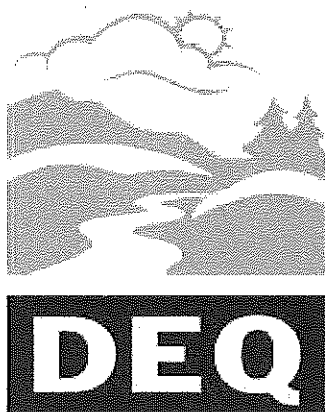


**OREGON
ENVIRONMENTAL QUALITY
COMMISSION MEETING
MATERIALS 07/07/1995**



**State of Oregon
Department of
Environmental
Quality**

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*Reasons
learned*

EQC EVENING INFORMATIONAL SESSION
THURSDAY - JULY 6, 1995

Jackson County Public Works Auditorium,
200 Antelope Road, White City.

GENERAL BASIN OVERVIEW

Gary Arnold: DEQ Nonpoint Source Specialist

A short history of Total Maximum Daily Loads (TMDL)

Al Cook: Oregon Water Resources - Southwest Regional Manager

Bruce Sund: Oregon Water Resources - Watermaster, District 14

*health of Bear Creek
progress made since 1993* *need concrete
proposal*
Artificial nature of Bear Creek, water rights issues

*10 sec ft
achievable*

Eric Dittmer: Southern Oregon State College/Rogue Valley Council
of Governments

Jim Hill - spp. for regional project

Bear Creek water reclamation plan

goals, benefits

- enhance flows*
- address low flows*
- provide irrigation
insurance supply*
- assure dry weather*
- WW disposal for WRF
improve BC
WR*

QUESTIONS FROM THE COMMISSION

POINT SOURCE DISCUSSION

Ken Hagen: Ashland City Council

Ashland wastewater treatment options

Jon Gasik: Medford Office Senior Engineer, DEQ

Update on log pond discharges to Bear Creek

pt, non-pt.

QUESTIONS FROM THE COMMISSION

*Brian Almqvist - goals
City of Ashland*

*Paula Brown - RVCOC, City of Ashland
alternatives to meet reqs.
Keep on schedule*

CAFO - not major issues here

* larger projects that increase flows

specific tributaries
small landowners - time / education / money
timeframe needed to see results - many water uses and diversions

NONPOINT SOURCE DISCUSSION

Mike Wolf: Oregon Department of Agriculture
Senate Bill 1010, CAFO inspections, PL566

need to resolve Ashland WW treatment issue

moving forward, coordination of reg. agencies on TMDLs
City of Medford, Water Reclamation Division
clarification on TMDL process
Stormwater issues, urban perspective. increase public awareness

(1-a) Dave Degenhardt: Oregon Department of Forestry

ongoing program
support regional program - key quality/quantity
Forestry Perspective erosion, roads, sampling areas
TMDLs, riparian areas, good forest practices

(1) Marc Prevost: Rogue Valley Council of Governments

Update on basin monitoring, public awareness/education plan, stream inventories

QUESTIONS FROM THE COMMISSION

Comments

Talent's drinking water quality
federal funding for Bear Creek program

Handouts:

- 1) "Bear Creek Water Resource Needs and Activities" - Rogue Valley Council of Governments
- 2) "Water Quality Protection Guide" - Oregon Department of Agriculture
- 3) "Reclaimed Water as a Water Resource Option" - Eric Dittmer

Jim Hill

- establish hierarchy
- propose flexibility in requirements be allowed
so program can be operational

Invitation List for July 7, 1995
ECQ Breakfast Meeting

<u>NAME</u>	<u>POSITION</u>	<u>PHONE #</u>
✓ Sue Kupillas	Chair - Jackson County Commissioners	776-7236
Burke Raymond	Jackson County Administrator	776-7248
Kathy Golden	Ashland Mayor	488-6002
✓ Brian Almquist	Ashland Admin.	488-6002
Jerry Lausmann	Medford Mayor	770-4432
✓ Andy Anderson	Medford Manager	770-4432
Rusty McGrath	Central Point Mayor	664-3321
Dave Kucera	Central Point Admin.	664-3321
James Lewis	Jacksonville Mayor	899-1231
Jerry Greer, Sr.	Phoenix Mayor	535-9171
Frank Falsarella	Talent Mayor	535-1566
Mary DeLaMare- Schaefer	Rogue Valley Council of Governments Ex. Director	664-6674
✓ Paula Brown	RVCOG Assist. Director	664-6674

Slash burning
equity - VIP
woodstoves
backyard
burning

ITINERARY

Environmental Quality Commission Meeting

*July 6 and 7, 1995
White City, Oregon*

Thursday, July 6

- 8:00a Load up at the turnaround (Yamhill and Sixth)
8:20a Pick up Bill Wessinger at the corner of Second and Salmon
•
•
•
11:00a Pick up Carol Whipple in Sutherlin at the Dairy Queen
•
•
•
2:30p Arrive Medford (approximately); check into the motel (rooms are not pre-paid)
Knights Inn
500 N. Riverside, Medford, 773-3676
3:00p Walk to tour of Bear Creek
•
•
•
(Dinner is on your own.)
6:30p Leave for Informational Meeting at White City
7:00p Informational Meeting

Three panels:

1. Overview of Bear Creek: progress since last meeting in fall 1993.

Presenters:

Gary Arnold, DEQ, Medford
Al Cook, Department of Water Resources
Eric Dittmer, Rogue Valley Council of Government

2. Ashland Sewage Treatment Plant: progress since the last meeting and a discussion of the options they are considering.

Presenters:

John Gasik, DEQ, Medford
Ken Hagen, Ashland City Council

3. **Non-point Sources: progress on the TMDL.**
Presenters:
Mike Wolff, Department of Agriculture
Jim Hill, City of Medford
Dave Dagenheart, Department of Forestry
Marc Prevost, Rogue Valley Council of Government

Friday, July 7

8:00a Breakfast at the Holiday Inn
2300 Crater Lake Highway\

(Will provide a list of participants Thursday night.)

9:30a Leave for White City
10:00a EQC meeting

Note: A representative from Jackson County will make a short presentation during the Public Forum, discussing the success story of the Medford area air quality standards attainment.

-
-
-

Leave for Portland (box lunches will be delivered at 11:45a).

Note: Michael Huston will be going down on his own. He will try to be at the Thursday evening meeting; he will not be attending the breakfast. Michael will be attending Friday's meeting. (Michael will be staying at the Red Lion in Medford.)

JACKSON COUNTY PUBLIC WORKS LOCATION MAP



PACIFIC AVE

ANTELOPE ROAD

To HWY. 26

TO AUDITORIUM

ADMINISTRATION / ENGINEERING

200 ANTELOPE ROAD

FLEET / ROAD MAINT

PUBLIC WORKS WAREHOUSE

ARCHIVES HIST. SOC.

JOURNEYMAN APPRENTICESHIP TRAINING CENTER

SIGNS PAINT

WELDING

FUEL & LUBE

EQUIPMENT SHED

EQUIP.

EQUIPMENT SHED

LAB

FENCED & COVERED AREA

ASPHALT TANKS

PURCHASING WAREHOUSE

PUBLIC WORKS WAREHOUSE

PUBLIC WORKS WAREHOUSE

SEARCH & RESCUE WAREHOUSE

PARKS WAREHOUSE

SHED

AUDITORIUM

TO MEDFORD
TABLE ROCK ROAD

Gary Arnold and Jon Gasik
Oregon DEQ, Western Region
May 15, 1995

Page 2

RE: 1993 Bear Creek Nonpoint Source Management
Implement and Compliance Schedule

Jackson County Roads and Parks Services is also proceeding with the development of a Integrated Vegetation Management Plan in cooperation with the Oregon Department of Transportation and the Federal Highway Administration. Even though the Oregon Department of Transportation is not listed in the schedule as a DMA, the water quality of drainage from the I-5 Freeway and State Highway 99, which both impact Bear Creek for a long distance, should be improved by implementation of an IVM plan.

The IVM Plan, through data collected on the characteristics of county and state roads and examination of current practices in both agencies, will define best management practices for managing the vegetation along our roads. Even though vegetation management will be the primary focus, other data directly related to vegetation management and water quality will be considered and included in the BMP's. For instance, roadside ditch condition will be considered. How much vegetation is present, signs of erosion, soil type, slope, back slope grade, etc. will all help determine the BMP. Better management of the vegetation along our roads should contribute to improved water quality. We hope to begin data collection this summer and complete the plan by July 1, 1996. The plan should present specific opportunities to address the Bear Creek Basin Non-Point Source Management Implementation and Compliance Schedule.

In addition we have the following comments:

1. Jackson County Roads and Parks Services would like the opportunity to work with the RVCOG and DEQ to develop a program to maintain county roadside ditches that is effective, economical and responds to the needs of the environment. Paul Korbolic (vegetation and parks) and Carl Michael (road maintenance) have both agreed to work with the two agencies.
2. Action proposed by either the Implementation and Compliance Schedule or the Integrated Vegetation Management Plan is subject to funding approval. Initially we must spend funds to collect data and develop a plan to ensure that when we finally implement an action the cost of the action carries a benefit which is measurable. We can only implement actions as funds are available.

Gary Arnold and Jon Gasik
Oregon DEQ, Western Region
May 15, 1995
Page 3

RE: 1993 Bear Creek Nonpoint Source Management
Implement and Compliance Schedule

3. Jackson County Roads and Parks Services has no comment on proposals for the Ashland Sewage Treatment Plant and Boise Cascade log pond discharge into Elk Creek.

Again, thanks for the opportunity to comment. Give me a call if you have questions.

Sincerely,



Tim A. Coffey, P.E.
Traffic & Development Engineer

cc: Joe Strahl
Dale Petrusek
Marsha Fickert
Paul Korbolic
Ron Young
Carl Michael

\wp\deqditch.tac

State of Oregon
Department of Environmental Quality

Memorandum

Date: July 7, 1995

To: Environmental Quality Commission
From: Langdon Marsh
Subject: Director's Report

DEQ Budget and Legislative Outcomes

The DEQ budget for the 1995-97 biennium was approved much as reported to you in May. There were no cuts to the base budget. Of 84 new positions requested, 50 were approved and we have authority to go to the Emergency Board for 12 more if workload demands them. In addition, 8 positions were approved as part of specific legislation.

The final lottery allocation ("Christmas Tree bill") included \$87,000 for Phase III of the Willamette River Study. Senator Yih is seeking additional funding from the affected counties.

Important substantive outcomes, described more fully in the Legislative Report, included:

- HB 2255 - Pollution and Pollution Prevention Tax Credits**
Continues several tax credits (pollution control, plastics, and recycling), and creates a new pollution prevention tax credit for reduction of hazardous air pollutants.
- SB 333 - Fees**
State agency fee increases will not be effective unless approved by the Governor or Dept. of Administrative Services, and will automatically expire unless approved by the legislature in the following session.
- SJR 12 - Legislative Review of Administrative Rules**
Referral to voters.
- HB 3448 - Portland Air Quality Maintenance Plan**
Governor has not yet decided whether to sign. Would eliminate Yamhill, Columbia and Marion Counties from the expanded boundary. Makes parking ratio program voluntary, and adjusts other strategies.
- HB 3044 - Field Burning Program to Dept. of Agriculture**
- HB 3352 - Environmental Cleanup**
Major revisions will require rulemaking.
- SB 502 - Strategic Water Management Group Abolished**
All SWMG groundwater functions are transferred to DEQ.
- SB 829 - Chemical Process Mining**
Consolidated application must be processed under statutes and rules in effect at time application is filed. Governor signed on July 5.

Columbia River Voluntary Spill Program

Spill for salmon on the Columbia River continues at all hydroelectric projects. Two major concerns have arisen since the Commission's last review of the program:

1. Army Corps of Engineers (Corps) physical monitoring has been unreliable;
2. Routine violation of the Commission's TDG standard, resulting in a Notice of Noncompliance.

DEQ vigorously and regularly expressed its concerns about the physical monitoring problems to the Corps and the fishery agencies, until at this time only minor equipment problems appear to remain. Hourly data upon which twelve hour averages are calculated are more complete.

Because of standard violations, DEQ issued a Notice of Noncompliance to the Corps and the National Marine Fisheries Service (NMFS) on May 26, 1995. At a meeting with the Corps, NMFS and the Washington Dept. of Ecology on June 2nd, DEQ underlined the importance of remaining within the TDG waiver standards. Since that time, with occasional small overages, the Corps has managed to remain within the standard at the Oregon dams.

In discussions with the Corps we have emphasized our interest in working toward a long term solution. DEQ will attend a presentation on the Corps' gas abatement study later this month and will continue meeting with the Corps and other agencies. Early indications are that the Corps supports establishment of a timetable for modifying the dams to achieve the required spills and remain within the state's normal TDG criteria.

Hyundai Plant in Eugene

Announcement of a \$1.3 billion Hyundai computer chip factory to be located in Eugene has led to 2 community meetings re possible impacts (including environmental) to the community. There is significant concern about the types of chemicals to be used in the process, their handling and storage, and possible releases to the environment. The site is located in a wetland area and will require a fill permit. The Eugene office was represented at both community forums and has been active in responding to questions.

Clean Air Action Day Program

DEQ's advisory day program to reduce summer ozone pollution has been given a boost by a name change and free transit this year. The program was launched in 1991 as "Clean Air Weather Watch." The name switch to "Clean Air Action Day" puts less emphasis on the weather and underscores that people can take voluntary action to help keep the air from becoming unhealthy to breathe. For the first time, Tri-Met will offer free rides on all buses and MAX trains on a Clean Air Action Day. We expect C-Tran in Clark County to follow suit, pending approval by its board on July 11.

Another initiative this season is to urge CEO's of the region's largest employers to encourage and support employees driving less on advisory days. DEQ is designing kits with information and suggestions for ideas companies can implement.

EPA Region X is very impressed with our revitalized program and will encourage other states to implement similar programs.

AFSCME Negotiations

The current contract is extended through July 31st. The State and AFSCME continue mediation. With reversal of Measure 8, budgeted funds for salary increases will not even cover the reinstatement of the 6% PERS state "pickup."

Hearing Authorizations

1. Air Quality. Deferral of Title V Operating Permit Requirements for Certain Sources.

This rule would defer permitting requirements for sources with low actual emissions. Under Title V all sources with potential to emit at major source levels must be permitted or have other enforceable limits on that potential. Deferring permit requirements will allow the Department time to develop less costly non-permit means to comply, for those sources with low actual emissions.

2. Solid Waste. Conform DEQ Deadline for Solid Waste Landfills to Meet Financial Assurance Requirements with Federal Deadline.

This proposes permanent adoption of a temporary rule adopted by the Commission in April.

Note: The Commission will travel together by van to Medford on July 6, 1995. Upon arrival the Commission will take a tour of Bear Creek.

A G E N D A

ENVIRONMENTAL QUALITY COMMISSION MEETING

July 6-7, 1995

Jackson County Roads and Parks Auditorium
900 Antelope Road
White City, Oregon

Thursday, July 6, 1995: Work Session beginning at 7:00 p.m.

1. Update on the Status of Bear Creek (Rouge River Basin) Subbasin Point Source Discharge Conditions and Nonpoint Source Management Implementation Compliance Schedule
 2. Update on the progress of the Ashland Sewage Treatment Plant
 3. Non-Point Sources: Progress on the Total Maximum Daily Load
-

Note: The Commission will be breakfasting with local officials beginning at 8:00 am at the Medford Holiday Inn, 2300 Crater Lake Hwy.

Friday, July 7, 1995: Regular Meeting beginning at 10:00 a.m.

Notes:

Because of the uncertain length of time needed for each agenda item, the Commission may deal with any item at any time in the meeting. If a specific time is indicated for an agenda item, an effort will be made to consider that item as close to that time as possible. However, scheduled times may be modified if agreeable with participants. Anyone wishing to be heard or 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. Individual presentations will be limited to 5 minutes. The Commission may discontinue this forum after a reasonable time if an exceptionally large number of speakers wish to appear.*

- A. Approval of Minutes
- B. Approval of Tax Credits
- C. Revisions to OAR 340-50 Land Application of Domestic Wastewater Treatment Facility Biosolids
- D. Revision to Nonpoint Source Implementation and Compliance Schedule and Commission Authorization
- D-1. Proposed Authorization for Continued Point Source Discharges into Waters of the Bear Creek Subbasin (Rogue Basin) with Specified Conditions
- E. This item was removed.
- F. Proposed Temporary Rule to Continue the Existing Fecal Coliform Water Quality Bacterial Standard
- G. Progress on Review of the EQC Tualatin Subbasin Nonpoint Source Management Implementation
- H. Commissioner's Report (Oral)
- I. Director's Report (Oral)

Hearings have already been held on the Rule Adoption items; therefore, any testimony received will be limited to comments on changes proposed by the Department in response to hearing testimony. The Commission also may choose to question interested parties present at the meeting.

The Commission has set aside August 17-18, 1995, for their next meeting which will be held in Bend, Oregon.

Copies of staff reports for individual agenda items are available by contacting the Director's Office of the Department of Environmental Quality, 811 S. W. Sixth Avenue, Portland, Oregon 97204, telephone 229-5395, or toll-free 1-800-452-4011. Please specify the agenda item letter when requesting.

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

June 28, 1995

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June 28, 1995

JACKSON COUNTY PUBLIC WORKS LOCATION MAP



PACIFIC AVE

ANTELOPE ROAD

To Hwy. 26

TO AUDITORIUM

ADMINISTRATION / ENGINEERING

208 ANTELOPE ROAD

TREES / ROAD MAINT

PUBLIC WORKS WAREHOUSE

ARCHIVES

HIST. SOC.

JOURNEYSMAN APPRENTICESHIP TRAINING CENTER

PAINT

EQUIP.

LAB

WELDING

FUEL & LUBE

EQUIPMENT SHED

EQUIPMENT SHED

FENCED & COVERED AREA

ASPHALT TAKES

PURCHASING WAREHOUSE

PUBLIC WORKS WAREHOUSE

PUBLIC WORKS WAREHOUSE

SEARCH & RESCUE WAREHOUSE

PARKS WAREHOUSE

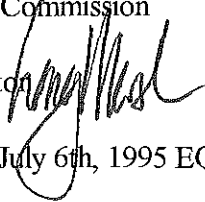
SHED

AUDITORIUM

TO MEDFORD

TABLE ROCK ROAD

Date: June 21, 1995

To: Environmental Quality Commission
From: Langdon Marsh, Director 
Subject: Work Session Item 1, July 6th, 1995 EQC Informational Meeting

**UPDATE ON THE STATUS OF BEAR CREEK (ROUGE RIVER BASIN)
SUBBASIN POINT SOURCE DISCHARGE CONDITIONS AND NONPOINT SOURCE
MANAGEMENT IMPLEMENTATION COMPLIANCE SCHEDULE**

Statement of Purpose

This purpose of this meeting allows staff and the local Bear Creek basin Designated Management Agencies (DMAs) the chance to update the Commission on:

What efforts have been made to meet the TMDLs for the Bear Creek basin.

What tasks still need to be accomplished, and the time frame that they require.

How well the implementation process for the Bear Creek TMDLs has proceeded and what lessons have been learned.

Background

Bear Creek has been classified by the Department of Environmental Quality as water quality limited. Years of monitoring have shown that Rogue River basin standards for dissolved oxygen, pH and fecal coliform bacteria are routinely violated. Water of this quality will not support the beneficial uses of salmonid fish rearing, resident fish and aquatic life, water contact recreation or aesthetics.

Computer modeling, calibrated with water quality data collected in the Bear Creek basin, has determined numerical instream concentration limits for total phosphorus, total ammonia and five-day Biological Oxygen Demand (BOD5) that will allow for the protection of the beneficial uses mentioned above. These protective instream limits were adopted as Total Maximum Daily Loads (TMDL), and

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

Memo To: Environmental Quality Commission
Agenda Item 1
July 6, 1995 Meeting
Page 2

incorporated into the Oregon Administrative Rules in 1989. Scheduled dates for compliance were also included into the rule (OAR 340-41-385). The scheduled compliance dates have come and gone for complying with the TMDL limits.

The City of Ashland must still submit an approved facilities plan which details how their Waste Water Treatment Plant's (WWTP) discharge will comply with their TMDL waste load allocation. The City of Ashland has signed a Mutual Agreement and Order (MAO) with the department agreeing to a revised schedule for the completion a plan. Boise Cascade of Medford has submitted a request to revise the original waste load allocation set by the department. Department review of the Boise Cascade request is currently underway.

The dates for meeting the nonpoint source compliance schedule (adopted by the EQC in April of 1993) have also come and gone. Some of the required tasks are complete, some require more time. The revised nonpoint schedule details the status of specific tasks and any additional time that is being requested.

Additional, non-TMDL water quality factors also limit the beneficial uses relating to fish and aquatic life. TMDLs are not proposed for these problems, but they are mentioned here for completeness. Limiting factors which will be partly addressed through the nonpoint source program are the excessive instream temperatures and the lack of instream/riparian habitat. Limitations due to the toxicity of chlorine in the Ashland WWTP effluent will be addressed in the new NPDES discharge permit for that facility.

Summary of Public Input Opportunity

A public hearing was held in Medford on May 16, 1995. The hearing officer's report is listed as Attachment E in the July 7, 1995 Agenda package.

