L of orthophosphate and 600 ug/L of dissolved inorganic nitrogen. Clearly, these nutrient concentrations are far in excess of algae growth requirements and would result in excessive periphyton growth immediately below the discharge. However, these impacts would be limited to a

zone which would no longer extend into the area of currently observed highest periphyton growth, since the nutrients are expected to be incorporated into benthic algae prior to reaching this area. However, the analysis did not assess the effects of nutrient recycle. In addition, the effect of changes in production rates and stream flow on uptake rates was not assessed.

These wasteload allocations would be very difficult to meet with available municipal wastewater technology when stream flows are less than 5 cfs. Therefore, for such flows, they are essentially no discharge allocations.

As with La Grande, the no discharge option is cost-competitive with the advanced treatment alternative. Therefore, since the no discharge option is cost-competitive with advanced treatment and since it will result in the greatest improvement in water quality, no discharge during the critical summer time period is the recommended alternative.

There is little information available to determine when "summer low flow" occurs. It is a reasonable assumption that the seasonal changes to summer conditions occur similar to the Grande Ronde River, and occur during June - July. This period would be coincident with the irrigation season, and may be related to irrigation. Although insufficient data is available to clearly define the stream flow below which discharge must be ceased, it is recommended that no discharge be allowed in June when the flow is less than 15 cfs and that no discharge be allowed in July, August, or September. The fall transition is somewhat better defined by the limited October monitoring data. Assuming that the water quality observed during the October survey is reasonably representative of typical fall conditions, the Union WTP should be able to discharge at current mass loads in October once stream flows exceed 15 cfs and in-

stream afternoon temperatures fall below 12C. Although little data is available for November, it is reasonable to assume that seasonal conditions are similar to the Grande Ronde and that the standard would be achieved.

With the implementation of a summer no discharge period, there will be less periphyton biomass developed over the summer. This reduction in periphyton biomass may have the added benefit of reducing the fall diurnal variation in DO, even after discharge is resumed.

### Minor Permitted Industrial Sources

In addition to the City of Union wastewater treatment plant, there are four minor industrial point sources in the basin. The only minor industrial source of potential concern is the Boise Cascade particle board plant in Island City which discharges to the Grande Ronde River. Potential wasteload allocations for the Boise Cascade plant have been calculated.

Available data on the Island City particle board plant's permitted discharge effluent quality are very limited. Sampling performed during the 1993 survey showed that, although the discharge flow rate was low, the effluent contained high concentrations of phosphorus (2.9 - 5.3 mg/L). Based on an effluent flow rate of 0.3 cfs, an effluent concentration of 5.3 mg/L, and a river flow rate of 14 cfs, the discharge would increase the in-stream concentration over 100 ug/L.

The following mass balance calculations show that, even if background concentrations in the river upstream of the discharge were zero (which is not the case), the wasteload allocation for orthophosphate to meet the in-stream target of 5 ug/L could be set no higher than 0.24 mg/L:

$$C_{\text{eff}} = C_{\text{target}}(Q_{\text{eff}} + Q_{\text{riv}})/Q_{\text{eff}} - C_{\text{bgd}}Q_{\text{riv}}/Q_{\text{eff}}$$

$$= (5)(0.3 + 14)/(0.3) - (0)(14)/(0.3) = 238 \text{ ug/L}$$

where:  $C_{\text{eff}}$  = wasteload allocation, ug/L  
 $Q_{\text{eff}}$  = effluent flow rate, cfs  
 $C_{\text{bgd}}$  = background concentration, ug/L  
 $Q_{\text{riv}}$  = river flow rate upstream of the discharge, cfs  
 $C_{\text{target}}$  = in-stream target concentration or standard, ug/L

Such a low effluent concentration would likely be difficult to achieve on a consistent basis using available treatment technology. Unless it were demonstrated that such a low concentration could be consistently met and that it would have no measurable impact on periphyton growth, it may be necessary to cease discharge during the critical summer period.

Observed nitrogen concentrations in the Grande Ronde River near the outfall varied between 60 and 100 ug/L during the summer low flow surveys. These exceed the target for DIN of 40 ug/L. Only one sample of the Island City effluent was analyzed for nitrogen. This had an inorganic nitrogen concentration of 0.21 mg/L and a Kjeldahl nitrogen (organic + ammonia) concentration of 2.1 mg/L. If the background DIN concentration equaled the target of 40 ug/L, a 0.3 cfs discharge with 0.21 mg/L DIN would increase the in-stream concentration about 3.5 ug/L. This is a relatively small increase. While this increase in DIN would likely increase periphyton growth, it is unlikely that the increased periphyton growth or its impact on pH and DO would be measurable.

Because of the limited information on the nutrient discharge of the Island City plant, phase one of the TMDL implementation will include discussions with Boise Cascade to describe the potential problem and options for eliminating the discharge or controlling nutrients during the low flow period. Permit

requirements for monitoring nutrients in the discharge could be included. It may prove to be practical for Boise Cascade to cease this discharge.

### Nonpoint Sources

The Department recognizes that control of nutrients from point sources alone will not resolve all of the water quality concerns in the Grande Ronde Valley. Nonpoint source loads have been shown to have a significant affect on water quality in the reach of the Grande Ronde River upstream of the La Grande waste water treatment plant. Estimates of nutrient loading indicate that 44 to 50+ percent of the nutrients in this reach originate from diffuse sources within the reach. A portion of the nutrient load coming from upstream is also of nonpoint source origin which cannot currently be separated from natural origin. Quantification of nonpoint source loads downstream of the La Grande wastewater treatment plant is problematic because of masking by the large point source load. Existence of nonpoint source inputs below the treatment plant outfall is certain, however, and will become more apparent when the point source discharge is eliminated.

Separating the total nonpoint source load into source categories (agriculture, urban, residential, etc.) and assigning a load to each category is not possible with existing information nor is it necessary. As pointed out previously, establishing a total load allocation (LA) for all NPS contributions would result in very restrictive limits because of the low nutrient concentrations needed to support excess periphyton growth and the low dilution rates available during low river flow periods. An estimate of a total LA for all nonpoint sources combined plus background would have to be based on the same assumptions used for calculating the WLA previously; i.e. no measurable increase in nutrient concentration beyond the concentration up-stream of the city of La Grande and a  $7Q_{10}$  river flow.

One way of assigning the LA would be to assume that because the La Grande wastewater treatment plant will be going to a no discharge option the available loads calculated for the treatment plant could be made available to the nonpoint sources, i.e. 0.94 lbs/day phosphorus and 3.2 lbs/day inorganic nitrogen. Attempting to spread this small available loading over the entire landscape of the valley and allocate loads to each source category would make the individual nutrient loads effectively immeasurable.

In addition to the very low available nutrient loads, the nonpoint sources also will need to address the other environmental concerns in this TMDL: temperature, sediment, bank stability, fish habitat, and bacteria. The low available nutrient loading capacity combined with the need to address these other environmental concerns makes setting numeric load allocations for nutrients from nonpoint sources impractical and unnecessary. Instead, the nonpoint source component of this TMDL will be based upon complying with the state Water Quality Standards by striving to achieve target in-stream criteria as follows:

Dissolved oxygen concentrations of 8 mg/L or greater, in spawning areas during the period of spawning, incubation and fry emergence, 11 mg/L.

pH between 6.5 and 9.0.

No human caused temperature increase when the temperature is above 64 F except in waters and periods of the year of salmonid spawning, egg incubation, and fry emergence when the target in-stream temperature will be 55 F.

E. coli bacteria below 126 organisms per 100 ml (30 day log mean based on a minimum of 5 samples).

No appreciable bottom or sludge deposits or any organic or inorganic deposits deleterious to fish or other aquatic life or injurious to public health, recreation, or industry.