Conclusions

Since the Bear Creek TMDL rule was adopted a number of activities have occurred within the basin that will bring us closer to meeting water quality standards. Although there have been delays in the early stages of implementation several factors have come together to provide assurance that standards will be met. Because of reorganization and staff assignment the Department has been able to provide additional resources to monitor progress towards implementation by both the point sources and the Designated Management Agencies (DMAs) responsible for nonpoint source impacts. In addition, staff are optimistic that this review of the issue by the Commission and a reaffirmation of the DMAs' commitment to the Commission will maintain the momentum. Finally, there is increased citizen and federal agency involvement in working to improve water quality and beneficial use protection in Bear Creek.

Intended Future Actions

This informational item is designed as an opportunity for the Commission to question staff and local Bear Creek basin DMAs on how efforts to meet the TMDLs set for the Bear Creek basin are proceeding. It is also intended to inform the Commission on what options are recommended for adoption during their July 7th, 1995 meeting.

Memo To: Environmental Quality Commission
Agenda Item 1
July 6, 1995 Meeting
Page 4

Attachments

A. Bear Creek Water Quality Update

B. Bear Creek Nonpoint Source Designated Management Agencies List of
Accomplishments

Approved:

Section:

Kevin Downing

Division:

Michael How

Report Prepared By: Gary Arnold

Phone: 776-6010 Ex 241

Date Prepared: June 21, 1995

ga:ga
6/21/95

BEAR CREEK WATER QUALITY SUMMARY
July, 1995

The following is an update on the water quality parameters of interest in Bear Creek.

PHOSPHORUS

Figure 1 shows the contribution of phosphorus to Bear Creek from the Ashland wastewater treatment plant. It has been pointed out that some of this phosphorus comes from nonpoint source inputs between these sampling points, however, several monitoring data sets show that the Ashland effluent accounts for the great majority of the increases shown here.

Figure 2 shows how instream phosphorus data from August of 1994 (solid line) compares to historical August data (plotted stars). Figure 3 shows a longitudinal data set taken in August of 1976 (solid line with Xs) compared with the same data set collected in August 1994 (solid line with stars). Both figures show that 1994 instream phosphorus levels are some of the lowest ever recorded. Ashland was one of the first communities in Oregon to ban phosphate detergents, and it appears that this action has resulted in overall reductions of phosphorous concentrations.

Figure 4 shows how often the low flow season TMDL limit of 0.08 mg/l of total phosphorus as P has been exceeded. Open bars show pre-1990 data, dark bars show post 1990 data. The segments referred to on the X-axis are:

Segment 1: Walker Cr./Emigrant Cr. Confluence to TID Dam	(RM 23.0 - 27.0)
Segment 2: TID Dam to MID Dam	(RM 18.1 - 23.0)
Segment 3: MID Dam to Jackson St. Dam	(RM 9.8 - RM 18.1)
Segment 4: Jackson Street Dam to mouth	(RM 0 - RM 9.8)

It is clear that Bear Creek still has instream phosphorus levels above the TMDL target. Substantial reductions to both the point and nonpoint sources of phosphate are still required.

The most controversial subject of Bear Creek water quality has undoubtedly been the background phosphorus level set by the TMDL. Many have questioned the validity of the background level used in the computer model. Data collected high in the headwaters of the Bear Creek basin by the Oregon Department of Forestry supports these observations about background phosphorus levels:

Phosphorus levels from 1992 were higher than levels from 1994.

Tributary basins in the southern part of the Bear Creek watershed have the highest natural phosphorus levels.

Background levels in Neil, Ashland, Emigrant and Walker Creeks (all of which are upstream of the Ashland WWTP) show only two of the 31 samples collected above the 0.08 mg/l limit (both were 0.09 mg/l).

AMMONIA

The contribution of the Ashland plant to Bear Creek ammonia concentrations is shown in figure 5. In contrast to phosphorus or BOD5, the Ashland WWTP is the sole source of ammonia in the basin. Ammonia does not occur in any of the tributaries or above the plant. Ammonia has two negative effects to aquatic life, it is directly chronically toxic in the concentrations measured in Bear Creek, and it acts to lower dissolved oxygen levels below the Ashland outfall.

Figure 6 shows how 1994 data compares with historical data and figure 7 shows how instream levels compare to the TMDL limits. The segments in figure 7 are identical to the segments in figure 4. Low flow season TMDL limits for ammonia are 0.25 mg/l total ammonia as N and the high flow TMDL limits are 1.0 mg/l of total ammonia as N.

Again levels in 1994 are lower than historic levels, and the low flow season data shows that measurable reductions of ammonia have occurred throughout Bear Creek. Even though high flow limits are four times as high as low flow season limits, the data show an increase in ammonia in the segments directly downstream of the plant. Probably, this is due to the decreased efficiency of the Ashland plant due to colder winter temperatures and due to the increased age of the plant coinciding with the most recent data.

FIVE-DAY BIOLOGICAL OXYGEN DEMAND (BOD5)

Figure 8 shows the contribution of BOD5 from the Ashland WWTP to Bear Creek. Figure 9 shows how well TMDL limits have been met. The low flow TMDL limit for BOD5 is 3.0 mg/l, the high flow TMDL limit for BOD5 is 2.5 mg/l.

Substantially lower levels of nonpoint source BOD5 are measured in the upper reaches of Bear Creek (segment 1) during the most recent low flow seasons of data. The high flow season data shows an increased level of BOD5 in Bear Creek. Again, the advancing age of the present Ashland treatment plant is the probable cause.

INSTREAM TEMPERATURE

Traditional "grab" sampling for temperature has occurred in the Bear Creek basin since the late 1960's. With the current maturity of continuous monitoring technology for temperature, it can be said with confidence that more and better data was taken during the summer of 1994 than in the last 25 years. Approximately 25,000 data points were logged during the summer. The quality control audit measurements performed during the summer prove that the accuracy and precision of this data set are extremely high.

The data presented in figure 10 summarizes instream water temperature conditions in Bear Creek from mid August through early October. The data show that in the late summer of 1994 (*):

Lethal water temperatures for salmonids (above 24 degrees C.) in Bear Creek are rare, but do occur below the Jackson Street Dam

Instream temperatures are classified as "limiting or less than optimal " (between 15.6 and 24.0 degrees C.) about 75 percent of the time. Temperatures are classified as "optimal" (less than 15.6 Degrees C.) about 25 percent of the time.

Instream temperatures in the upper reaches of Bear Creek are already close to thermal equilibrium. In other words, the upper sections of Bear Creek provide little protection from solar heating from the sun.

The Jackson Street dam, at river mile 9.8 causes increased water temperature. Other data, not presented here, show that the Jackson Street dam increases water temperature at least 0.5 degrees Celsius 45 percent of the time.

(*) July of 1994 was the warmest July on record, 28 days were above 95 degrees F (as measured at the Medford airport). The data from 1994 is closer to a worst case scenario than to an average condition.

INSTREAM/RIPARIAN HABITAT

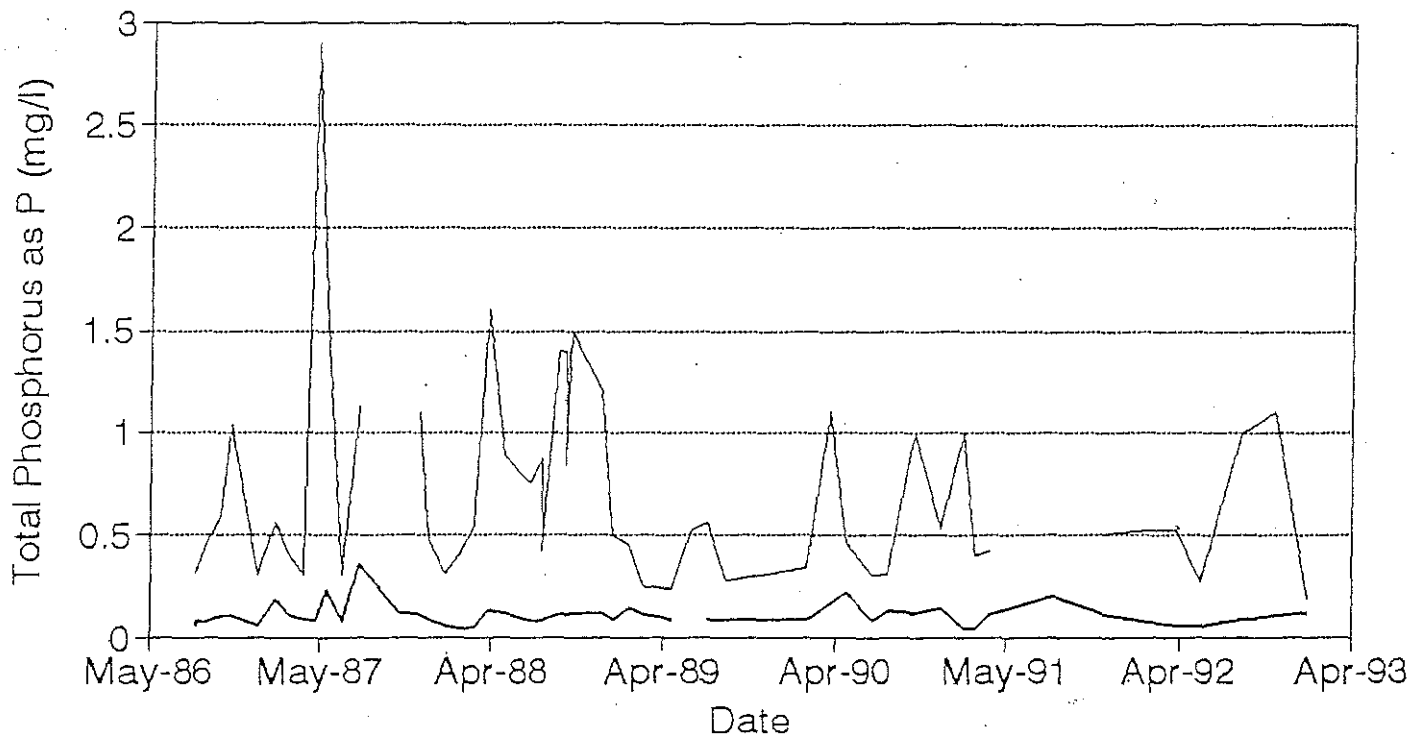
Stable aquatic populations need functional habitat niches as well as adequate water quality. Bear Creek will require protection and restoration work to provide for that habitat. Data collected by state agencies, volunteers, environmental groups and the Rogue Valley Council of Governments shows that the Bear Creek stream corridor suffers from lack of shading, lack of bank stability, potential spawning gravel beds that are buried under sediment, both excessive and inadequate stream flows, barriers to migration, lack of connections to groundwater...and a host of other factors. Measures taken to reduce excessive stream temperatures, such as enhancing the width, density and diversity of riparian plant communities, will also aid in correcting some of the habitat problems listed above.

ASHLAND WWTP EFFLUENT TOXICITY

Toxicity from the Ashland WWTP has been shown to be chronically toxic in standard bioassay tests. This is due to both chlorine and ammonia levels. Increased ammonia removal will be required of any of the wastewater treatment options that Ashland is considering. The selected option must also include either a dechlorination step before discharge or an alternative to chlorine for disinfection.

FIGURE 1

Phosphorus Concentrations in Bear Creek DEQ Data

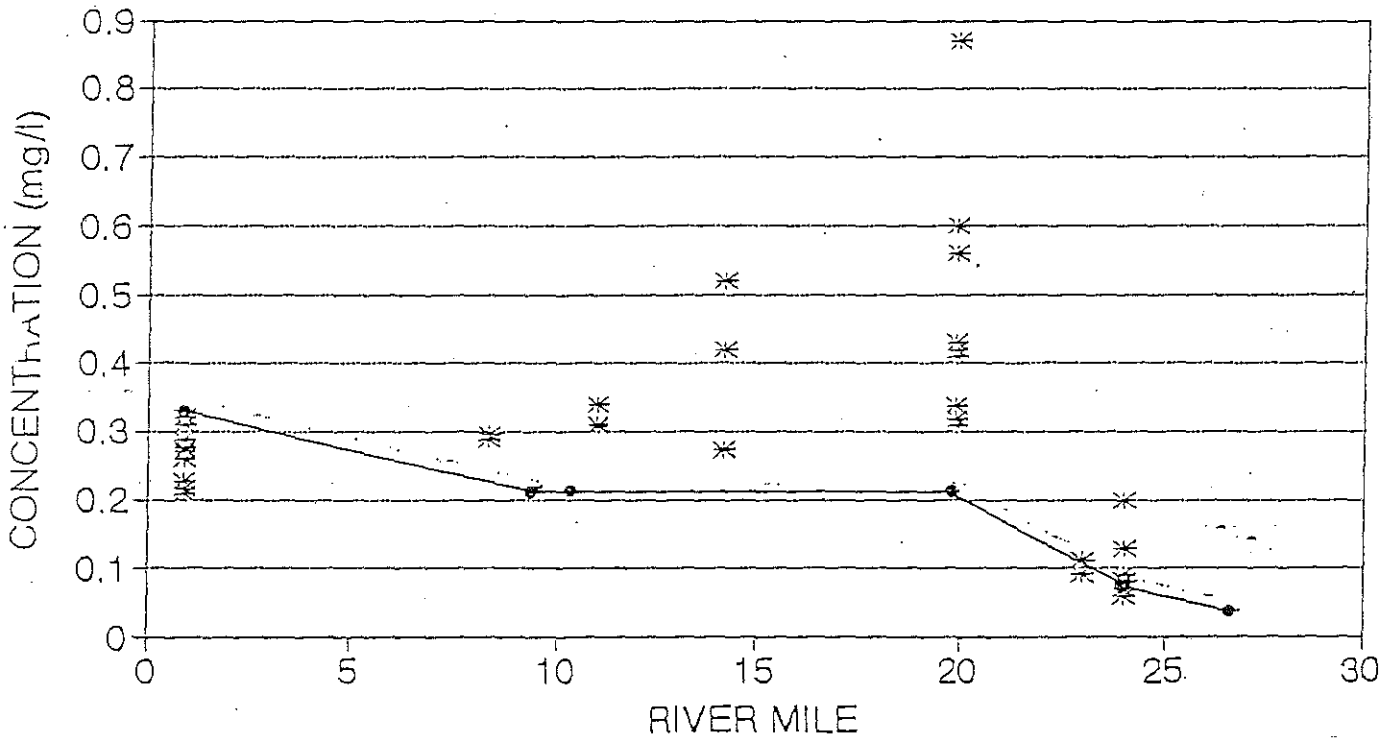


— Downstream of Plant — Upstream of Plant

FIGURE 2

BEAR CREEK TOTAL PHOSPHORUS

ALL DATA FOR MONTH OF AUG - 1980/1991

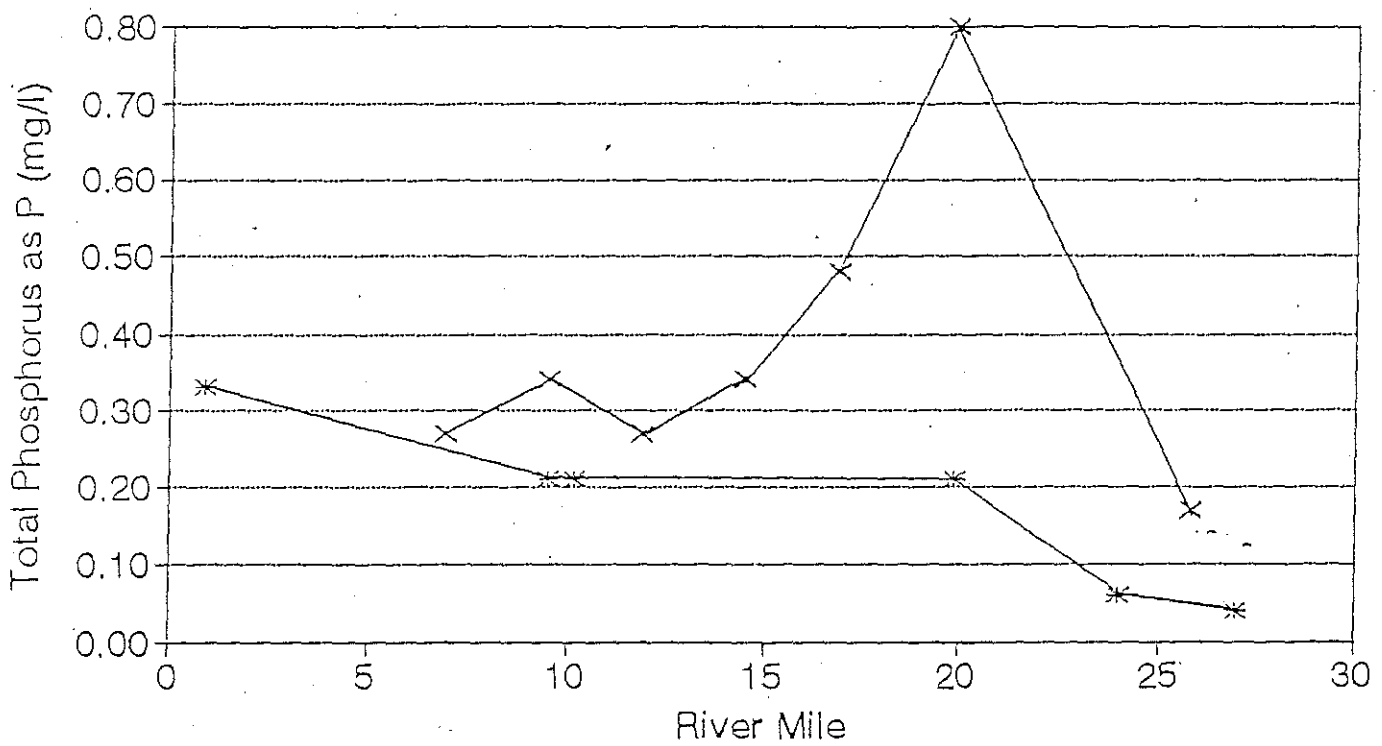


* TOTAL PHOS. AS P

FIGURE 3

Main Stem Bear Creek

Aug 76 Compared to Aug 94



* August '76 * August '94

FIGURE TMDL Phosphorus Standard

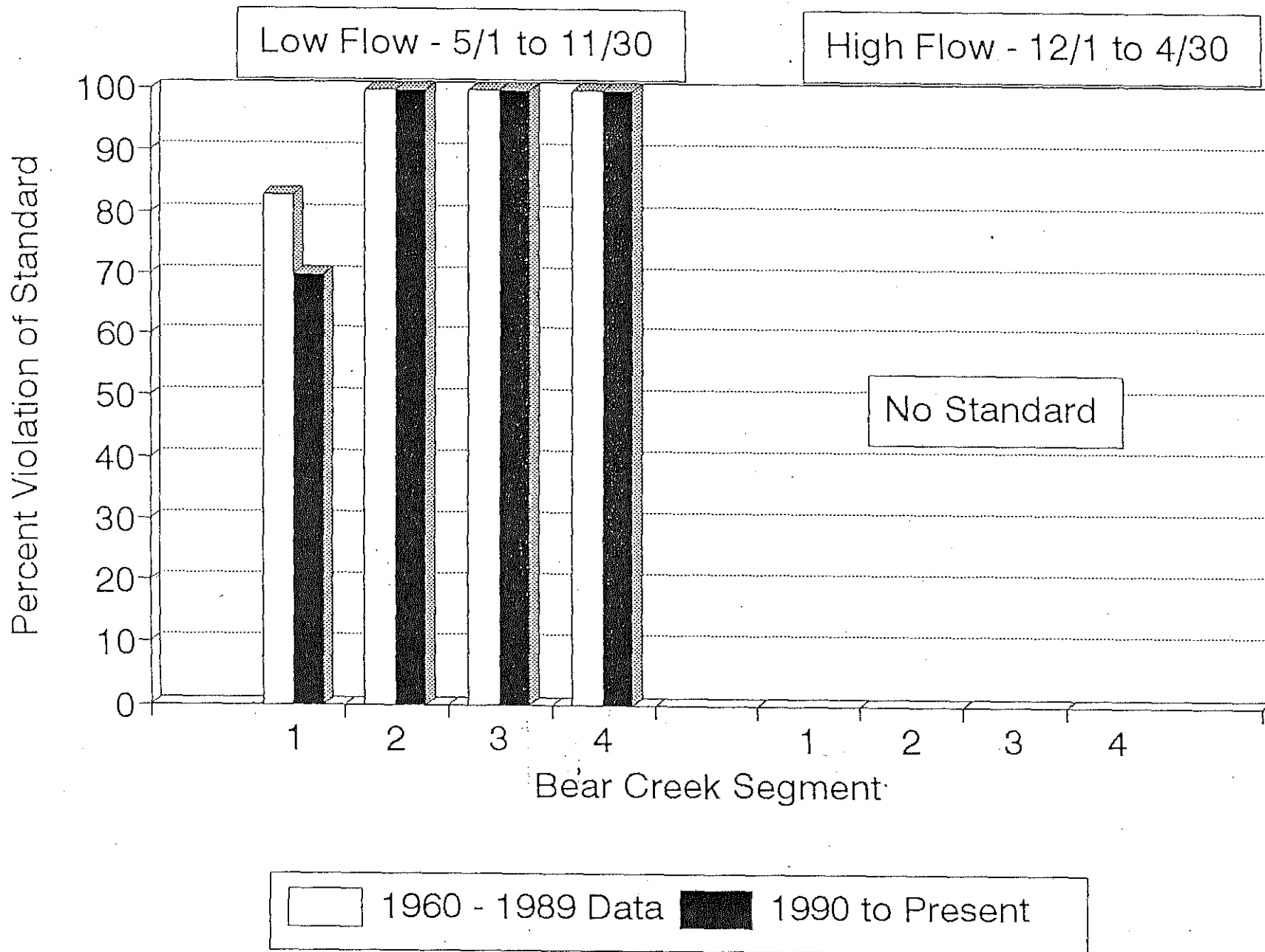
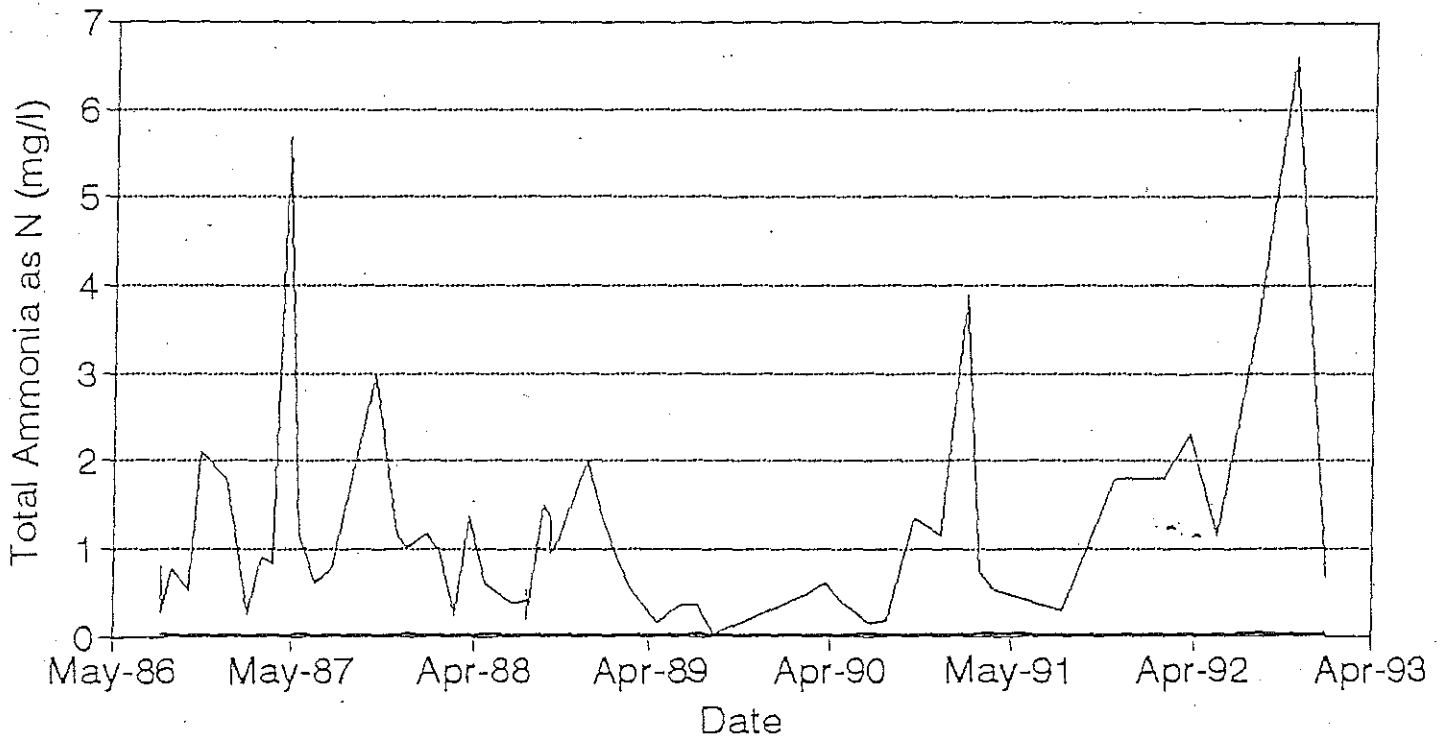