In Oregon, the Oregon Department of Agriculture, through the provisions of ORS 568.900-933 (SB 1010) and ORS 561.191, has the authority to develop and implement water quality management plans to reduce agricultural nonpoint source pollution. The Cities of La Grande and Union will be responsible entities to address nonpoint source pollution generated within their city limits. The local advisory committee (discussed below) will make recommendations as to the need for Cove, Summerville, and Elgin to also address nonpoint source pollution in their communities. It may also be necessary to address some industrial stormwater discharge permits. Union County will be responsible for addressing nonpoint source pollution resulting from county roads and un-incorporated areas that do not fall under the jurisdiction of the agriculture plans. Nonpoint source control activities associated with forestry activities on state or private lands will fall under the jurisdiction of the Oregon Department of Forestry and the Forest Practices Act.

The nonpoint source component of this TMDL will focus on the establishment of a Nonpoint Source Water Quality Management Plan (TMDL equivalent) designed to achieve the water quality standards. Upon approval of this TMDL approach by the EPA, the Department of Environmental Quality will notify the appropriate nonpoint source jurisdictions of the need to submit an approvable Nonpoint Source Water Quality Management Plan (NPSWQMP) within 12 months. (Relevant jurisdictions are urged to begin plan development as soon as possible in order to ensure ability to meet the 12 month time frame.) The plan will require DEQ approval and will be implemented according to a schedule included in the approved plan. Effectiveness and compliance will be measured by documenting implementation, demonstrating that necessary management changes/practices are in place, and monitoring in-stream water quality trends. Implementation and evaluation will be iterative with needed adjustments identified and implemented on a defined schedule.

The DEQ draft guidance for developing such plans states, "To be acceptable as a nonpoint source TMDL, a water quality management plan must be a thorough, phased, objective-driven, well-funded, fully-monitored, multi-year watershed enhancement approach with significant commitment demonstrated by local landowners and managers." It will contain the following basic elements:

- Condition Assessment and Problem Identification
- Goals and Objectives
- Proposed Management Practices
- Timeline for Implementation
- Identification of Responsible Participants
- Reasonable Assurance of Implementation
- Monitoring and Evaluation
- Public Involvement
- Maintenance of Effort Over Time
- Discussion of Costs and Funding

The NPS water quality management plan will be developed using a local advisory committee(s) and will make use of local voluntary efforts, city and county ordinances, and authorities provided under Senate Bill 1010 as appropriate. Senate Bill 1010 provides authority to the Oregon Department of Agriculture to develop and implement management plans to control NPS pollution from agricultural sources in order to achieve TMDLs developed by the Department of Environmental Quality. The Bill provides the flexibility to involve, and delegate responsibilities to, local organizations (SWCD, Watershed Council, etc.) as appropriate.





The anticipated approach will use one broad-based advisory committee to develop a single plan that will address NPS contributions from all source categories (urban, rural, agriculture, forestry). In order to achieve this the advisory committee will need to include representation from, at a minimum:

Municipalities  
Union County  
Agriculture & Grazing Interests  
Industry  
Forestry  
Affected State Agencies  
Environmental Interests  
Tribal Interests

If this approach proves too cumbersome separate sub-committees and control strategies may be necessary for separate source categories but such separate strategies would be required to be compatible with other source strategies in order to result in a comprehensive, coordinated, NPS Water Quality Management Plan.

The NPS Water Quality Management Plan will likely focus primarily on sources within the valley but may need to address some upstream sources as well. Implementation of the TMDL will be iterative. This means that an initial "cut" will be developed and implementation will begin within a defined time frame (12 months from EPA approval). Effectiveness will be reviewed on a schedule defined in the strategy and adjustments to the strategy will be made as needed as implementation proceeds.