FIGURE 5

Ammonia Concentrations in Bear Creek DEQ Data



— Downstream of Plant — Upstream of Plant

FIGURE 6

BEAR CREEK TOTAL AMMONIA
ALL DATA FOR MONTH OF AUG - 1980/1991

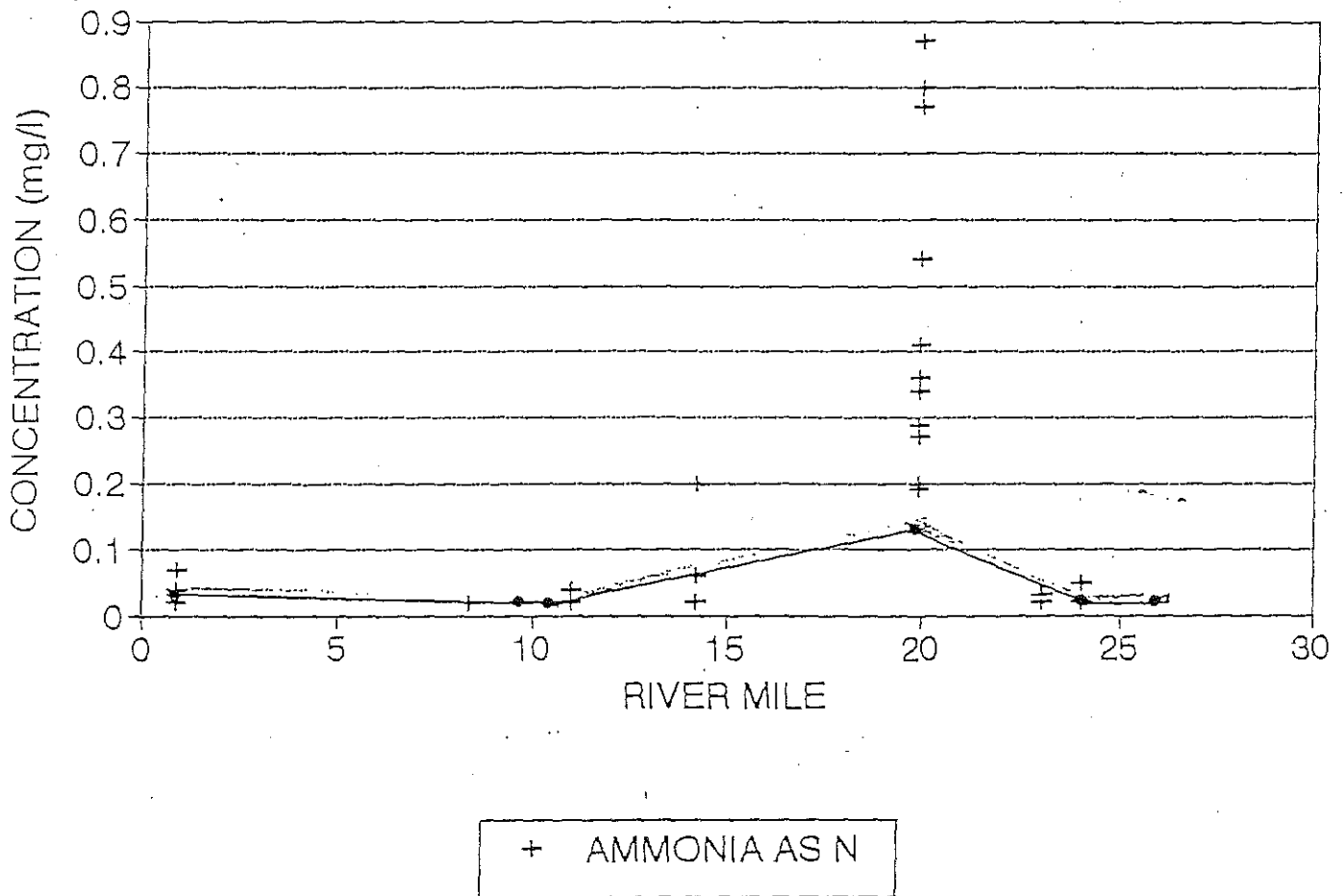


FIGURE 7

TMDL Ammonia Standard

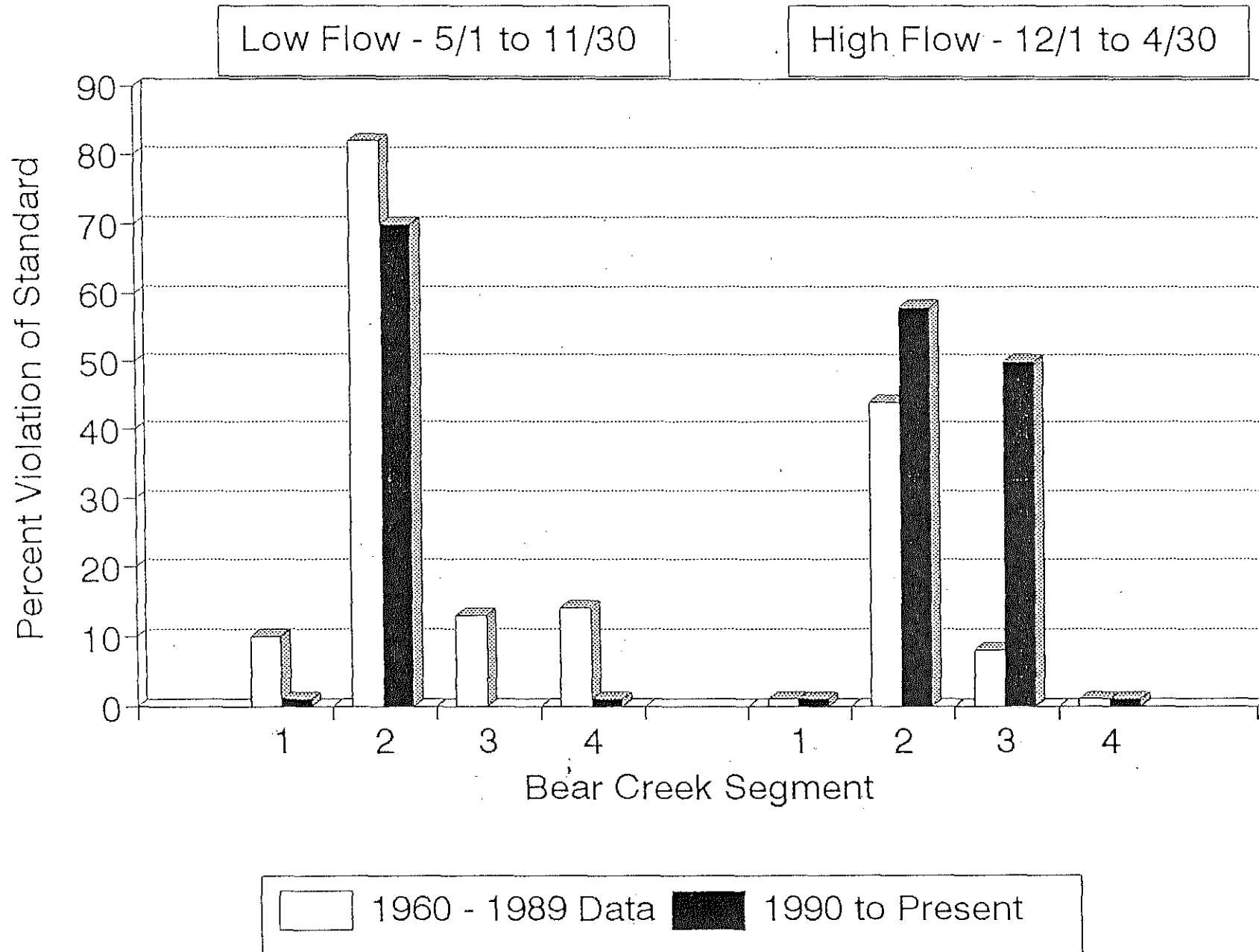
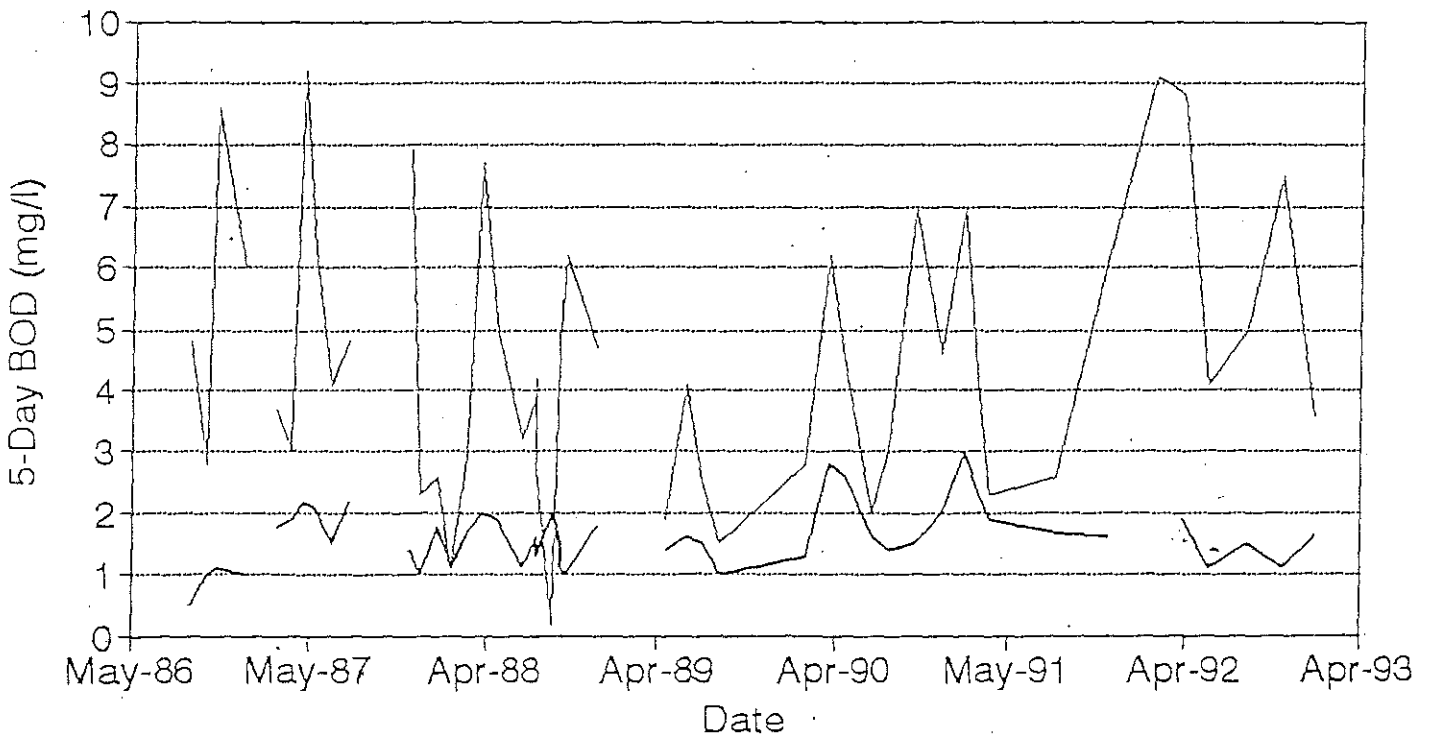


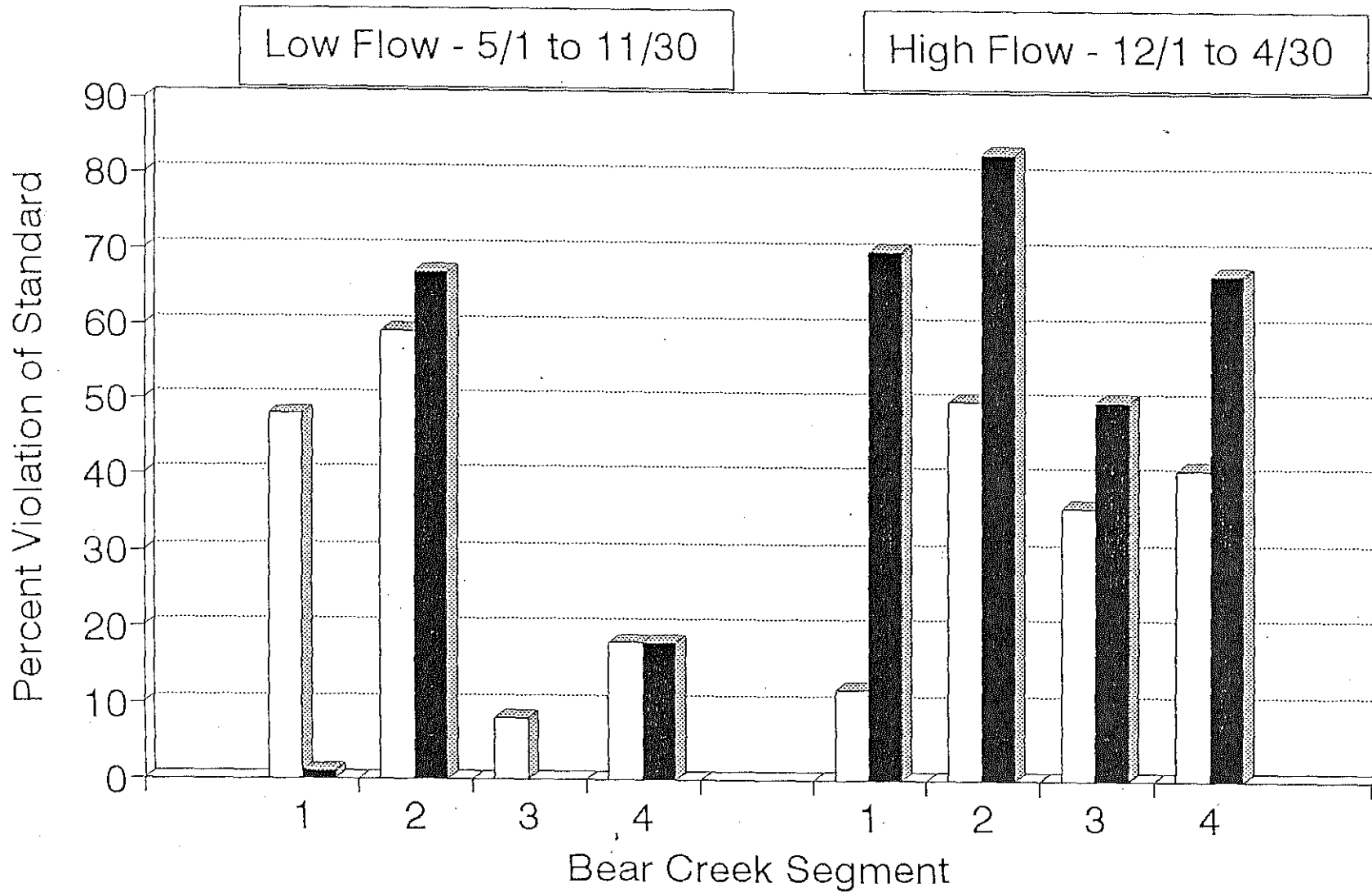
FIGURE 8

5-Day BOD Concentrations in Bear Creek DEQ Data



— Downstream of Plant - - - Upstream of Plant

FIGURE TMDL 5-Day BOD Standard



Legend:
□ 1960 - 1989 Data ■ 1990 to Present

FIGURE 10

Bear Creek Temperature Profile

Aug 17 at 0600 to Oct 3 at 1400, 1994

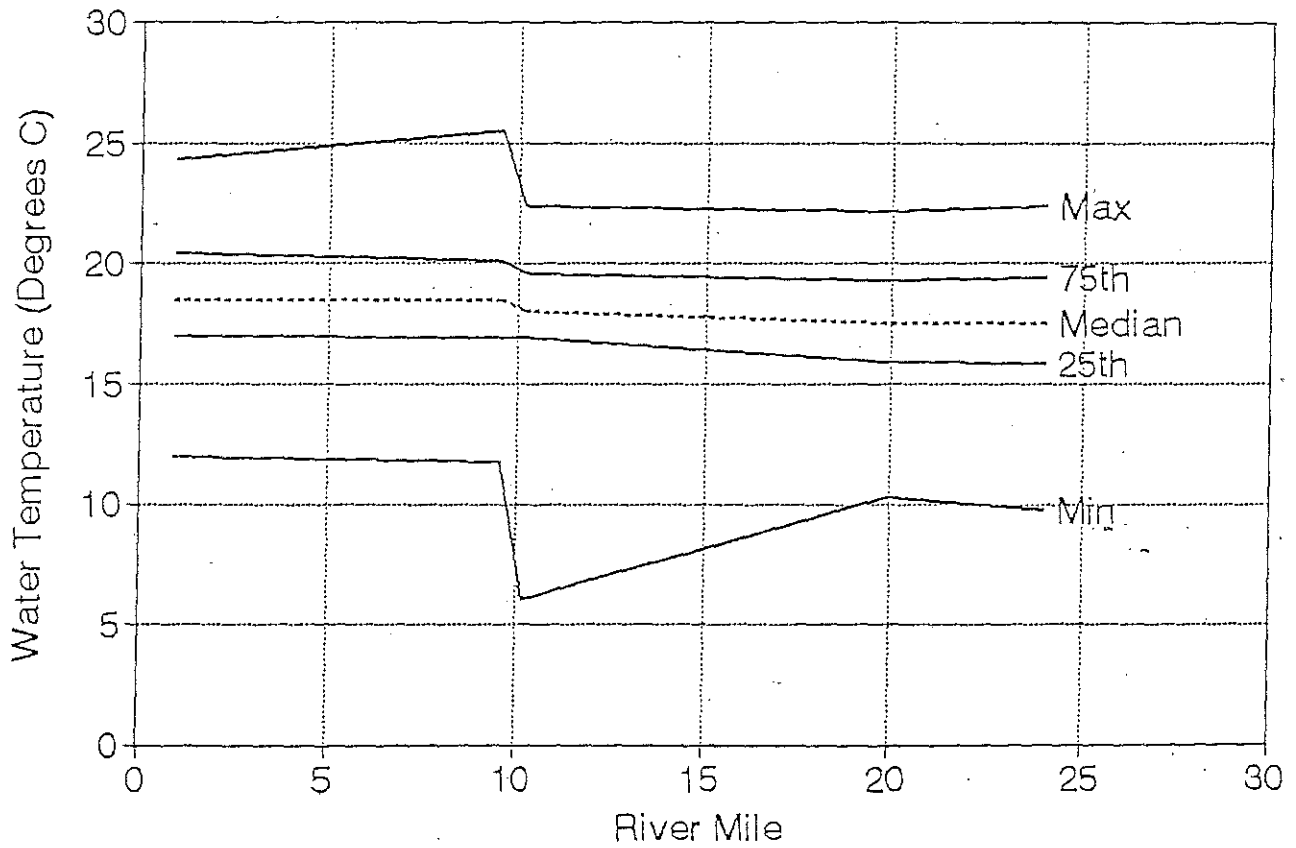


Figure 15

ATTACHMENT B

PARTIAL LIST OF ACCOMPLISHMENT BY DMAs (AND OTHERS) IN THE BEAR CREEK BASIN

Most of the accomplishments listed below deal with meeting TMDL limits on nonpoint source pollution. The 1993 Nonpoint Source Management Implementation and Compliance Schedule identified specific Designated management Agencies (DMAs) with responsibility for meeting the Bear Creek TMDLs. Certain tasks could be performed by all of the DMAs throughout the basin, some tasks are unique to one jurisdiction.

BASIN WIDE TASKS PERFORMED BY DMAs

Figure 1 details which DMAs have accomplished these basin wide tasks.

UTILITY BILL MAILINGS

Information dealing with nonpoint source pollution control measures included in city utility bills. The city of Phoenix elected to distribute bilingual door hangers using high school students.

STORMDRAIN STENCILING

Many drains have been labeled, some twice as the original paint has worn off. The Bear Creek Watershed subcommittee on Education will help to coordinate efforts for future stenciling efforts.

TOWN MEETINGS/CONFERENCES

The county and cities have discussed nonpoint source compliance goals in council meetings. Talent presented a forum specific to local water issues. Ashland has done several TV cable access presentations dealing with its WWTP options.

Two water quality conferences were held in the basin in March of 1995. Oregon Department of Agriculture, the Jackson County Soil and Water District and the Natural Resources Conservation Service co-sponsored a conference dealing with agricultural issues. Most of the nonpoint source DMAs were in attendance or presented at the one and one half day long conference. Southern Oregon State College also presented a two day conference on Bear Creek surface and groundwater issues. Again, many local DMAs were involved.

Interest has been expressed in presenting future conferences on these topics:

- 1) The importance of wetlands to controlling nonpoint source pollution.

2) A seminar directed towards county and city planners, elected officials and realtors on how to incorporate nonpoint source control measures into local ordinances.

STREAMWALKS

Streamwalks were assigned as a first step to identify the worst problem areas. Several trash cleanup days have occurred as a direct result of these walks.

STORMWATER SYSTEM SAMPLES/MAPPING

The identification of the location of stormdrains that input into Bear Creek and the quality of the stormwater coming from them.

FUNDING NPS MONITORING

Rather than having nine separate monitoring programs, the Rogue Valley Council of Governments (RVCOG) is coordinating one nonpoint source monitoring program for the basin. The DMAs, except for Department of Forestry, have provided monies to fund the monitoring program.

WATER QUALITY MONITORING

Rather than contribute funds to the basin nonpoint source program, the Department of Forestry elected to monitor sites high in the basin. This data has been shared with all of the DMAs and has been very useful in establishing natural background nutrient levels. The RVCOG, although not a DMA, has been monitoring in the basin since the mid 1970s.

TASKS BY INDIVIDUAL DMAs

Ashland

Has facilitated the formation of a citizen work group that is looking for alternatives to periodic sluicing of the city's Reeder Reservoir. Material from the sluicing activities (currently allowed every three years) becomes a moderate to severe sediment load in Ashland and Bear Creek. The group is exploring measures to 1) stabilize hillsides above the reservoir and 2) optimizing the timing of releases from the dam to better mimic natural basin hydrology.

Ashland has constructed a demonstration wetland, through funding from the Oregon Watershed Health program, for treating urban stormwater runoff. The city is pursuing EPA 319

funding for expanding this wetland and also to develop new wetlands in new city park land. The new park land, bordered by Bear Creek, may also have substantial habitat restoration work done in the riparian zone.

Phoenix

Recently passed an ordinance which required minimum riparian buffers along city creeks and wetlands. Phoenix is also currently pursuing funding for the construction of stormwater treatment wetlands in new city park land.

Talent

Is looking to create a greenway along Wagner Creek. Middle school students recently planted native vegetation along Wagner Creek with material obtained through the Watershed Health Program.

Jackson County

Recently entered into a cooperative study with Oregon Department of Transportation to find better vegetative covers for county roadsides.

Department of Agriculture

In cooperation with the Jackson County Soil and Water District and the Natural Resources Conservation Service has sought funding from the US Department of Agriculture PL566 program to reduce runoff from irrigation activities. Part of the water recovered through increased efficiency would be used to meet the target of a minimum 10 cubic feet per second discharge throughout Bear Creek. The reduced runoff would also reduce sediment and nutrient loading from agricultural lands.

ACTIONS TAKEN BY OTHER AGENCIES AND GROUPS

Rogue Valley Council of Governments (RVCOG)

The RVCOG has facilitated and coordinated studies and activities throughout the basin. They have done water quality monitoring in the basin since the mid 1970's. Because of their experience in monitoring, they have taken the lead for developing the current nonpoint source monitoring program.

The new program will increase the parameters that are tested and will increase the number of tributaries that are monitored. Other notable accomplishments of the RVCOG are:

Identification and prioritization of stream banks in the agricultural areas which lack shading and are prone to erosion.

Collected discharge information along the main stem so that a more accurate hydrologic model for the basin can be constructed. Partial funding for this study came from Oregon Department of Water Resources. The NRCS has done discharge measurement of tributaries in the basin, and has shared that data with the RVCOG.

Has formed a group of educators that will identify and coordinate a basin wide program for environmental education. The RVCOG, through an AmeriCorp position, was able to form this nucleus of teachers who will work to develop water quality monitoring specialties for each high school in the basin. Data from these investigations will be presented in a yearly basin-wide water quality congress involving all of the schools. Elementary school educators, also in the group, will use Bear Creek as their focus for teaching water quality concepts. Southern Oregon College will be involved by: 1) providing education students to assist in field and classroom instruction about Bear Creek in K-12 schools and 2) collecting data for analysis by students in college level natural science classes.

Published an informational brochure on Bear Creek. The booklet details current conditions, the difference between healthy and degraded streams and steps that individuals can take to improve water quality.

Is collecting environmental ordinances from Portland area METRO and the American Planning Association. This reference collection of existing ordinances will be used as a resource guide for local city/county planners and councils in the drafting of effective ordinances.

Is conducting a five year study, using a local naturalist, to determine the number and location of spawning redds in three one- mile-long test reaches along Bear Creek.

Coordinated and helped to fund a Bear Creek macroinvertebrate sampling of Bear Creek by students from Crater High School (in Central Point). The students sampled six sites during different seasons. A report of their findings will be out before the end of the school year.

Adhered the Bear Creek watershed assessment and action plan that was submitted to and accepted by the Strategic Water Management Group (SWMG) from the governors office.

The RVCOG has a very capable GIS system. They currently are collecting existing Bear Creek data layers and are developing water quality data into GIS compatible format. Their aim is to be the center for GIS analysis of Bear Creek natural resource issues.

Bear Creek Watershed Council

Secured \$400,000+ grant from the Oregon Watershed Health program, \$375,000 from the Medford Urban Renewal Agency and \$100,000 from the US Bureau of Reclamation to remove the Jackson Street Dam in downtown Medford. The dam is a barrier to fish migration and has been shown to increase instream water temperatures.

Has commissioned reports on the projected water needs of agriculture and municipal/industrial activities within the basin. Has completed a report to determine what amount of water is required to maintain a healthy stream ecology, and what can be done to obtain these minimum instream flows.

The education subcommittee will continue to coordinate water issues education at elementary, middle and high schools levels.

Watershed Health Program

As mentioned before, has funded several projects in the Bear Creek basin.

Watershed Education Program

Part of the Watershed Enhancement Team (WET) subcommittee of the Headwaters environmental group. Obtained Governors Watershed Enhancement Board (GWEB) grant for teaching watershed education at the Ashland Middle School. Classroom and field studies have highlighted, macroinvertebrate monitoring, fish health and environmental resource mapping. Willow plantings along Bear Creek were arranged by student volunteers of the program.

Rogue River National Forest

Will distribute a "Bear Watershed Analysis" (currently in draft form) on the conditions of Ashland, Upper Wagner, Neil, Wrights, Hamilton, Tolman and Clayton Creeks. The assessment of aquatic systems will focus on basin hillslope processes, flow regimes and aquatic resident species and habitats.

Figure 1

Basin Wide Tasks Performed By Designated Management Agencies

DMA's	Utility Bill Mailings	Storm Drain Stenciling	Sponsored Town Meetings	Sponsored WQ Conference	Participated In Streamwalks	Sampled Stormwater System	Mapped Stormwater System	Funding NPS Monitoring	Engaged In WQ Monitoring
Ashland	Yes	Yes	Yes	No	No	Yes - Limited	Yes	Yes	No
Central Point	Yes	Yes	No	No	Yes - '92 & '93	Yes (limited parms)	No	Yes	No
Jacksonville	Yes	Yes	No	No	Yes	Yes	Yes	Yes	No
Medford	Yes	Yes	No	No	Yes-Annually	Yes	Yes	Yes	No
Phoenix	Yes	Yes	No	No	Yes	No	Yes	Yes	No
Talent	No	No	Yes	No	Yes	No	Yes	Yes	No
Jackson County	NA	NA	NA	No	No	NA	NA	Yes	Yes - Septic Tank Program
Department of Agriculture	NA	NA	NA	Yes	No	NA	NA	Yes	No
Department of Forestry	NA	NA	NA	No	No	NA	NA	No	Yes

Approved _____
Approved with Corrections _____

Minutes are not final until approved by the E2C

ENVIRONMENTAL QUALITY COMMISSION
Special Meeting Conference Call

March 15, 1995, 3:30 p.m.

Attending the special conference call meeting were William Wessinger, Chair; Henry Lorenzen, Carol Whipple, Emery Castle and Linda McMahan, members. Also attending via the conference call were Lydia Taylor, Interim Director, Department of Environmental Quality, Michael Huston, Assistant Attorney General, Oregon Department of Justice and Roy Hemmingway, the Governor's Policy Advisor on Salmon. The purpose of the special conference call was to consider a request from the U. S. Fish and Wildlife Service (USFW) to spill water over the Bonneville Dam for 10 days commencing on March 16, 1995, to assist out-migrating Spring Creek hatchery chinook salmon smolts.

The Commission was petitioned by the USFW to increase the current 110 percent maximum Total Dissolved Gas (TDG) criteria to a 12-hour average criteria of 115 percent saturation. The increased criteria would allow for greater spill at the Bonneville Dam to increase the relative survival of out migrating salmon from the Spring Creek Hatchery.

Staff provided four alternatives for the Commission to consider.

1. Accept the petition;
2. Reject the petition based on inadequacy of supporting information;
3. Accept the petition based on the Commission's understanding of the risk to fish and aquatic life from previous deliberations on TDG issues for the Columbia River, the limited information contained in the petition, information provided during the public review process, and the Department's summary of the petition;
4. Accept the petition with modifications based on the Commission's understanding of the risk to fish and aquatic life from previous deliberations on TDG issues for the Columbia River, the limited information contained in the petition, information provided during the public review process, and the Department's summary of the petition.

Mike Downs, Administrator of the Water Quality Division, Russell Harding and Bob Baumgartner of the Water Quality Division presented this issue to the Commission. Russell Harding summarized the public comments, four findings and alternatives and evaluations by staff.

Bob Baumgartner provided the Commission with a scientific analysis of USFW petition (Appendix B of the staff report). He indicated that the Department's evaluation relied upon previous information because little or no substantive information was presented in this spill request.

Bob said there was no biological monitoring mentioned in the petition. He said the Department decided to include some language for biological monitoring for resident fish and juvenile salmon below Bonneville Dam. He said that these stocks of fish are different than what the Commission had considered previously because these fish are not endangered. He said that raises the question about an appropriate endpoint to be measuring. Bob said that based on a value cited by the USFWS that 900 additional adult salmon would be returned. He briefly discussed the fish kill that occurred at Willamette Falls on the Willamette River. Bob and Commissioner Lorenzen discussed survival rates for turbine passage.

Russell briefly summarized public comments received. Commissioner Lorenzen and Baumgartner expressed frustration and concern over refusal of the NMFS to allow access to data and to provide draft materials. Bob cited other fisheries agencies who had been helpful in supplying data and information.

Chair Wessinger asked when the USFWS knew a request for spill would be made. Dan Diggs, Columbia Basin Eastern Regional Manager for the USFWS, replied that it was a matter of record that USFWS has requested this type of operation in the past. He said he received the request from the field offices about a week or ten days before a formal request to the Commission was made. Chair Wessinger indicated that this was his first experience with a request for a hatchery spill. Dan clarified his statement by saying this was the first year that the USFWS had approached the Commission for this variance. He said that there is a dual purpose for this variance request; he said it was not simply for the benefit of Spring Creek Hatchery but also for increased survival of this particular stock of fall chinook.

Chair Wessinger asked Dan if there was no other option of getting the fish into the stream. Dan said that there have been studies on barging fish and that results from the studies indicate that a small percentage return to the hatchery due to barging programs but there was an increased strain on hatchery fish. Dan said spilling was a better mode to increase survival.

Commissioner Lorenzen asked the USFWS if they considered the potential number of additional fish that would be available compared to the loss of revenue. Dan guesstimated a \$100/200 value of each fish (5 percent increase in survival of 375,000 smolts to adults with a 1 percent survival rate; 425 adults at \$200 = \$85,000; 425 adults at \$100 = \$42,500).

Commissioner Castle asked Dan to respond to the question of potential damage to existing adult fish below the dam at the time of the spill occurs. Dan said it was believed the occurrence of spring chinook to be harmed, if at all, would not be great during the ten-day period. Gary Fredericks, NMFS, also spoke to the Commission about this issue. Commissioner McMahan asked Gary about the position of NMFS on this request; Gary indicated that the NMFS does support the request.

Russell read to the Commission the Oregon Department of Fish and Wildlife (ODFW) letter of support for the request. Commissioner McMahan said that she wanted to do the right thing but found that the information she received was not adequate to make that decision.

Commissioner Castle said that he could not ever recall the Commission relaxing water quality standards based on the information and argument such as had been presented at this meeting. He said the case had not been made for relaxing the standard.

Russell discussed the four findings.

Commissioner McMahan echoed Commissioner Castle's comments. Commissioner Lorenzen added that he did not consider the application as being timely; he said it was clear in his mind that the application should be denied.

Roy Hemmingway said the Commission needs to consider first, does the 110 percent standard exist for anything other than protecting aquatic life; and, second, do the fish and wildlife agencies have some expertise that the Department does not have at their disposal to monitor these issues so that the Commission would feel comfortable turning questions over to them? He said that if only aquatic life is protected by the 110 percent standard then why are these requests coming on a short-term, every-year basis rather than looking at the standard in a more relaxed atmosphere in between the migration season.

Special Conference Call Meeting
Environmental Quality Commission
Page 4
March 15, 1995

Commissioner Whipple said she found the proposal disturbing. She said that the Commission members are not fish experts but that it was their obligation to the Department and their responsibility as decision makers to require a higher level of information than they had received. She suggested that the Commission decline the petition.

Commissioner Lorenzen moved that the Commission deny the request for the temporary modification of the water quality standard; Commissioner Castle seconded the motion. Michael Huston stated that the motion will authorize the Director to issue a formal written order that the Commission denied the request.

The motion was unanimously approved.

There was no further business, and the special conference call meeting was adjourned at 5 p.m.

Environmental Quality Commission

- Rule Adoption Item
 Action Item
 Information Item

Agenda Item B
July 7, 1995 Meeting

Title:

Approval of Tax Credit Applications

Summary:

New Applications - Sixteen (16) tax credit applications with a total facility cost of \$34,311,510 are recommended for approval as follows:

- | | |
|--|---------------|
| - 9 Water Quality facilities with a total facility cost of: | \$ 33,800,676 |
| - 5 Field Burning related facilities recommended by the Department of Agriculture with a total facility cost of: | \$ 327,270 |
| - 1 Plastic Product recycling facility costing: | \$ 10,325 |
| - 1 Industrial Solid Waste landfill facility with a total facility cost of: | \$ 173,239 |

One application with claimed facility cost exceeding \$250,000 was reviewed by an independent accounting firm contractor. The review statement is attached to the application report.


Department Recommendation:

Approve issuance of tax credit certificates for 16 applications as presented in Attachment A of the staff report.

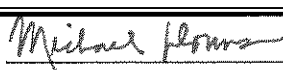
The Department also requests that the Commission:

Approve the transfer of the remaining value of Tax Credit Certificate 2404 from Edwin J. Rohner to Steven J. Rohner, the current owner and operator of the facility, as requested by the parties; and

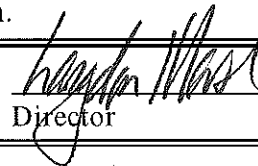
Approve the transfer of the remaining value of Tax Credit Certificates 3190, 3191, 3192, 3193 and 3194 from the Temp-Control Mechanical Corporation to the Temp-Control Mechanical Service Corporation, the current owner and operator of the pollution control facilities, as the result of a reorganization and the creation of the new corporation.



Report Author



Division Administrator



Director

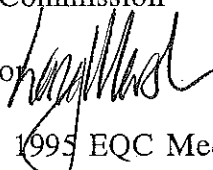
June 20, 1995

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

State of Oregon
Department of Environmental Quality

Memorandum[†]

Date: July 7, 1995

To: Environmental Quality Commission
From: Langdon Marsh, Director 
Subject: Agenda Item B, July 7, 1995 EQC Meeting
Approval of Tax Credit Applications

Statement of the Need for Action

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

Tax Credit Application Review Reports:

Application Number	Applicant	Description
TC 4321	Lowell and Elizabeth Kuenzi (\$10,325)	A plastic product reclamation facility consisting of an Inger-Teco Corporation Model FC-60-B mobil compaction unit to collect, store and transport plastic containers.
TC 4367	Gary Keen (\$66,208)	An air quality field burning facility consisting of a steel truss 22'x110'x120' straw storage building.
TC 4372	Wacker Siltronic Corp. (\$308,378)	A water pollution control facility consisting of a concrete trench system and storage tanks to prevent leakage of acid contaminated water into the environment.
TC 4375	Portland General Electric Company (\$24,950)	A water pollution control facility consisting of a sand filtration system to prevent water contamination in the event of an oil spill.

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

Application Number	Applicant	Description
TC 4376	Portland General Electric Company (\$193,215)	A water pollution control facility consisting of an internal storm drainage and oil spill collection system.
TC 4381	Robert Schmidt (\$10,450)	An air quality field burning facility consisting of a Rear's 20' Pul-Flail chopper.
TC 4383	Smith Bros. Farm (\$157,612)	An air quality field burning facility consisting of a 22'x80'x300' clear span, steel construction, metal clad grass seed straw storage building.
TC 4388	McKee Farms (\$26,500/90%)	An air quality field burning facility consisting of a used 1075 New Holland stackwagon.
TC 4389	Intel Corporation (\$198,615)	A water pollution control facility consisting of improvements to the applicant's Aloha, Oregon plant's wastewater pretreatment facility.
TC 4390	International Paper (\$173,239)	An industrial solid waste landfill facility consisting of a leachate collection system, which ensures that all of the mill's leachate is processed through their effluent treatment system.
TC 4392	Anodizing, Inc. (\$175,789)	A water pollution control facility consisting of an inclined plate settler including a Parkson (Model 200/55) lamella gravity settler with tanks (2), a filter press and an equipment storage building for reducing the concentration of suspended solids in the applicant's wastewater discharge.
TC 4395	Portland General Electric Company (\$61,276)	A water pollution control facility consisting of an internal storm drainage and oil spill collection system.

Application Number	Applicant	Description
TC 4397	Portland General Electric Company (\$10,423)	A water pollution control facility consisting of a liner membrane to prevent oil spill emissions into the Portland storm drain system.
TC 4401	Richard D. Baker (\$66,500/96%)	An air quality field burning facility consisting of a 200hp John Deere 4955 tractor.
TC 4403	Portland General Electric Company (\$28,030)	A water pollution control facility consisting of a sand filter system to prevent oil spill contamination of waterways.

**Tax Credit Application Review Reports With Facility Costs Over \$250,000
 (Accountant Review Reports Attached).**

Application Number	Applicant	Description
TC 4154	Boise Cascade Corp. (\$32,800,000)	A water pollution control facility consisting of significant modifications to the bleach plant of a bleached kraft pulp and paper mill at St. Helens, Oregon, to achieve compliance with dioxin limitations.

Background

There are no significant issues presented for discussion in this report.

Authority to Address the Issue

ORS 468.150 through 468.190 and OAR 340-16-005 through 340-16-050 (Pollution Control Facilities Tax Credit).

ORS 468.925 through 468.965 and OAR 340-17-010 through 340-17-055 (Reclaimed Plastic Product Tax Credit).