The Department recognizes the ongoing activities in the Grande Ronde Basin and strongly encourages the Grande Ronde Model Watershed, Union Soil and Water Conservation District, City of La Grande, and other organizations to continue their efforts to develop and implement projects and programs to improve the quality of the Grande Ronde River and its tributaries. In developing and implementing a NPS Water Quality Management Plan for the Grande Ronde Valley, the Department will:

Work with the Oregon Department of Agriculture and local agricultural organizations to identify practices and develop and implement programs to reduce nonpoint source pollution under the authorities provided through Senate Bill 1010. This will include development and implementation of any needed administrative rules, monitoring to determine whether implemented practices are having the desired water quality benefits, tracking implementation and progress reporting to DEQ annually.

Continue to work with the Oregon Department of Forestry to insure consistent implementation of the Forest Practices Act. This effort will include insuring that required practices are followed, violations are documented, and necessary enforcement is pursued.

Work with the City of La Grande to complete development of a Surface Water Management Plan that will address reduction of nonpoint source water pollution. This will include revising and enforcing relevant city ordinances and codes as necessary.

Work with Union County to develop strategies to address rural roads, residences, and other potential sources that may not be covered by other authorities.

Continue to work with the Grande Ronde Model Watershed to encourage action planning and restoration projects in the Grande Ronde Valley that will lead to water quality improvements.

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- Baumgartner, R. Grande Ronde Survey, 1993, memo to file, December 21, 1994, Oregon Department of Environmental Quality.
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- Metcalf & Eddy, Inc., Wastewater Engineering Treatment, Disposal, and Reuse (Third Edition), 1991, McGraw-Hill, Inc., New York, New York.

## APPENDICES (available on Request)

- A. Baumgartner, B. Memo to File: Synoptic Survey 9/15/92, Grande Ronde River and Catherine Creeks, May 26, 1993.
- B. Baumgartner, B. Memo to File: Data Summary Grande Ronde Productivity, June 1, 1993.
- C. Progress Report: 1992 Field Sampling Season, ODEQ Grande Ronde River Study, August 1993.
- D. Baumgartner, B. Memo to File: Grande Ronde Survey, 1993, December 21, 1994.
- E. Schnurbusch, S.A., Memo to File: Grande Ronde River Analysis for the La Grande WWTP. April 18, 1996.
- F. Schnurbusch, S., Memo to File: Ammonia Toxicity - Grande Ronde River, January 24, 1996.
- G. Baumgartner, B., Memo to File: Analysis of MZ using QUAL2EU, January 12, 1996.

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**Date:** October 3, 1997  
**To:** Environmental Quality Commissioners  
**From:** Langdon Marsh  
**Subject:** Director's Report

### **TMDL Issues Get National Attention**

I've spent a fair portion of the last two weeks in national forums where development of Total Daily Maximum Load allocations was the main topic. Last week I attended the Environmental Council of States (ECOS) meeting where the ECOS Water Committee selected TMDL issues as its primary work focus for the next year. That conference also generated good discussion about child health and environmental justice issues. Earlier this week I represented Governor Kitzhaber on the Land and Water Committee at the Western Governors Association meeting where developing a TMDL framework was a lead discussion topic.

On the home front, the hiring process to fill the Healthy Streams Partnership positions is nearly complete. We have either filled or have offers pending for most of the 19 positions. There will be a joint training of this new staff with their Department of Agriculture counterparts next week. Then our aggressive TMDL development program will begin in earnest.

### **Core Measures Support Real Environmental Benefits**

Last month the Environmental Protection Agency and the Environmental Council of States (ECOS) – representing state environmental quality agencies – concluded a year-long effort to agree upon core performance measures to gauge how state programs are doing. Measuring success has often been a sticking point between the states and EPA. Federal reporting requirements have tended to emphasize reporting of outputs, such as number of inspections or penalties, rather than outcomes such as real waste reduction or water quality improvement.

Our 1997 Performance Partnership Agreement (PPA) with EPA reflected somewhat this new way of doing business. The next PPA for fiscal year 1998 will be the official transition year for shifting emphasis to outcomes rather than outputs. In my view, this state/federal agreement is consistent with the guiding principles of our strategic planning process.