Memo To: Environmental Quality Commission
Agenda Item B
July 7, 1995 Meeting
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Alternatives and Evaluation

None.

Summary of Any Prior Public Input Opportunity

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

Conclusions

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

Memo To: Environmental Quality Commission
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o Proposed July 7, 1995, Pollution Control Tax Credit Totals:

<u>Certificates</u>	<u>Certified Costs*</u>	<u>Certified Allocable Costs**</u>	<u>No.</u>
Air Quality	0	0	0
CFC	0	0	0
Field Burning	327,270	321,960	5
Hazardous Waste	0	0	0
Noise	0	0	0
Plastics	10,325	10,325	1
SW - Recycling	0	0	0
SW - Landfill	173,239	173,239	1
Water Quality	33,800,676	33,800,676	9
UST	<u>0</u>	<u>0</u>	<u>0</u>
	\$34,311,510	\$34,306,200	16

o Calendar Year Totals Through May 18, 1995:

<u>Certificates</u>	<u>Certified Costs*</u>	<u>Certified Allocable Costs**</u>	<u>No.</u>
Air Quality	\$ 94,402	\$ 94,402	1
CFC	0	0	0
Field Burning	693,116	584,813	10
Hazardous Waste	0	0	0
Noise	0	0	0
Plastics	85,200	85,200	3
SW - Recycling	0	0	0
SW - Landfill	117,257	117,257	1
Water Quality	11,632,831	11,627,765	14
UST	<u>188,988</u>	<u>149,301</u>	<u>1</u>
	\$12,811,794	\$12,658,738	30

*These amounts represent the total facility costs. The actual dollars that can be applied as credit is calculated by multiplying the total facility cost by the determined percent allocable and dividing by 2.

**These amounts represent the total eligible facility costs that are allocable to pollution control. To calculate the actual dollars that can be applied as credit, the certifiable allocable cost is multiplied by 50 percent.

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Page 6

Recommendation for Commission Action

It is recommended that the Commission approve certification for the tax credit applications as presented in Attachment A of the Department Staff Report. The Department also recommends approval of the requests for transfer of the remaining value of Tax Credit Certificates 3190, 3191, 3192, 3193 and 3194 from the Temp-Control Mechanical Corporation to the Temp-Control Mechanical Service Corporation and the transfer of the remaining value of Tax Credit Certificate 2404 from Edwin J. Rohner to Steven J. Rohner. The letters requesting the transfer of these tax credits are included in this report.

Intended Followup Actions

Notify applicants of Environmental Quality Commission actions.

Attachments

- A. Pollution Control Tax Credit Application Review Reports.

Reference Documents (available upon request)

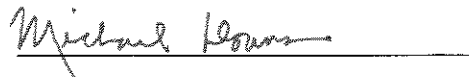
- 1. ORS 468.150 through 468.190.
- 2. OAR 340-16-005 through 340-16-050.
- 3. ORS 468.925 through 468.965.
- 4. OAR 340-17-010 through 340-17-055.

Approved:

Section:



Division:



Report Prepared By: Charles Bianchi

Phone: 229-6149

Date Prepared: June 20, 1995

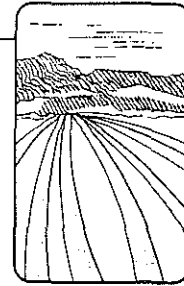
Charles Bianchi
JULY/EQC
June 20, 1995

March 15, 1995

RECEIVED

MAR 20 1995

Water Quality Division
Dept. of Environmental Quality



Oregon
Department
of Agriculture

Charles Bianchi
Department of Environmental Quality
Executive Building
811 SW Sixth Avenue
Portland OR 97204

Dear Charles:

As provided by OAR 340-16-040, the Department of Agriculture recommends the transfer of Tax Credit Certificate 2404 from Edwin J. Rohner to Steven J. Rohner. As requested by the parties, the Environmental Quality Commission may revoke the certificate issued to Edwin J. Rohner and grant a new one to Steven J. Rohner for the balance of the available tax credit. Supporting documents are attached.

Sincerely,

Jim Britton

Jim Britton, Manager
Smoke Management Program
Natural Resources Division
503-986-4701
FAX: 503-986-4730

cc: Edwin J. Rohner
Steven J. Rohner

John A. Kitzhaber
Governor



635 Capitol Street NE
Salem, OR 97310-0110

Certificate No. 2404
Date of Issue 03/11/91
Application No. T-3296

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
POLLUTION CONTROL FACILITY CERTIFICATE

Issued to: Edwin J. Rohner 31623 Peoria Road Albany, OR 97321	Location of Pollution Control Facility: 31868 Peoria Road Albany, OR
As: () Lessee (X) Owner	
Description of Pollution Control Facility: 22' x 124' x 144' pole construction grass-seed straw storage shed	
Type of Pollution Control Facility: (X) Air () Noise () Water () Solid Waste () Hazardous Waste () Used Oil	
Date Facility was completed: 7/01/90 Placed into Operation: 7/01/90	
Actual Cost of Pollution Control Facility: \$63,809.77	
Percent of actual cost properly allocable to pollution control: 100 Percent	

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

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

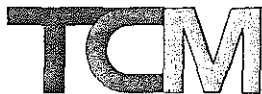
1. The facility shall be continuously operated at maximum efficiency for the designed purpose of preventing, controlling, and reducing the type of pollution as indicated above.
2. The Department of Environmental Quality shall be immediately notified of any proposed change in use or method of operation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

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

Signed William P. Hutchison, Jr.

Title William P. Hutchison, Jr., Chairman

Approved by the Environmental Quality Commission
on the 11th day of March, 1991.



TEMP-CONTROL MECHANICAL CORPORATION
MECHANICAL CONTRACTORS

4800 N. CHANNEL AVE. P.O. BOX 11065 PORTLAND, OREGON 97211 (503) 285-9851

MAY 17 1995

RECEIVED
MAY - 8 1995

May 5, 1995

Water Quality Division
Dept. of Environmental Quality

Mr. Michael Downs
Water Quality Division
811 SW Sixth Avenue
Portland, Oregon 97204

Dear Mr. Downs,

As of January 1, 1995 the equipment for which Pollution Control Facility Certificates 3190, 3191, 3192, 3193 and 3194 was owned by a related corporation of Temp-Control Mechanical Corporation. The assets were transferred when the corporation reorganized and spun off a new corporation, Temp-Control Mechanical Service Corporation. We request that the certificates mentioned above be transferred as follows:

From:

Temp-Control Mechanical Corporation
P.O. Box 11065
Portland, OR 97211
EIN # 93-0414073

To:

Temp-Control Mechanical Service Corporation
P.O. Box 11065
Portland, OR 97211
EIN # 93-1154640

Sincerely,

Temp-Control Mechanical Corporation

James F. Culbertson Jr., President

Temp-Control Mechanical Service Corporation

James F. Culbertson Jr., President

JFC:tdm
Encls.

STATE OF OREGON
 DEPARTMENT OF ENVIRONMENTAL QUALITY
POLLUTION CONTROL FACILITY CERTIFICATE

Certificate No: 3190
 Date of Issue: 9/10/92
 Application No: 4108

ISSUED TO:
 Temp Control Mech Corp
 P.O. Box 11065
 Portland, Oregon 97211

LOCATION OF POLLUTION CONTROL FACILITY:
 4800 N. Channel Avenue
 Portland

ATTENTION: Jay Colbertson

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

DESCRIPTION OF POLLUTION CONTROL FACILITY:
 Air conditioner and refrigerant coolant recovery equipment.

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

DATE FACILITY COMPLETED: 6/26/92 PLACED INTO OPERATION: 6/26/92

ACTUAL COST OF POLLUTION CONTROL FACILITY: \$1,275.00

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

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

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

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

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

Signed: William W. Wessinger (William W. Wessinger, Chairman)

Approved by the Environmental Quality Commission on the 10th day of September, 1993.

CERTIFICATE TRANSFER

From: ^C

To: ^C

Signed: _____ (William W. Wessinger, Chairman)

Approved by the Environmental Quality Commission on the ^C ___ day of ^C _____, 1992.

STATE OF OREGON
DEPARTMENT OF ENVIRONMENTAL QUALITY
POLLUTION CONTROL FACILITY CERTIFICATE

Certificate No: 3191
Date of Issue: 9/10/92
Application No: 4109

ISSUED TO:
Temp Control Mech Corp
P.O. Box 11065
Portland, Oregon 97211

LOCATION OF POLLUTION CONTROL FACILITY:

4800 N. Channel Avenue
Portland

ATTENTION: Jay Colbertson

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

DESCRIPTION OF POLLUTION CONTROL FACILITY:
Air conditioner and refrigerant coolant recovery equipment.

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

DATE FACILITY COMPLETED: 6/24/92 PLACED INTO OPERATION: 6/24/92

ACTUAL COST OF POLLUTION CONTROL FACILITY: \$2,149.00

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

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

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

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

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

Signed: *William W. Wessinger* (William W. Wessinger, Chairman)

Approved by the Environmental Quality Commission on the 10th day of September, 1993.

CERTIFICATE TRANSFER

From: ^C

To: ^C

Signed: _____ (William W. Wessinger, Chairman)

Approved by the Environmental Quality Commission on the ^C__ day of ^C_____, 1992.

STATE OF OREGON
 DEPARTMENT OF ENVIRONMENTAL QUALITY
POLLUTION CONTROL FACILITY CERTIFICATE

Certificate No: 3192
 Date of Issue: 9/10/92
 Application No: 4110

ISSUED TO:
 Temp Control Mech Corp
 P.O. Box 11065
 Portland, Oregon 97211

LOCATION OF POLLUTION CONTROL FACILITY:

 4800 N. Channel Avenue
 Portland

ATTENTION: Jay Colbertson

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

DESCRIPTION OF POLLUTION CONTROL FACILITY:
 Air conditioner and refrigerant coolant recovery, recycling and recharging equipment.

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

DATE FACILITY COMPLETED: 3/19/92 PLACED INTO OPERATION: 3/19/92

ACTUAL COST OF POLLUTION CONTROL FACILITY: \$3,600.00

PERCENT OF ACTUAL COST PROPERLY ALLOCABLE TO POLLUTION CONTROL: 81%

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

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

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

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

Signed: William W. Wessinger (William W. Wessinger, Chairman)

Approved by the Environmental Quality Commission on the 10th day of September, 1993.

CERTIFICATE TRANSFER

From: ^C

To: ^C

Signed: _____ (William W. Wessinger, Chairman)

Approved by the Environmental Quality Commission on the ^C ___ day of ^C _____, 1992.

STATE OF OREGON
DEPARTMENT OF ENVIRONMENTAL QUALITY
POLLUTION CONTROL FACILITY CERTIFICATE

Certificate No: 3193
Date of Issue: 9/10/92
Application No: 4111

ISSUED TO:
Temp Control Mech Corp
P.O. Box 11065
Portland, Oregon 97211

LOCATION OF POLLUTION CONTROL FACILITY:

4800 N. Channel Avenue
Portland

ATTENTION: Jay Colbertson

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

DESCRIPTION OF POLLUTION CONTROL FACILITY:
Air conditioner and refrigerant coolant recovery equipment.

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

DATE FACILITY COMPLETED: 7/22/92 PLACED INTO OPERATION: 7/22/92

ACTUAL COST OF POLLUTION CONTROL FACILITY: \$1,999.00

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

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

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

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

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

Signed: William W. Wessinger (William W. Wessinger, Chairman)

Approved by the Environmental Quality Commission on the 10th day of September, 1993.

CERTIFICATE TRANSFER

From: ^C

To: ^C

Signed: _____ (William W. Wessinger, Chairman)

Approved by the Environmental Quality Commission on the ^C ___ day of ^C _____, 1992.

STATE OF OREGON
 DEPARTMENT OF ENVIRONMENTAL QUALITY
POLLUTION CONTROL FACILITY CERTIFICATE

Certificate No: 3194
 Date of Issue: 9/10/92
 Application No: 4112

ISSUED TO: Temp Control Mech Corp P.O. Box 11065 Portland, Oregon 97211	LOCATION OF POLLUTION CONTROL FACILITY: 4800 N. Channel Avenue Portland
ATTENTION: Jay Colbertson	

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

DESCRIPTION OF POLLUTION CONTROL FACILITY:
Air conditioner and refrigerant coolant recovery equipment.

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

DATE FACILITY COMPLETED: 7/22/92 PLACED INTO OPERATION: 7/22/92

ACTUAL COST OF POLLUTION CONTROL FACILITY: \$1,999.00

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

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

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

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

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

Signed: *William W. Wessinger* (William W. Wessinger, Chairman)
 Approved by the Environmental Quality Commission on the 10th day of September, 1993.

CERTIFICATE TRANSFER

From: ^C To: ^C

Signed: _____ (William W. Wessinger, Chairman)
 Approved by the Environmental Quality Commission on the ^C day of ^C, 1992.

State of Oregon
Department of Environmental Quality

RECLAIMED PLASTIC TAX CREDIT
TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

Lowell and Elizabeth Kuenzi
P.O. Box 17669
Salem, Oregon 97305

The applicants own and operate a curbside collection business collecting refuse and recyclables.

Application was made for Reclaimed Plastic Tax Credit.

2. Description of Equipment, Machinery or Personal Property

The claimed equipment and installation cost: \$10,325.00

The claimed equipment consisting of:

One plastic compaction unit (truck) manufactured by Inger-Teco Corporation, model FC-60-B, to be used to collect, store and transport plastic containers on residential curbside recycling routes in the City of Salem, Oregon.

Invoices for all products and services were provided. Copies of the checks for payment were provided.

3. Procedural Requirements

The investment is governed by ORS 468.925 through 468.965, and by OAR Chapter 340, Division 17.

The investment met all statutory deadlines in that:

- a. The request for preliminary certification was received on December 1, 1994. The preliminary application was filed complete.
- b. The request for preliminary certification was approved on December 10, 1994.
- c. The investment was made on January 16, 1995. The request for final certification was submitted on May 4, 1995 and was filed complete on May 23, 1995.

4. Evaluation of Application

- a. The investment is eligible because the equipment is necessary to process reclaimed plastic.
- b. Allocable Cost Findings

In determining the portion of the investment costs properly allocable to reclaiming and recycling plastic material, the following factors from ORS 468.960 have been considered and analyzed as indicated:

- 1) The extent to which the claimed collection, transportation, processing or manufacturing process is used to convert reclaimed plastic into a salable or usable commodity.

This factor is applicable because the sole purpose of this truck is to transport recyclable plastic to a plastic processor where it is processed into a feed stock to be used to manufacture reclaimed plastic products. The waste plastic transported by this truck is generated by persons other than the applicant.

- 2) The alternative methods, equipment and costs for achieving the same objective.

The applicant investigated other alternatives and determined that this equipment is the most efficient and productive from an economic standpoint.

- 3) Any other factors which are relevant in establishing the portion of the actual cost of the investment properly allocable to the collection, transportation or processing of reclaimed plastic or to the manufacture of a reclaimed plastic product.

No other factors were considered relevant.

The actual cost of the investment properly allocable to processing reclaimed plastic as determined by using these factors is 100%.

5. Summation

- a. The investment was made in accordance with all regulatory deadlines.
- b. The investment is eligible for final tax credit certification in that the equipment is necessary to manufacture a reclaimed plastic product.
- c. The qualifying business complies with DEQ statutes and rules.
- d. The portion of the investment cost that is properly allocable to reclaiming and recycling plastic is 100%.

6. Director's Recommendation

Based upon these findings, it is recommended that a Reclaimed Plastic Tax Credit Certificate bearing the cost of \$10,325.00, 100% allocated to reclaiming plastic material, be issued for the investment claimed in Tax Credit Application No. TC-4321.

Rick Paul:rap
wp51\tax\tc4321rr.sta
(503) 229-5934
June 5, 1995

State of Oregon
Department of Agriculture

TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

Gary Keen
34656 Enos Drive
Brownsville, OR 97327

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

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

2. Description of Claimed Facility

The facility described in this application is a steel truss, 22' x 110' x 120' straw storage shed, located one mile north of Highway 58 on Fisher Drive between I-5 and Brownsville, Oregon. The land and the buildings are owned by the applicant.

Claimed facility cost: \$66,208
(Accountant's Certification was provided.)

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

Prior to investing in straw removal equipment, the applicant open field burned as many of his 1,250 annual ryegrass acres as the weather and smoke management program permitted.

The applicant stated that the straw storage shed was constructed to protect the baled straw from inclement weather preserving the straw's potential marketability

4. Procedural Requirements

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

Construction of the facility was substantially completed on September 1, 1994. The application for final certification was found to be complete on March 15, 1995. The application was filed within two years of substantial completion of the facility.

5. Evaluation of Application

- a. The facility is eligible under ORS 468.150 because the facility is an approved alternative method for field sanitation and straw utilization and disposal that reduces a substantial quantity of air pollution. This reduction is accomplished by reduction of air contaminants, defined in ORS 468A.005; by reducing the maximum acreage to be open burned in the Willamette Valley as required in OAR 340-26-013; and, the facility's

qualification as a "pollution control facility", defined in OAR 340-16-025(2)(f)
A): "Equipment, facilities, and land for gathering, densifying, processing, handling, storing, transporting and incorporating grass straw or straw based products which will result in reduction of open field burning."

b. Eligible Cost Findings

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

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

The facility promotes the conversion of a waste product (straw) into a salable commodity by providing protection from inclement weather.

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

The actual cost of claimed facility (\$66,208) divided by the average annual cash flow (\$100) equals a return on investment factor of 662.08. Using Table 1 of OAR 340-16-030 for a life of 20 years, the annual percent return on investment is 0. Using the annual percent return of 0 and the reference annual percent return of 5.5, 100% is allocable to pollution control.

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

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

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

There is no savings or increase in costs as a result of the facility.

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

There are no other factors to consider in establishing the actual cost of the facility properly allocable to prevention, control or reduction of air pollution.

The actual cost of the facility properly allocable to pollution control as determined by using these factors is 100%.

6. Summation

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

- b. The facility is eligible under ORS 468.150 as an approved alternative method for field sanitation and straw utilization and disposal that reduces a substantial quantity of air pollution as defined in ORS 468A.005
- c. The facility complies with DEQ statutes and rules.
- d. The portion of the facility that is properly allocable to pollution control is 100%.

7. The Department of Agriculture's Recommendation

Based upon these findings, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$66,208, with 100% allocated to pollution control, be issued for the facility claimed in Tax Credit Application Number TC-4367.

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

JB:bk4367
March 15, 1995

STATE OF OREGON
DEPARTMENT OF ENVIRONMENTAL QUALITY
TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

Wacker Siltronic Corporation
PO Box 83180
Portland OR 97283-0180

The applicant owns and operates a silicon wafer manufacturing facility in Portland, Oregon.

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

2. Description of Facility

The claimed facility consists of two components. The first is a concrete trench system extending from the acid etch process area within the manufacturing building to the new wastewater forwarding sumps outside of the building. The sumps contain pumps which discharge to the on site wastewater treatment facility. The second component is a pair of day tanks to minimize the storage of concentrated acids in the work area and reduce the potential for spills. The trench was lined with a chemical resistant coating to control spills or leaks of concentrated acids into the environment.

Claimed Facility Cost: \$308,378
(Accountant's Certification was provided).

3. Procedural Requirements

The facility is governed by ORS 468.150 through 468.190 and by OAR Chapter 340, Division 16.

The facility met the statutory deadline in that construction, erection, and installation of the facility was substantially completed on July 21, 1993, and the application for certification was found to be complete on March 27, 1995, within 2 years of substantial completion of the facility.

4. Evaluation of Application

- a. The facility is eligible because the sole purpose of the facility is to prevent a substantial quantity of water pollution. This prevention is accomplished by installing a secondary containment system for piping used to transport acid and by installing large tanks for large volume acid storage.

The sole purpose of the claimed facility is to prevent the unplanned release of hazardous materials or hazardous wastewaters into the environment. The acid trench serves no other purpose. The day tank serves the purpose of delivering concentrated acid to process equipment without the use of individual glass bottles (fifty) and eliminates the hazards of pressurized hazardous chemicals in supply pipes. The most common source of leaks from chemicals delivery systems is faulty pumps, pump seals, and fittings. The day tank system (with nitrogen blanket) eliminated the hazards and potential for spills at the source.

The firm is currently conducting a Toxicity Reduction Evaluation under the terms of their permit's bioassay monitoring requirements. They were issued a Notice of Noncompliance (NON) on September 13, 1993 for a Class III violation and on October 29, 1992 for a Class II violation. There have been no citations issued since September 13, 1993.

b. Eligible Cost Findings

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

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

The facility does not recover or convert waste products into a salable or usable commodity. The percent allocable determined by using this factor would be 100%.

- 2) The estimated annual percent return on the investment in the facility.

There is no return on investment.

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

Conventional design does not require the addition of secondary containment for hazardous material piping, nor do current regulations require secondary containment of wastewaters regulated under section 302 of the Clean Water Act. Alternatives considered were to directly bury acid supply pipes and wastewater pipes. A second option considered was to double contain and directly bury all acid pipes and acid wastewater pipes.

Conventional design would pump acids into process areas and if necessary add secondary containment around the pumps and fittings. Wacker rejected this approach because most EPA documents and their own experience have identified that most leaks occur from pumps, pump seals, and pipe fittings. The existing system was never installed with pumps for this reason. They chose not to expose employees to the risk of concentrated acid under pressure.

- 4) Any related savings or increase in costs which occur or may occur as a result of the installation of the facility.

There are no savings from the facility. The cost of maintaining and operating the facility is \$1,221,000 annually.