The core measures agreement also recognizes that "one size does not fit all." Core measures can be modified or even deleted if they don't meet individual state direction or needs. Our strategic plan will provide credible guidance for us to make and, if necessary, justify measure choices.

### **Agency Strategic Plan Will Go Public**

As I've mentioned before, agency administrators, managers and staff have been deeply involved the last several months developing strategic planning goals, objectives and strategies. We had an in-depth discussion of our progress at a two-day DA meeting last week, and I am pleased with the results. Our plan now is to implement a public involvement process later this month to share our thinking and get public feedback on future agency directions. We will also provide a briefing for you during your November meeting.

The DA meeting last week also addressed issues raised by the agency-wide employee survey conducted earlier this year. Again, I think we made significant progress on finding solutions to concerns that range from decision making to internal communications.

### **Teamwork Helps Shape Economic Development Priorities**

Last session, legislators gave a lot of attention to how economic development was being handled in Oregon. This review led to creation of a special task force charged with rethinking the state approach. I addressed this group last week regarding our involvement in community-based partnerships through the Community Solutions Team. I feel strongly that this shared state/local decision making process helps make sense of community development priorities.

### **EPA's Proposed Visibility Rules Raise Concerns**

DEQ is preparing comments on EPA's proposed Regional Haze Visibility Rules which would apply to the 12 Class I scenic and wilderness areas in Oregon. DEQ's Visibility Protection Program currently focuses on reducing visibility impairment from fine particulate matter (PM2.5) pollution from single sources like summertime slash and field burning or a industrial facility. EPA's proposed new regulations address regional haze from multiple sources over a larger geographic area. Key elements of EPA's proposed rules include a new measurement indicator called a "deciview" to be used to express changes in visibility that are perceptible to the public; reasonable progress targets to achieve visibility improvements; best available retrofit technology for large industrial sources; expansion of the current visibility monitoring network; and a specific timetable for rule implementation.

DEQ's comments on this proposal will question whether reasonable progress targets are achievable given the major increases in prescribed burning for forest health and express concern about funding sources for expanded visibility monitoring.

### **Portland Meets Carbon Monoxide Standards**

Despite the concern raised above, we now have the second acknowledgment this year from EPA that Portland is on the right track to keep our air clean and healthy now and in future. Yesterday, October 2, EPA officially approved the CO Maintenance Plan for the Portland airshed. As you recall, the federal agency gave similar approval to the Portland Ozone Maintenance Plan earlier this year. This is a significant achievement that reflects well on DEQ's Air Quality program.

### **New Program To Help Home Owners and Environment**

As you know, the Legislature last session passed a bill transferring a home heating oil tank management program from the Oil Heat Commission to DEQ. The law became official October 1, but full implementation may take several more months. We will immediately start offering free technical assistance to homeowners who ask for help, but the grantmaking portion of the new law depends on resolving some outstanding issues. We will be working with the Governor's office to sort through the transition from the Oil Heat Commission to DEQ.

## **TDG Briefing for the Director's Report to the Environmental Quality Commission**

The National Marine Fisheries Service (NMFS) spill program for juvenile salmonids reached its seasonal end August 31, 1997. The last month of the spill program operated within the limits established by the waiver with the exception of Bonneville Dam. Bonneville Dam was allowed to exceed the TDG physical monitoring limits established by the waiver because of damaged fish screens. The biological monitoring results were within the limits of the waiver. The Department continues to meet with other agencies in discussions of the multi-year plan of action for TDG. The Department continues to meet with agencies in discussions on the U.S. Army Corps of Engineers gas abatement program. The NMFS is contracting with the Fish Passage Center to assist NMFS in preparation of the year end report to the EQC. The year end report is a condition of the TDG waiver. Meetings will occur in the fall to discuss the previous summers monitoring results and how to improve the next years efforts. These meetings are open to the public and are well attended by agency personnel.