- 5) Any other factors which are relevant in establishing the portion of the actual cost of the facility properly allocable to the prevention, control or reduction of air, water or noise pollution or solid or hazardous waste or to recycling or properly disposing of used oil.

There are no other factors to consider in establishing the actual cost of the facility properly allocable to prevention, control or reduction of pollution.

The actual cost of the facility properly allocable to pollution control as determined by using these factors is 100%.

5. Summation

- a. The facility was constructed in accordance with all regulatory deadlines.
- b. The facility is eligible for tax credit certification in that the sole purpose of the facility is to prevent a substantial quantity of water pollution and accomplishes this purpose by installing a secondary containment system for piping used to transport acid and by installing large tanks for large volume acid storage.
- c. The facility complies with DEQ statutes, rules, and permit conditions.
- d. The portion of the facility cost that is properly allocable to pollution control is 100%.

6. Director's Recommendation

Based upon these findings, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$308,378 with 100% allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-4372.

Elliot J. Zais
T-4372
(503) 229-5292
WQTCSR-1/95

State of Oregon
Department of Environmental Quality
TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

Portland General Electric Company
Town Center Substation
121 SW Salmon Street, 1WTC-0402
Portland, OR 97204-2901.

The applicant owns and operates an electrical substation in Portland, Oregon.

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

2. Description of Facility

The facility is a sand filter system which allows the passage of water while retarding the flow of oil in the event of an oil spill.

Claimed Facility Cost: \$24,950
(Accountant's Certification was provided).

3. Procedural Requirements

The facility is governed by ORS 468.150 through 468.190 and by OAR Chapter 340, Division 16.

The facility met the statutory deadline in that construction and installation of the facility was substantially completed on May 15, 1993, and the application for certification was found to be complete on March 31, 1995, within 2 years of substantial completion of the facility.

4. Evaluation of Application

- a. The facility is eligible because the principal purpose of the facility is to comply with a requirement imposed by the federal Environmental Protection Agency, to prevent water pollution. The requirement is to comply with Title 40 Code of Federal Regulations, Part 112, Oil Pollution Prevention.

This site does not have any permits issued by DEQ. The claimed facility is required by EPA. There have been no spills at this site. There is no record of past noncompliance.

b. Eligible Cost Findings

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

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

The facility does not recover or convert waste products into a salable or usable commodity. The percent allocable determined by using this factor would be 100%.

- 2) The estimated annual percent return on the investment in the facility.

There is no return on investment.

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

Two other alternatives were considered. They are 1) using transformer/oil circuit breaker pits at a cost of \$37,000 to \$49,000 plus operational costs; and 2) using an oil stop valve, piping, and storage container at a cost of \$30,000 to \$40,000. Both alternatives were rejected due to cost and operational maintenance considerations.

- 4) Any related savings or increase in costs which occur or may occur as a result of the installation of the facility.

There are no savings or increase in costs as a result of the facility modification.

- 5) Any other factors which are relevant in establishing the portion of the actual cost of the facility properly allocable to the prevention, control or reduction of air, water or noise pollution or solid or hazardous waste or to recycling or properly disposing of used oil.

There are no other factors to consider in establishing the actual cost of the facility properly allocable to prevention, control or reduction of pollution.

The actual cost of the facility properly allocable to pollution control as determined by using these factors is 100%.

5. Summation

- a. The facility was constructed in accordance with all regulatory deadlines.
- b. The facility is eligible for tax credit certification in that the principal purpose of the facility is to comply with a requirement imposed by the federal Environmental Protection Agency to prevent water pollution.
- c. The facility complies with DEQ statutes and rules.
- d. The portion of the facility cost that is properly allocable to pollution control is 100%.

6. Director's Recommendation

Based upon these findings, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$24,950 with 100% allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-4375.

Elliot J. Zais:EJZ
T-4375
(503) 229-5292
WQTCSR-1/95

State of Oregon
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

Portland General Electric Company
Rivergate Substation
121 SW Salmon Street, 1WTC-0402
Portland, OR 97204-2901

The applicant owns and operates an electrical substation in Portland, Oregon.

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

2. Description of Facility

The facility is an internal storm drainage and oil spill collection system. The site was regraded to direct liquid flow into an oil water separator. The site was also lined with an impermeable barrier to prevent oil and water from entering the soil.

Claimed Facility Cost: \$193,215
(Accountant's Certification was provided).

3. Procedural Requirements

The facility is governed by ORS 468.150 through 468.190 and by OAR Chapter 340, Division 16.

The facility met the statutory deadline in that construction and installation of the facility was substantially completed on October 31, 1993, and the application for certification was found to be complete on March 31, 1995, within 2 years of substantial completion of the facility.

4. Evaluation of Application

- a. The facility is eligible because the principal purpose of the facility is to comply with a requirement imposed by the federal Environmental Protection Agency, to prevent water pollution. The requirement is to comply with Title 40 Code of Federal Regulations, Part 112, Oil Pollution Prevention.

This site does not have any permits issued by DEQ. The claimed facility is required by EPA. There have been no spills at this site.

b. Eligible Cost Findings

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

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

The facility does not recover or convert waste products into a salable or usable commodity. The percent allocable determined by using this factor would be 100%.

- 2) The estimated annual percent return on the investment in the facility.

There is no return on investment.

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

Two other alternatives were considered. They are 1) using transformer/oil circuit breaker pits at a cost of \$534,000 to \$667,000 plus operational costs; and 2) using a sand filter system at a cost of \$107,000 to \$173,000. The first alternative was rejected due to cost and operational maintenance considerations. The second was rejected due to the risk of fire and high environmental risk.

- 4) Any related savings or increase in costs which occur or may occur as a result of the installation of the facility.

There are no savings or increase in costs as a result of the facility modification.

- 5) Any other factors which are relevant in establishing the portion of the actual cost of the facility properly allocable to the prevention, control or reduction of air, water or noise pollution or solid or hazardous waste or to recycling or properly disposing of used oil.

There are no other factors to consider in establishing the actual cost of the facility properly allocable to prevention, control or reduction of pollution.

The actual cost of the facility properly allocable to pollution control as determined by using these factors is 100%.

5. Summation

- a. The facility was constructed in accordance with all regulatory deadlines.
- b. The facility is eligible for tax credit certification in that the principal purpose of the facility is to comply with a requirement imposed by the federal Environmental Protection Agency to prevent water pollution.
- c. The facility complies with DEQ statutes and rules.
- d. The portion of the facility cost that is properly allocable to pollution control is 100%.

6. Director's Recommendation

Based upon these findings, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$193,215 with 100% allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-4376.

Elliot J. Zais:EJZ
T-4376
(503) 229-5292
WQTCSR-1/95

State of Oregon
Department of Agriculture

TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

Robert Schmidt
16294 Arbor Grove Road NE
Woodburn, Oregon 97071

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

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

2. Description of Claimed Facility

The equipment described in this application is a Rear's 20ft Pul-Flail chopper, located at 16294 Arbor Grove NE, Woodburn, Oregon. The equipment is owned by the applicant.

Claimed equipment cost: \$10,450

(The applicant provided copies of the purchase agreement.)

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

The applicant has 400 acres of perennial grass seed under cultivation. Prior to initiating alternatives to open field burning, the applicant thermally sanitized as many acres as the smoke management program and weather permitted.

The pioneer alternative to open field burning consisted of baling the bulk straw off the fields and propane flaming the remaining residue and stubble. The applicant found that in years of below normal precipitation, the propane flaming would kill the plants.

The applicant is now using the flail to fine chop the remaining straw and stubble to facilitate decomposition and eliminate propane flaming henceforth.

4. Procedural Requirements

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

Purchase of the equipment was substantially completed on August 24, 1994. The application was submitted on April 12, 1995; and the application for final certification was found to be complete on April 19, 1995. The application was filed within two years of substantial completion of the equipment.

5. Evaluation of Application

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

b. Eligible Cost Findings

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

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

The equipment does not recover or convert waste products into a salable or usable commodity.
2. The estimated annual percent return on the investment in the equipment.

There is no annual percent return on the investment as applicant claims no gross annual income.
3. The alternative methods, equipment and costs for achieving the same pollution control objective.

The method chosen is an accepted method for reduction of air pollution. The method is one of the least costly, most effective methods of reducing air pollution.
4. Any related savings or increase in costs which occur or may occur as a result of the purchase of the equipment.

There is an increase in operating costs of \$720 to annually maintain and operate the equipment. These costs were considered in the return on investment calculation.
5. Any other factors which are relevant in establishing the portion of the actual cost of the equipment properly allocable to the prevention, control or reduction of air pollution.

There are no other factors to consider in establishing the actual cost of the equipment properly allocable to prevention, control or reduction of air pollution.

The actual cost of the equipment properly allocable to pollution control as determined by using these factors is 100%.

6. Summation

- a. The equipment was constructed in accordance with all regulatory deadlines.
- b. The equipment is eligible under ORS 468.150 as an approved alternative method for field sanitation and straw utilization and disposal that reduces a substantial quantity of air pollution as defined in ORS 468A.005
- c. The equipment complies with DEQ statutes and rules.
- d. The portion of the equipment that is properly allocable to pollution control is 100%.

7. The Department of Agriculture's Recommendation

Based upon these findings, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$10,450, with 100% allocated to pollution control, be issued for the equipment claimed in Tax Credit Application Number TC-4381.

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

JB:bkTC-4381
April 18, 1995

State of Oregon
Department of Agriculture

TAX RELIEF APPLICATION REVIEW REPORT

1. Smith Bros. Farm
30736 Peoria Road
Shedd, Oregon 97377

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

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

2. Description of Claimed Facility

The facility described in this application is a 22' x 80' x 300' clear span, steel construction, metal clad grass seed straw storage building located at 30736 Peoria Road, Shedd, Oregon. The land and the buildings are owned by the applicant.

Claimed facility cost: \$157,612
(Accountant's Certification was provided.)

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

The applicant has 2,076 acres of perennial grass seed and 196 acres of annual grass seed under cultivation. Over the last five years, the applicant has methodically phased out open field burning. The applicant's alternative to open field burning includes flail chopping and plowing down the straw in annual fields and baling the straw off the perennial fields prior to flail chopping the stubble.

The straw is baled off the applicant's fields by a custom baler in exchange for the straw and storage to protect it from inclement weather. The phase out of open field burning increased the acreage baled off requiring additional storage for the straw.

4. Procedural Requirements

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

Construction of the facility was substantially completed on September 17, 1994. The application for final certification was found to be complete on May 1, 1995. The application was filed within two years of substantial completion of the facility.

5. Evaluation of Application

- a. The facility is eligible under ORS 468.150 because the facility is an approved alternative method for field sanitation and straw utilization and disposal that reduces a substantial quantity of air pollution. This reduction is accomplished by reduction of air

contaminants, defined in ORS 468A.005; by reducing the maximum acreage to be open burned in the Willamette Valley as required in OAR 340-26-013; and, the facility's qualification as a "pollution control facility", defined in OAR 340-16-025(2)(f) A): "Equipment, facilities, and land for gathering, densifying, processing, handling, storing, transporting and incorporating grass straw or straw based products which will result in reduction of open field burning."

b. Eligible Cost Findings

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

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

The facility promotes the conversion of a waste product (straw) into a salable commodity by providing protection from inclement weather.

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

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

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

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

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

There is an increase in operating costs of \$5,500 to annually maintain and operate the facility. These costs were considered in the return on investment calculation.

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

There are no other factors to consider in establishing the actual cost of the facility properly allocable to prevention, control or reduction of air pollution.

The actual cost of the facility properly allocable to pollution control as determined by using these factors is 100%.

6. Summation

- a. The facility was constructed in accordance with all regulatory deadlines.
- b. The facility is eligible under ORS 468.150 as an approved alternative method for field sanitation and straw utilization and disposal that reduces a substantial quantity of air pollution as defined in ORS 468A.005
- c. The facility complies with DEQ statutes and rules.
- d. The portion of the facility that is properly allocable to pollution control is 100%.

7. The Department of Agriculture's Recommendation

Based upon these findings, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$157,612, with 100% allocated to pollution control, be issued for the facility claimed in Tax Credit Application Number TC-4383.

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

JB:bk4383
April 28, 1995

State of Oregon
Department of Agriculture

TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

McKee Farms
22450 SW McKee Road
Amity, Oregon 97101

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

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

2. Description of Claimed Facility

The facility described in this application is a used 1075 New Holland Stackwagon, located at 22450 SW McKee Road, Amity, Oregon. The land and the buildings are owned by the applicant.

Claimed facility cost: \$26,500.
(Accountant's Certification was provided.)

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

The applicant has 685 acres of perennial grass seed under cultivation. McKee Farms has decreased open field burning by approximately 80% since 1992. The applicant's principal alternative to open field burning involves baling the bulk straw off the harvested fields and flail chopping the remaining residue and stubble.

Prior to purchasing the stackwagon, the applicant removed the baled straw from the fields with a tractor loader and truck. This method proved to be very time consuming and delayed the flail chopping operation. The stackwagon allows the applicant to remove the baled straw quicker while maintaining the condition of the bales. The applicant gives the baled straw away or burns it in stacks.

4. Procedural Requirements

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

Construction of the facility was substantially completed on April 23, 1995. The application for final certification was found to be complete on May 2, 1995. The application was filed within two years of substantial completion of the facility.

5. Evaluation of Application

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

b. Eligible Cost Findings

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

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

The facility promotes the conversion of a waste product (straw) into a usable commodity by providing a method to quickly remove the baled straw from the fields while maintaining the condition of the bales.

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

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

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

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

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

There is an increase in operating costs of \$1,250 to annually maintain and operate the facility. These costs were considered in the return on investment calculation.

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

The applicant uses the stackwagon approximately 10% of the time to remove red clover hay, however, the stackwagon was purchased to make the alternative to field burning more propitious.

The actual cost of the facility properly allocable to pollution control as determined by using these factors is 90%.

6. Summation

- a. The facility was constructed in accordance with all regulatory deadlines.
- b. The facility is eligible under ORS 468.150 as an approved alternative method for field sanitation and straw utilization and disposal that reduces a substantial quantity of air pollution as defined in ORS 468A.005
- c. The facility complies with DEQ statutes and rules.
- d. The portion of the facility that is properly allocable to pollution control is 90%.

7. The Department of Agriculture's Recommendation

Based upon these findings, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$26,500, with 90% allocated to pollution control, be issued for the facility claimed in Tax Credit Application Number TC-4388.

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

JB:bk4388
May 2, 1995

State of Oregon
Department of Environmental Quality
TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

Intel Corporation
3065 Bowers Avenue
Santa Clara, CA 95051

The applicant owns and operates a silicon wafer microcomputer chip manufacturing plant in Aloha, Oregon.

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

2. Description of Facility

The claimed facility consists of storage tanks, an anti-foam injection system, effluent weir, electronic control system, pumps and associated plumbing system. The new facility was installed to improve and increase the capacity of an existing wastewater treatment facility which discharges to the Unified Sewerage Agency sewer system in Washington County.

Claimed Facility Cost: \$198,615
(Accountant's Certification was provided).

3. Procedural Requirements

The facility is governed by ORS 468.150 through 468.190 and by OAR Chapter 340, Division 16.

The facility met the statutory deadline in that installation of the facility was substantially completed on December 1, 1994 and the application for certification was found to be complete on April 27, 1995, within 2 years of substantial completion of the facility.

4. Evaluation of Application

- a. The facility is eligible because the sole purpose of the facility is to control a substantial quantity of water pollution. This control is accomplished by the use of treatment works for industrial waste as defined in ORS 468B.005.

Intel recently expanded its manufacturing plant, Fab 5, which resulted in the increased flow of process

wastewater. Consequently, the existing wastewater treatment facility had to be expanded to accommodate the increased flow and to improve treatment efficiency prior to discharge to the sanitary sewer.

The new facility is constructed on the northeast side of the existing wastewater treatment facility. The hydraulic capacity of the acid waste neutralization (AWN) collection system was increased by adding a 6-inch line between the fourth trim tank and the flow monitoring/sampling station. The collection system drains the corrosive waste from the expanded Fab 5 to the wastewater treatment facility.

The existing AWN system uses an ultrasonic level controller to actuate transfer pumps that control the wastewater level in the equalization basin (EB) as well as the flow through the system. Surfactant discharged into the AWN system from manufacturing operations creates foam. The foam was creating false "high" and/or "high-high" level indications that would signal the transfer pumps to increase flow through the AWN system. These false level indications subjected the AWN system to peak hydraulic loading conditions much more frequently than necessary. The automatic anti-foam injection system pumps an anti-foam chemical into the EB at a set frequency, which significantly reduces foam generation and stabilizes flow through the system. Stabilizing flow through the system improves chemical feed control and process reliability.

The claimed facility resulted to a better control and increased treatment efficiency. It also lowered the risk of discharging inadequately treated wastewater to the USA sewer system.

b. Eligible Cost Findings

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

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

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

- 2) The estimated annual percent return on the

investment in the facility.

There is no return on investment.

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

Alternative control and/or treatment methods and systems were evaluated by the design engineers but were not considered to be cost effective for Intel's specific application.

- 4) Any related savings or increase in costs which occur or may occur as a result of the installation of the facility.

Prior to the construction of the claimed facility defoamer chemicals in the AWN is added manually. With the installation of the automatic control system operating cost savings of \$686 annually is realized.

Cost of claimed facility: \$198,615
Annual cash flow: \$686
Life of facility: 10 years

Return on Investment factor: $198,615/686 = 289$

from Table 1 OAR 340-16-030

ROI = 0%

from Table 2 OAR 340-16-030

RROI = 4.5

Percent allocable = $\frac{4.5 - 0}{4.5} \times 100\%$

= 100%

- 5) Any other factors which are relevant in establishing the portion of the actual cost of the facility properly allocable to the prevention, control or reduction of air, water or noise pollution or solid or hazardous waste or to recycling or properly disposing of used oil.

There are no other factors to consider in establishing the actual cost of the facility properly allocable to prevention, control or reduction of pollution. None of the claimed facilities are a part of the wafer manufacturing process. All the facilities are directly related

to the wastewater treatment process.

The actual cost of the facility properly allocable to pollution control as determined by using Item 4 is 100%.

5. Summation

- a. The facility was constructed in accordance with all regulatory deadlines.
- b. The facility is eligible for tax credit certification in that the sole purpose of the facility is to control a substantial quantity of water pollution and accomplishes this purpose by the use of treatment works to treat industrial waste as defined in ORS 468B.005.
- c. The facility complies with DEQ statutes and rules and permit conditions.
- d. The portion of the facility cost that is properly allocable to pollution control is 100%.

6. Director's Recommendation

Based upon these findings, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$198,615 with 100% allocated to pollution control be issued for the facility claimed in Tax Credit Application No. T-4389.

Elliot J. Zais
(Intel 1/TC 4389)
(503) 229-5292
6/20/95

State of Oregon
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT

1. **Applicant**

International Paper
P O Box 854
Gardiner, Oregon 97441

The applicant owns and operates a mill which processes wood chips into unbleached linerboard with pulp produced by the Kraft process. The applicant operates a captive industrial landfill to collect solid waste materials produced by their mill.

2. **Description of Facility**

The facility is a leachate collection system installed around the West Landfill to ensure that all leachate is processed through the mill effluent treatment system and none escapes into the environment.

An independent accountant's certification of costs was provided.

Total cost claimed is \$173,239.00.

3. **Procedural Requirements**

The facility is governed by ORS 468.150 through 468.190 and by OAR Chapter 340, Division 16.

The facility met all statutory deadlines in that:

- a. Installation of the facility was started on July 7, 1993.
- b. The facility was placed into operation on October 23, 1993.
- c. The application for tax credit was filed with the Department on April 27, 1995, within two years of substantial completion of the facility.

4. Evaluation of Application

- a. The principal purpose of the facility is to comply with a requirement of the Department of Environmental Quality, ACD Permit 10-0036; NPDES Permit 10-07423; and Stormwater Permit - ORR 241522.
- b. Eligible Cost Findings

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

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

This factor is not applicable.

- 2) The estimated annual percent return on the investment in the facility.

- A) The applicant claimed a facility cost of \$173,239.00 and the Department has identified no ineligible costs relating to construction of the leachate collection system.

- B) Annual Percentage Return on Investment

There is no annual percentage return on investment for this facility. There was no salvage value for any facility removed from service. There is no income from this activity, no annual operating expenses and no annual cash flow.

The applicant has claimed a twenty year useful life. As a result of using Table 1, OAR 340-16-030, for a twenty year useful life, the return on investment for the claimed facility is 0% and the percent allocable is 100%.

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

The applicant did not considered any other methods for processing or diverting the leachate because the method elected was required by the Department as a condition of the landfill closure permit. It is the Department's determination that the proposed facility is an acceptable method of achieving the diversion of the leachate to protect the ground water of the State of Oregon.

- 4) Any related savings or decrease in costs which occur or may occur as a result of the installation of the facility.

There are no savings associated with the use of this facility.

- 5) Any other factors which are relevant in establishing the portion of the actual cost of the facility properly allocable to the prevention, control or reduction of air, water, or noise pollution or solid or hazardous waste, or to recycle or properly dispose of used oil.

There are no other factors to consider in establishing the actual cost of the installation of the claimed facility.

The actual cost of the facility properly allocable to pollution control as determined by using these factors is 100%.

5. Summation

- a. The facility was constructed in accordance with all regulatory deadlines.
- b. The facility is eligible for tax credit certification in that the sole purpose of the facility is to divert leachate from entering the ground waters of the State of Oregon, and to direct leachate to the facility which will process the liquid at the mill effluent treatment system.
- c. The facility complies with DEQ statutes and permit conditions.
- d. The portion of the facility cost that is properly allocable to pollution control is 100%.

6. Director's Recommendation

Based upon the findings, it is recommended that a Pollution Control Facility certificate bearing the cost of \$173,239.00 with 100% allocable to pollution control be issued for the facility claimed in Tax Credit Application No. T-4390

Rick Paul:rap
wp51\tax\tc4390RR.STA
(503)229-5934
June 5, 1995

State of Oregon
Department of Environmental Quality
TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

Anodizing, Inc.
Architectural Anodizing Operation
7933 NE 21st Avenue
PO Box 11263
Portland OR 97211-0263

The applicant owns, leases and operates an aluminum extrudizing and anodizing facility in Portland, Oregon.

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

2. Description of Facility

An inclined plate settler was installed to reduce suspended solids from the company's wastewater discharge. The settler system includes a Parkson lamella gravity settler, model 200/55x and two sludge holding tanks along with a filter press and an extended building to house the equipment. Two pH control tanks along with pumps, mixers, valves, hoses, and meters are included with the system.

Claimed Facility Cost: \$175,789
Accountant's Certification was provided.

3. Procedural Requirements

The facility is governed by ORS 468.150 through 468.190 and by OAR Chapter 340, Division 16.

The facility met the statutory deadline in that installation of the facility was substantially completed in June 1994 and the application for certification was found to be complete on May 2, 1995, within 2 years of substantial completion of the facility.

4. Evaluation of Application

- a. The facility is eligible because the sole purpose of the facility is to reduce a substantial quantity of water pollution. This reduction is accomplished by installation a treatment system to reduce the concentration of suspended solids in the applicant's wastewater discharge.

The facility has a wastewater discharge permit #467.001 issued by the City of Portland. According to the City of Portland Bureau of Environmental Services, Anodizing is currently in compliance with the metals limitations in their permit. The inclined plate settler was specifically designed to help meet these metal limitations. The last enforcement action for metals was well over a year ago.

b. Eligible Cost Findings

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

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

The facility does not recover or convert waste products into a salable or usable commodity. The percent allocable determined by using this factor would be 100%.

- 2) The estimated annual percent return on the investment in the facility.

There is no return on investment.

- 3) The alternative methods, equipment and costs for achieving the same pollution control objective. Anodizing, Inc. investigated gravity separation and flotation methods as alternatives to the plate settler selected. The gravity separation methods involve rectangular sedimentation tanks and inclined plate settlers. The flotation method is a form of gravity separation involving attachment of air bubbles to suspended solids to enhance gravity separation. Dissolved air flotation and induced air flotation systems were considered. The inclined plate settler was chosen for the following reasons:

- a. The system occupies one-tenth the space of other systems;
- b. The system costs less on a total installed basis;

- c. Simple start-up and shut-down;
 - d. Easy re-location;
 - e. Few moving parts.
- 4) Any related savings or increase in costs which occur or may occur as a result of the installation of the facility.

There are no savings from the facility. The five year average cost of maintaining and operating the facility is \$43,475 annually.

- 5) Any other factors which are relevant in establishing the portion of the actual cost of the facility properly allocable to the prevention, control or reduction of air, water or noise pollution or solid or hazardous waste or to recycling or properly disposing of used oil.

There are no other factors to consider in establishing the actual cost of the facility properly allocable to prevention, control or reduction of pollution.

The actual cost of the facility properly allocable to pollution control as determined by using these factors is 100%.

5. Summation

- a. The facility was constructed in accordance with all regulatory deadlines.
- b. The facility is eligible for tax credit certification in that the sole purpose of the facility is to reduce a substantial quantity of water pollution. This reduction is accomplished by installation a treatment system to reduce the concentration of suspended solids in the applicant's wastewater discharge.
- c. The facility complies with DEQ statutes and rules and City of Portland permit conditions.
- d. The portion of the facility cost that is properly allocable to pollution control is 100%.

6. Director's Recommendation

Based upon these findings, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$175,789 with 100% allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-4392.

Elliot J. Zais
T-4392
(503) 229-5292
WQTCSR-1/95

State of Oregon
Department of Environmental Quality
TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

Portland General Electric Company
Curtis Substation
121 SW Salmon Street, 1WTC-0402
Portland OR 97204-2901

The applicant owns and operates an electrical substation in Portland, Oregon.

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

2. Description of Facility

The substation has been modified with an internal storm drainage and an oil spill collection system. The system allows passage of water while stopping the flow of oil in the event of an oil spill. The site has been lined with an impermeable barrier which prevents oil and water from passing into the soil. The site was regraded so that all rain and spilled oil is directed thru an 8,000 gallon oil water separator which provides for oil containment in the event of an oil spill from oil-filled electrical equipment. This system allows adequate time for a cleanup crew to be dispatched to the site and begin pumping oil from the oil water separator and prevents oil from entering the storm sewer system.

Claimed Facility Cost: \$61,275.71
Accountant's Certification was provided.

3. Procedural Requirements

The facility is governed by ORS 468.150 through 468.190 and by OAR Chapter 340, Division 16.

The facility met statutory deadline in that construction and installation of the facility was substantially completed on May 27, 1993 and the application for certification was found to be complete on May 4, 1995, within 2 years of substantial completion of the facility.

4. Evaluation of Application

- a. The facility is eligible because the principal purpose of the facility is to comply with a requirement imposed by the federal Environmental Protection Agency to prevent water pollution. The requirement is to comply with Title 40 Code of Federal Regulations, Part 112, Oil Pollution Prevention.

This site does not have any permits issued by DEQ. The claimed facility is required by EPA. There is no record of past noncompliance.

b. Eligible Cost Findings

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

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

The facility does not recover or convert waste products into a salable or usable commodity. The percent allocable determined by using this factor would be 100%.

- 2) The estimated annual percent return on the investment in the facility.

There is no return on investment.

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

Two other alternatives were considered. They are 1) using transformer/oil circuit breaker pits at a cost of \$43,000 to \$60,000 plus operational costs; and 2) using a sand filter system. The first alternative was rejected due to cost and operational maintenance considerations. The second was rejected due to the risk of fire, high environmental risk, and the fact that the sand filter system could not hold the oil on site.

- 4) Any related savings or increase in costs which occur or may occur as a result of the installation of the facility.

There are no savings or increase in costs as a result of the facility modification.

- 5) Any other factors which are relevant in establishing the portion of the actual cost of the facility properly allocable to the prevention, control or reduction of air, water or noise pollution or solid or hazardous waste or to recycling or properly disposing of used oil.

There are no other factors to consider in establishing the actual cost of the facility properly allocable to prevention, control or reduction of pollution.

The actual cost of the facility properly allocable to pollution control as determined by using these factors is 100%.

5. Summation

- a. The facility was constructed in accordance with all regulatory deadlines.
- b. The facility is eligible for tax credit certification in that the principal purpose of the facility is to comply with a requirement imposed by the federal Environmental Protection Agency, to prevent water pollution. The requirement is to comply with Title 40 Code of Federal Regulations, Part 112, Oil Pollution Prevention.
- c. The facility complies with DEQ statutes and rules, Commission orders and permit conditions.
- d. The portion of the facility cost that is properly allocable to pollution control is 100%.

6. Director's Recommendation

Based upon these findings, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$61,276 with 100% allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-4395.

Elliot J. Zais
T-4395
(503) 229-5292
WQTCSR-1/95

State of Oregon
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

Portland General Electric Company
Arlita Substation
121 SW Salmon Street 1-WTC-04-02
Portland OR 97204

The applicant owns and operates an electrical substation in Portland, Oregon.

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

2. Description of Facility

A liner system was installed which prevents the passage of oil beyond the fenced area of the substation in the event of an oil spill. The liner system design allows adequate time for a cleanup crew to be dispatched to the site before oil enters the City of Portland's storm drain. The liner is buried 18 inches and extends above the yard grade eight to ten inches. The membrane liner is attached to the existing fence. The driveway areas are fitted with impermeable membrane liners which are bermed with compacted crushed rock.

Claimed Facility Cost: \$10,423.

Documentation of the actual cost of the facility was provided by the applicant.

3. Procedural Requirements

The facility is governed by ORS 468.150 through 468.190 and by OAR Chapter 340, Division 16.

The facility met the statutory deadline in that installation of the facility was substantially completed on December 15, 1994, and the application for certification was found to be complete on May 4, 1995, within 2 years of substantial completion of the facility.

4. Evaluation of Application

- a. The facility is eligible because the principal purpose of the facility is to comply with a requirement imposed by the federal Environmental Protection Agency, to prevent water pollution. The requirement is to comply with Title 40 Code of Federal Regulations, Part 112, Oil Pollution Prevention.

This site does not have any permits issued by DEQ. The claimed facility is required by EPA. There have been no spills at this site. There is no record of past noncompliance.

b. Eligible Cost Findings

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

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

The facility does not recover or convert waste products into a salable or usable commodity. The percent allocable determined by using this factor would be 100%.

- 2) The estimated annual percent return on the investment in the facility.

There is no return on investment.

- 3) The alternative methods, equipment and costs for achieving the same pollution control objective. Two other alternatives were considered. They are 1) using transformer/oil circuit breaker pits at a cost of \$30,000 to \$40,000 plus operational costs; and 2) using an oil stop valve, piping, and a storage container at a cost of \$24,000 to \$30,000. Both alternatives were rejected due to cost and operational maintenance considerations.

- 4) Any related savings or increase in costs which occur or may occur as a result of the installation of the facility.

There are no savings or increase in costs as a result of the facility modification.

- 5) Any other factors which are relevant in establishing the portion of the actual cost of the facility properly allocable to the prevention, control or reduction of air, water or noise pollution or solid or hazardous waste or to recycling or properly disposing of used oil.

There are no other factors to consider in establishing the actual cost of the facility properly allocable to prevention, control or reduction of pollution.

The actual cost of the facility properly allocable to pollution control as determined by using these factors is 100%.

5. Summation

- a. The facility was constructed in accordance with all regulatory deadlines.
- b. The facility is eligible for tax credit certification in that the principal purpose of the facility is to comply with a requirement imposed by the federal Environmental Protection Agency, to prevent water pollution. The requirement is to comply with Title 40 Code of Federal Regulations, Part 112, Oil Pollution Prevention.
- c. The facility complies with DEQ statutes and rules.
- d. The portion of the facility cost that is properly allocable to pollution control is 100%.

6. Director's Recommendation

Based upon these findings, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$10,423 with 100% allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-4397.

Elliot J. Zais
T-4397
(503) 229-5292
WQTCSR-1/95

State of Oregon
Department of Agriculture

TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

Richard D. Baker
32283 Diamond Hill Drive
Harrisburg, Oregon 97446

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

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

2. Description of Claimed Facility

The equipment described in this application is a 200 hp John Deere 4955 tractor, located at 32283 Diamond Hill Drive, Harrisburg, Oregon. The equipment is owned by the applicant.

Claimed equipment cost: \$66,500.
(Accountant's Certification was provided.)

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

The applicant has 117 perennial grass seed acres and 488 annual grass seed acres under cultivation. The alternatives to open field burning the applicant has investigated include baling the bulk straw off the perennial fields and flail chopping the remaining residue and stubble and flail chopping the full straw load on the annual fields followed by plowing, harrowing and rolling.

The applicant is now ready to replace open field burning on all his acreage with the alternatives. The applicant states that it is necessary to have a large tractor (higher horsepower) to flail chop straw, plow it under and harrow and roll fields adequately in the short time from between harvest and fall planting.

4. Procedural Requirements

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

Purchase of the equipment was substantially completed on December 30, 1994. The application was submitted on May 12, 1995; and the application for final certification was found to be complete on May 19, 1995. The application was filed within two years of substantial completion of the equipment.

5. Evaluation of Application

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

b. Eligible Cost Findings

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

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

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

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

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

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

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

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

There is an increase in operating costs of \$6,465 to annually maintain and operate the equipment. These costs were considered in the return on investment calculation.

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

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

<u>Implement</u>	<u>Acres Worked</u>	<u>Machinery Capacity</u>	<u>Annual Operating Hours</u>
Flail Chopper	605	7 acres/hr	86
Plow	605	7 acres/hr	86
Harrow & Roller	1815 (605x3)	7 acres/hr	<u>259</u>
Total Annual Operating Hours			431

The total annual operating hours of 431 divided by the average annual operating hours of 450 produces a percent allocable of 96%.

The actual cost of the equipment properly allocable to pollution control as determined by using these factors is 96%.

6. Summation

- a. The equipment was constructed in accordance with all regulatory deadlines.
- b. The equipment is eligible under ORS 468.150 as an approved alternative method for field sanitation and straw utilization and disposal that reduces a substantial quantity of air pollution as defined in ORS 468A.005
- c. The equipment complies with DEQ statutes and rules.
- d. The portion of the equipment that is properly allocable to pollution control is 96%.

7. The Department of Agriculture's Recommendation

Based upon these findings, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$66,500, with 96% allocated to pollution control, be issued for the equipment claimed in Tax Credit Application Number TC-4401.

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

JB:bk4401
May 19, 1995

State of Oregon
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

Portland General Electric Company
Gales Creek Substation
121 SW Salmon Street 1WTC-0402
Portland OR 97204-2901

The applicant owns and operates an electrical substation in Gales Creek, Oregon.

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

2. Description of Facility

A sand filter system was installed which allows the passage of water while retarding the flow of oil in the event of an oil spill. This allows adequate time for a cleanup crew to be dispatched to the site before oil can enter navigable waters. The filter consists of mason's sand, and the curbing around it is made of treated dimensional lumber.

Claimed Facility Cost: \$28,030
Accountant's Certification was provided.

3. Procedural Requirements

The facility is governed by ORS 468.150 through 468.190 and by OAR Chapter 340, Division 16.

The facility met statutory deadline in that installation of the facility was substantially completed on December 8, 1993, and the application for certification was found to be complete on May 12, 1995, within 2 years of substantial completion of the facility.

4. Evaluation of Application

- a. The facility is eligible because the principal purpose of the facility is to comply with a requirement imposed by the federal Environmental Protection Agency, to prevent water pollution. The requirement is to comply with Title 40 Code of Federal Regulations, Part 112, Oil Pollution Prevention.

This site does not have any permits issued by DEQ. The claimed facility is required by EPA. There have been no spills at this site. There is no record of past noncompliance.

b. Eligible Cost Findings

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

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

The facility does not recover or convert waste products into a salable or usable commodity. The percent allocable determined by using this factor would be 100%.

- 2) The estimated annual percent return on the investment in the facility.

There is no return on investment.

- 3) The alternative methods, equipment and costs for achieving the same pollution control objective. Two other alternatives were considered. They are 1) using transformer/oil circuit breaker pits at a cost of \$30,000 to \$40,000 plus operational costs; and 2) using an oil stop valve, piping, and a storage container at a cost of \$24,000 to \$30,000. Both alternatives were rejected due to cost and operational maintenance considerations.

- 4) Any related savings or increase in costs which occur or may occur as a result of the installation of the facility.

There are no savings or increase in costs as a result of the facility modification.

- 5) Any other factors which are relevant in establishing the portion of the actual cost of the facility properly allocable to the prevention, control or reduction of air, water or noise pollution or solid or hazardous waste or to recycling or properly disposing of used oil.

There are no other factors to consider in establishing the actual cost of the facility properly allocable to prevention, control or reduction of pollution.

The actual cost of the facility properly allocable to pollution control as determined by using these factors is 100%.

5. Summation

- a. The facility was constructed in accordance with all regulatory deadlines.
- b. The facility is eligible for tax credit certification in that the principal purpose of the facility is to comply with a requirement imposed by the federal Environmental Protection Agency, to prevent water pollution. The requirement is to comply with Title 40 Code of Federal Regulations, Part 112, Oil Pollution Prevention.
- c. The facility complies with DEQ statutes and rules.
- d. The portion of the facility cost that is properly allocable to pollution control is 100%.

6. Director's Recommendation

Based upon these findings, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$28,030 with 100% allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-4403.

Elliot J. Zais
T-4403
(503) 229-5292
WQTCSR-1/95

State of Oregon
Department of Environmental Quality
TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

Boise Cascade Corporation
White Paper Division
1300 Kaster Road
St. Helens, Oregon 97051

The applicant owns and operates a bleached kraft pulp and paper mill in St. Helens, Oregon.

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

2. Description of Facility

Boise Cascade operates a bleached kraft pulp and paper mill in St. Helens, Oregon. Wastewater from the mill is discharged to the wastewater treatment facility owned and operated by the City of St. Helens. Mill wastewater constitutes approximately 90% of the waste to be treated.

The Department placed dioxin limits in the City's NPDES permit. Since the dioxin originates from the pulp and paper mill, it was necessary for the mill to reduce dioxin discharges to the City's wastewater treatment system. The claimed facility consists of modifications to the bleach plant in the mill to allow compliance with the dioxin limits in the City's NPDES permit.

Prior to modifying the bleach plant, the applicant employed a chlorine + hypochlorite + chlorine dioxide bleach process to bleach pulp to the desired degree of whiteness. The previous bleaching process produced dioxin at levels in excess of the limits specified in the City's NPDES permit. In order to meet the limits, the applicant modified the bleach plant to allow substitution of chlorine dioxide for much of the chlorine previously used. This approach is referred to as "chlorine dioxide substitution".

Revising the bleach process entailed making a number of changes to the bleach plant; the major changes are briefly summarized below:

- The previous chlorine dioxide generator was replaced by a much larger chlorine dioxide generator. This was necessary because of the much greater use of chlorine dioxide in the revised bleaching process;
- Certain pieces of equipment and piping had to be replaced or relined to withstand the higher corrosivity of chlorine dioxide, including the partial relining of one bleaching tower;
- New scrubbers and associated ducting were installed to control air emissions of chlorine and chlorine dioxide;
- Additional water cooling capacity was installed to meet temperature limitations on wastewater discharged to the City's treatment system;

A number of other changes or additions were made to support the major changes described above; these include the addition of chemical storage tanks, chillers to supply chilled water to the chlorine dioxide generator and a control system for the new chlorine dioxide generator.

The applicant has submitted information indicating that these changes will allow the mill to reduce dioxin discharges to levels that will comply with the limits specified in the City's NPDES permit.

The applicant claimed facility costs of \$34,153,477. The accounting review determined that additional costs of \$1,590,246 were also eligible and that \$2,943,723 of claimed costs, including costs for capitalized interest, spare parts and undocumentable claimed costs, are ineligible. The Claimed Facility Cost has been adjusted by these amounts.

Claimed Facility Cost: \$32,800,000 (adjusted)
(Accountant's Certification was provided).

3. Procedural Requirements

The facility is governed by ORS 468.150 through 468.190 and by OAR Chapter 340, Division 16.

The facility met statutory deadlines in that construction and installation of the facility was substantially completed in April of 1993 and the application for certification was found to be complete on May 24, 1994, within 2 years of substantial completion of the facility.

4. Evaluation of Application

a. The facility is eligible because the principal purpose of the facility is to comply with a requirement imposed by the Department to reduce water pollution. The requirement is to comply with the dioxin limits established in the City of St. Helen's NPDES permit.

b. Eligible Cost Findings

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

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

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

- 2) The estimated annual percent return on the investment in the facility.

Operational costs associated with the claimed facility have increased as a result of the modifications made by the applicant. The operating costs of the facility were increased by approximately \$740,000 (based on 1993 costs). The annual percent return on investment in this case is 0 (zero).

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

Alternative methods exist to achieve the pollution control objective that was achieved by the claimed facility. However, it is the Department's opinion that the applicant chose the lowest cost approach for achieving the pollution control objective.

The applicant considered the following approaches:

- a. high substitution of chlorine dioxide;
- b. "C" bleach plant; and
- c. oxygen delignification

The option chosen by the applicant was the high substitution of chlorine dioxide, which is the least expensive approach that also would meet the dioxin limits set in the NPDES permit.

The estimated cost of option b. was \$97,000,000, and of option c., \$37,400,000. The actual cost of option a. was less than either of these.

- 4) Any related savings or increase in costs which occur or may occur as a result of the installation of the facility.

There are no savings from the facility. Although the cost of maintaining the facility decreased slightly in 1993, the cost of operating the facility increased. The net maintenance and operating cost increase was approximately \$700,000 annually (1993 data).

- 5) Any other factors which are relevant in establishing the portion of the actual cost of the facility properly allocable to the prevention, control or reduction of air, water or noise pollution or solid or hazardous waste or to recycling or properly disposing of used oil.

a) The Department asked if the modifications to the bleach plant would allow increases in production from the claimed facility. The applicant informed the Department that the modifications to the claimed facility (bleach plant) have not increased the capacity of the bleach plant.

b) The Environmental Quality Commission has directed that tax credit applications at or above \$250,000 undergo an additional departmental accounting review to ensure that all eligible costs are properly allocated. This review was performed under contract with the Department by the accounting firm of Coopers & Lybrand.

The cost allocation review identified an additional \$1,590,246 of eligible charges, and \$2,943,723 of ineligible charges. The claimed facility cost has been adjusted as follows:

Claimed costs on original application:	\$34,153,477
Eligible costs not claimed on original application:	\$ 1,590,246
Total claimed costs:	<u>\$35,743,723</u>
Non-allowable costs claimed:	
Interest	<\$ 2,461,066>
Spare Parts	<\$ 402,776>
Direct Costs	<\$ 66,581>
Vendor Costs	<\$ 13,300>
Final adjusted facility cost:	<u>\$32,800,000</u>

The cost allocation review determined that no further review procedures need be performed.

The actual cost of the facility properly allocable to pollution control as determined by using these factors is 100%.

5. Summation

- a. The facility was constructed in accordance with all regulatory deadlines.
- b. The facility is eligible for tax credit certification in that the principal purpose of the facility is to comply with a requirement imposed by the Department to reduce water pollution. The requirement is to comply with the dioxin limits established in the City of St. Helens' NPDES permit.
- c. The facility is able to comply with permit conditions.
- d. An independent accounting firm under contract with the Department has concluded that no further review procedures need be performed on T-4154 (see attached review report).
- d. The portion of the facility cost that is properly allocable to pollution control is 100%.

6. Director's Recommendation

Based upon these findings, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$32,800,000 with 100% allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-4154.

(George Davis):(GFD)
(T-4154)
(503) (229-5534)
(May 22, 1995)

Environmental Quality Commission

- Rule Adoption Item
- Action Item
- Information Item

Agenda Item C
July 7, 1995 Meeting

Title:

Revisions to OAR Chapter 340, Division 50, Land Application of Domestic Wastewater Treatment Biosolids, Biosolids Derived Products, and Domestic Septage

Summary:

The Department is requesting that the EQC adopt the proposed Division 50 rule amendments as presented in Attachment A of the staff report. The Division 50 revisions will update biosolids and domestic septage rules to make them consistent with new and recently amended federal technical and administrative regulations.

More specifically, the proposed rule amendments will revise and expand definitions to reflect federal biosolids regulations; incorporate minimum federal standards required for biosolids land application; and modify requirements for monitoring, recordkeeping and reporting to make these requirements consistent with federal regulations in 40 CFR Part 503. In addition, several housekeeping changes are proposed which make the rule more comprehensive, clear, and enforceable.

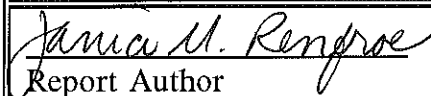
In July, 1988, the Department formed the Domestic Biosolids Technical Advisory Committee to review the biosolids management program, including making recommendations for rule revisions. The twelve-member committee represented local government, sewage districts, and private industry. The committee worked closely with Department staff and the Oregon Association of Clean Water Agencies (ACWA) Biosolids Subcommittee to develop the rule amendments.

Concurrent with the request for rulemaking, the Department will ask the EQC for permission to seek primacy for the land application portion of the federal biosolids program.

Department Recommendation:

The Department recommends that the Commission adopt the rule amendments regarding land application of domestic wastewater treatment facility biosolids, biosolids derived products, and domestic septage as presented in Attachment A of the Department Staff Report.

It is further recommended that the EQC grant the Department's request for authorization to seek primacy from the U.S. Environmental Protection Agency for administration of the land application portion of the federal sewage sludge (biosolids) program.


Report Author


Division Administrator


Director


June 15, 1995

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

State of Oregon
Department of Environmental Quality

Memorandum[†]

Date: June 21, 1995

To: Environmental Quality Commission
From: Langdon Marsh, Director 
Subject: Agenda Item C, July 7, 1995, EQC Meeting

Revisions to OAR Chapter 340, Division 50, Land Application of Domestic Wastewater Treatment Biosolids, Biosolids Derived Products, and Domestic Septage

Introduction

Biosolids--also known as domestic sludge--are the solid residues left over from treatment of domestic sewage. Biosolids contain essential plant nutrients, such as nitrogen, phosphorus, potassium, calcium, and magnesium. After receiving treatment to significantly reduce pathogens and odors, biosolids may be applied to land as organic fertilizer or soil amendment. Land application of biosolids provides a much more environmentally beneficial and responsible approach to waste management, as opposed to disposal by incineration or solid waste landfill.

The Department of Environmental Quality has long recognized that properly managed biosolids are a beneficial, recyclable resource. Many of Oregon's domestic wastewater treatment facilities have successfully employed biosolids land application for more than 40 years. In 1979, the department formalized a policy advocating land application of sludge. This policy acknowledged that the benefits of properly managed and applied sludge outweighed any risks to public health or the environment. In 1983, the state legislature enacted into law the requirement that the department move the 1979 guidelines into rules. This action was achieved in August of 1984, when the EQC adopted administrative rules and guidelines for management of sludge (now termed biosolids).

Nationally, EPA is the permitting authority for biosolids management; however, states may be delegated this authority after demonstrating to EPA that the state's biosolids management program meets federal requirements. Oregon does not at this time have delegation. Most of Oregon's biosolids and septage management operations are regulated jointly by EPA and DEQ through the department's Water Quality Division,

[†]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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under the domestic water quality permitting programs (NPDES and WPCF) and on-site sewage disposal service business licensing program. In addition, a few septage lagoons and processing facilities are regulated under solid waste disposal permits.

Background on this Proposed Rulemaking Action

On January 12, 1995, the director authorized the Water Quality Division to proceed to a rulemaking hearing on proposed rules which would amend Oregon Administrative Rules, Chapter 340, Division 50, pertaining to the management of domestic wastewater treatment biosolids, biosolids derived products, and domestic septage. The proposed rule amendments encourage the beneficial use of treated domestic wastewater biosolids, biosolids derived products, and domestic septage through land application programs managed in a manner which protects the public health and maintains or improves environmental quality.

Pursuant to the director's authorization to proceed to rulemaking, hearing notice was published in the Oregon Secretary of State's Bulletin on February 1, 1995. The Hearing Notice and informational materials were mailed to those persons who have asked to be notified of rulemaking actions, and to persons known by the department to be potentially affected by or interested in the proposed rulemaking action on January 31, 1995.

Public Hearings were held as follows:

March 3, 1995, 10:00 AM, Pendleton Convention Center, Pendleton
(Hearings Officer, Ed Liggett)

March 3, 1995, 10:00 AM, DEQ Conference Room, Roseburg (Hearings
Officer, Paul Kennedy)

March 6, 1995, 10:00 AM, DEQ Conference Room 3A, Portland
(Hearings Officer, Tom Lucas)

The Hearings Officers' Reports (Attachment C) summarize the testimony presented at the hearing.

Written comments were received through March 10, 1995, 5:00PM. A list of written comments received is included as Attachment D. (A copy of the comments is available upon request.)

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Department staff have evaluated the comments received (Attachment E). 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 F.

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 EQC action.

Issues this Proposed Rulemaking Action is Intended to Address

The issues addressed by this rulemaking proposal are as follows:

Consistency with federal regulatory requirements. Amendments are necessary to update rules and guidelines to make them consistent with new and recodified federal technical regulations (found at 40 CFR Part 503) and administrative requirements (40 CFR Parts 122, 123, and 501).

Primacy for regulatory oversight. Since the promulgation of 40 CFR Part 503 (Standards for the Use and Disposal of Sewage Sludge), permitted domestic wastewater sources that produce biosolids in Oregon have been regulated by two agencies: the Oregon Department of Environmental Quality, and the U. S. Environmental Protection Agency, Region 10. The EPA, Region 10 (Seattle) is the primary permitting authority. The regulated community has requested that the biosolids program be regulated by DEQ so as to eliminate the opportunity for conflicts between federal and state regulatory programs, to avoid duplication of effort, and to eliminate redundant requirements for source monitoring, recordkeeping, and reporting. Further, these sources have expressed the view that DEQ provides a more progressive and responsive regulatory approach than EPA.

Housekeeping changes. In addition to the above, the proposed rule amendments include several housekeeping changes which are needed to add clarity, conformity, and greater enforceability. The Division 50 rules have not been updated since their inception in August of 1984.

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To address these issues, the department is requesting that the EQC adopt the proposed Division 50 rule amendments as presented in Attachment A. The Division 50 revisions will update biosolids and domestic septage rules to make them consistent with new and recently amended federal technical and administrative regulations. In addition, several housekeeping changes are proposed which make the rule more comprehensive, clear, and enforceable. Concurrent with the request for rulemaking, the department will ask the EQC for permission to seek primacy for the land application portion of the federal biosolids program.

Relationship to Federal and Adjacent State Rules

The proposed rule amendments would revise and expand definitions to reference federal biosolids regulations; incorporate minimum federal standards required for biosolids land application; and alter permitted source biosolids monitoring, recordkeeping and reporting requirements to make them consistent with 40 CFR Part 503. The proposed rule amendments will make the state's rules more structured than the federal regulations in that the Best Management Practices (BMPs) included in the rule revisions set physical criteria for selecting and approving biosolids land application sites. The federal biosolids regulations are more general with regard to siting criteria. (More detailed discussion about relationship with federal requirements may be found in Attachment B).

The proposed rule amendments and BMPs are not more stringent than those of Washington State and California. Biosolids are regulated in California via ordinance at the county level. Local health districts in Washington and Idaho regulate certain aspects of biosolids management. Biosolids rules in Washington State are currently being revised by the Department of Ecology to reflect federal technical standards; these may include a few provisions which are more stringent than the proposed rule amendments (e.g. subjectively based biosolids-derived compost cadmium pollutant concentration limits). At the state level, Idaho remains undecided on whether it will adopt rules affecting the land application of biosolids.

Authority to Address the Issue

The Clean Water Act of 1987 is the legal authority for sludge management (Section 405). The federal law allows for states to administer permitting programs for sewage sludge subject to Section 402 (National Pollutant Discharge Elimination System or NPDES). As mandated by this federal law, the U. S. Environmental Protection Agency issued national standards regulating the use or disposal of sewage sludge. These standards, promulgated in 40 CFR Part 503, in conjunction with the permitting requirements of 40 CFR Parts 122 (federal NPDES Program), 123 (State program

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requirements for NPDES Program), and 501 (State sludge management program regulations), make up the regulatory framework of the National Sewage Sludge Program.

The authority for the EQC to address this rulemaking proposal is found in several places in the Oregon Revised Statutes:

ORS 468.020 (Environmental Quality Generally, Rules and Standards) conveys broad rulemaking authority to the EQC to adopt rules and standards deemed necessary and proper for the performance of the functions of the EQC and the Department.

ORS 468B.095 (Water Quality, Use of sludge on agricultural, horticultural, and silvicultural land) authorizes the EQC to adopt by rule requirements for the use of sludge (now called biosolids) on land.

ORS 459.045 (Solid Waste Control, Rules) authorizes the EQC to adopt reasonable and necessary solid waste management rules governing, among other things, the management of solid waste (including sewage sludge); and conveying authority to adopt as necessary other rules which carry out solid waste management statutes, particularly ORS 459.015, encouraging the recycling and reuse of solid wastes to extend the useful life of solid waste landfills and disposal sites.

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

To properly address biosolids issues including the development of this rulemaking proposal, in July, 1988 the department formed the Domestic Biosolids Technical Advisory Committee. This twelve-member committee worked with department staff and the Oregon Association of Clean Water Agencies (ACWA) Biosolids Subcommittee to develop the rule amendments.

Between March 4, 1993 and June 28, 1994, the DEQ Biosolids Committee met on 16 occasions to consider various aspects of and alternatives for Oregon's biosolids management policy and draft rule revisions. Ten position papers were prepared by the committee pertaining to various issue areas of the biosolids program.

On November 17, 1994, the Biosolids Committee unanimously agreed on language for the draft rule and best management practices. Further, the committee agreed that

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delegation of authority for administering the federal biosolids program should be sought by the DEQ (specifically relating to land application).

Attachment G lists the names of DEQ Biosolids Committee members. Also included is a letter from Steven A. Wilson, DEQ Biosolids Technical Advisory Committee Chair, dated November 17, 1994, summarizing committee recommendations.

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

The informational packet to solicit public comment contained general procedural information on rulemaking and a summary of the proposed rule amendments. Copies of the draft rule were not included in this packet, but were made available upon request.

As reflected in the Presiding Officers' reports (Attachment C) attendance was relatively low at the three hearings: one person attended the hearing in Pendleton, four in Roseburg, and nine in Portland. Each hearing provided informal question and answer sessions, providing an opportunity for interested and affected parties to find out more about the proposed amendments. Oral and written testimony supported the proposed rulemaking actions. No one presented any objections or otherwise expressed major concerns about the department's proposal.

The Summary of Written Comments (Attachment D) lists and summarizes all written testimony submitted during the public comment period. The department received letters from 22 people representing local governments, sanitary districts, associations, and private industry. Sixteen letters indicated unqualified and complete support for the proposed rule; 14 of these also strongly encouraged the EQC to grant the department's request to pursue delegation of the federal biosolids program (two of the writers did not express an opinion about delegation). The remaining six commenters expressed general support for both the rule changes and efforts to seek delegation, but also provided comments and suggested changes to rule language. These comments are summarized below, and described in more detail in Attachment E (Evaluation of Public Comment) and Attachment F (Detailed Changes to the Proposed Rule).

Summary of Significant Public Comment and Changes Proposed in Response

As noted above, no commenter objected to the department's proposed actions. Some commenters did, however, provide suggested changes to the proposed rule language. A number of these suggestions were editorial, and for the most part have been incorporated

as appropriate into to the proposed rule. Other more substantive comments were provided as follows:

Mr. Gareth Ott, representing the City of Gresham, advised that the proposed definition for domestic wastewater treatment facility solids should be amended to exclude grit and screenings. The draft rule now includes language for this exclusion. In addition, Mr. Ott recommended that the rule be amended to include a definition for "site authorization letter". This definition has been added. Further, Mr. Ott suggested the rule be amended to require a time line for taking action on biosolids and domestic septage site authorization proposals. While the department does not agree that a time constraint should be placed into rule, it is the department's goal to act on site authorization letters in a timely manner. Language has been added to the rule under OAR 340-50-030(2) which sets some time constraints on site authorization actions in the event that a proposed land application site is subject to a public process.

Mr. John Hebard of Douglas County expressed concern that independent commercial septage pumpers who operate alkaline stabilization and land application programs under WPCF Permits were not subject to certification requirements. He encouraged the department to implement some form of operator certification for these permittees. In response to Mr. Hebard's concern, staff noted that domestic septage alkaline stabilization and land application operator certification requirements were not considered during the rule making process, and determined that this concern would be more appropriately reviewed by the Water Quality operator certification program staff in future Division 49 rulemaking.

Mr. Harley James, representing the City of Medford, held the opinion that some suggested rule and best management practices revisions were considerably more stringent than minimum federal administrative and technical regulations pertaining to biosolids, specifically with regard to site authorization letters and nitrogen monitoring on biosolids application sites. Staff does not agree that the proposed rule is considerably more stringent in these areas. The department views the proposed rule as more progressive than the federal regulations in terms of environmental protection, particularly for groundwater quality. Staff recommends that the proposed rule remain as presented in Attachment A. This staff recommendation agrees with the position of the DEQ Biosolids Advisory Committee. (Attachment B discusses the differences between state and federal requirements in "Questions to be Answered to Reveal Potential Justification for Differing from Federal Requirements", question #11)

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Attachment E contains a more detailed description of comments and evaluation of testimony.

Department staff also reviewed the proposed rule, and a few more editorial changes were made to add further refinements. A substantive change was made to 340-50-030(2) of the rule, concerning the need for a public review process in the selection of certain land application sites. This change was made so that the rule more accurately reflects the statutory intent of ORS 468B.095, which requires that the sludge (biosolids) rule contain procedures and criteria for the selection of land application sites, including an opportunity for public comment and public hearing. The revised wording of the rule was developed through consultation with the Attorney General's Office, with the chair of the Department's Biosolids Advisory Committee (Steve Wilson), and with Mark Ronayne, former DEQ Biosolids Specialist.

Detailed changes to the proposed rule amendments are described in Attachment F.

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

The rule will continue to be implemented through the departments's existing water quality permitting programs, the solid waste permitting program, and the on-site sewage disposal licensing program. These permits and licenses are issued to domestic wastewater treatment facilities and disposal services which generate, treat, prepare, or land apply biosolids, sludge and domestic septage. The rule will be expanded to require sources exporting biosolids to Oregon to obtain a land application permit. As is currently practiced, those who land apply biosolids will be required to obtain DEQ site authorization letters prior to land application on the selected sites.

The rule amendments would be effective upon adoption by the EQC and filing with the Secretary of State. Impacts on the regulated community should be minimal as most already comply with state and federal requirements. Existing DEQ staff resources (4.75 FTE) should be adequate to implement the revised biosolids rule, including the land application portion of the federal biosolids program.

Some additional, short-term, resource may be needed to prepare the documentation necessary for state delegation of the land application portion of the federal program. Development and submission to EPA of appropriate documents could take from one to two years. EPA Region 10 has indicated that the services of an EPA contractor may be made available to the Department if needed to facilitate and expedite the delegation process.

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No additional federal funds will be made available as a consequence of state delegation.

Recommendation for Commission Action

It is recommended that the EQC adopt the rule amendments regarding land application of domestic wastewater treatment facility biosolids, biosolids derived products, and domestic septage as presented in Attachment A of the department's Staff Report.

It is further recommended that the EQC grant the department's request for authorization to seek primacy from the U.S. Environmental Protection Agency for administration of the land application portion of the federal sewage sludge (biosolids) program.

Attachments

- A. Rule Amendments Proposed for Adoption
- B. Supporting Procedural Documentation:
 - 1. Legal Notice of Hearing
 - 2. Public Notice of Hearing (Chance to Comment)
 - 3. Rulemaking Statements (Statement of Need)
 - 4. Fiscal and Economic Impact Statement
 - 5. Land Use Evaluation Statement
 - 6. Questions to be Answered to Reveal Potential Justification for Differing from Federal Requirements
- C. Presiding Officers' Reports on Public Hearings
- D. List of Written Comments Received
- E. Department's Evaluation of Public Comment
- F. Detailed Changes to Original Rulemaking Proposal made in Response to Public Comment
- G. Advisory Committee Membership and Letter of Recommendations
- H. ORS 468B.095

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Reference Documents (available upon request)

Written Comments Received (listed in Attachment D)
Transcripts and tapes of public hearings
DEQ Biosolids Technical Advisory Committee Position Papers
Meeting minutes from Biosolids Technical Advisory Committee
Clean Water Act of 1987
40 CFR Parts 122, 123, 501, and 503
Oregon Revised Statutes: 454.695, 459.045, 468.020, 468B.050
Oregon Administrative Rules, Chapter 340, Divisions 14, 40, 45, and 96

Approved:

Section: Thomas J. Luss
Division: Michael Plouns

Report Prepared By: Janice M. Renfro

Phone: (503)229-5589

Date Prepared: June 9, 1995

JMR
June 20, 1995

REVISIONS TO DIVISION 50

NOTE:

The underlined portions of text represent proposed additions made to the rules.

The ~~bracketed~~ portions of text represent proposed deletions made to the rules.

DIVISION 50

LAND APPLICATION ~~[AND DISPOSAL]~~ OF DOMESTIC ~~[SEWAGE]~~ WASTEWATER TREATMENT ~~[PLANT]~~ FACILITY ~~[SLUDGE]~~ BIOSOLIDS, ~~[AND]~~ ~~[SLUDGE]~~ BIOSOLIDS DERIVED PRODUCTS, ~~[INCLUDING]~~ AND DOMESTIC SEPTAGE

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[Guidelines] Best Management Practices for Site Selection and the Use[, Site Selection] and Application [or Disposal] of [Sludge] Bulk Biosolids and Domestic Septage

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PURPOSE

340-50-005

- (1) It is the purpose of these rules **and best management practices** to protect the environment and public health in Oregon by prescribing the methods, procedures and restrictions required for the safe handling[,] **and use[, and disposal]** of **domestic [sewage] wastewater treatment facility solids, biosolids, biosolids derived products, [sludge] and domestic septage.** **These rules implement a program for biosolids and domestic septage management which satisfies or exceeds minimum federal regulations pertaining to land application.**

- (2) Industrial process water solids [sludge], agricultural wastes and sewerage wastewater are not included in these rules.

POLICY

340-50-006

The Environmental Quality Commission (EQC) encourages the land application of treated domestic wastewater biosolids, biosolids derived products, and domestic septage which are managed in a manner which protects the public health and maintains or improves environmental quality. These beneficial recyclable materials improve soil tilth, fertility, and stability and their use enhances the growth of agricultural, silvicultural, and horticultural crops.

DEFINITIONS

340-50-010

~~*[As used in these rules, unless otherwise required by context.]*~~

Unless otherwise indicated in this Division, definitions appearing under federal regulations 40 CFR §503.9, §503.11, and §503.31 shall apply. In addition, as used in these rules, unless differently required by context, the following definitions apply:

- ~~[(1) — “Accumulator” crops means swiss chard, lettuce, spinach, carrots and other crops that have been shown to readily accumulate cadmium.]~~

{(2)} (1) "Agronomic Application Rate" means a rate of ~~[sludge]~~ **biosolids** or **domestic** septage application which matches nutrient requirements for a specific crop on an annual basis.

{(3)} (2) "Beneficial Use Site" means any **Department** approved site for application of a regulated amount of ~~[sludge]~~ **biosolids** or **domestic** septage used for crop or livestock production, ~~[sand-dune]~~ **soil reclamation and** stabilization, or soil improvement. Application rates and site management practices shall assure continued agricultural, horticultural or silvicultural production and shall not lead to a temporary or long-term reduction in site productivity.

(3) **"Biosolids" means solids derived from primary, secondary, or advanced treatment of domestic wastewater which have been treated through one or more controlled processes that significantly reduce pathogens and reduce volatile solids or chemically stabilize solids to the extent that they do not attract vectors. This term refers to domestic wastewater treatment facility solids that have undergone adequate treatment to permit their land application. This term has the same meaning as the term "sludge" in ORS 468B.095, and the term "sewage sludge" found elsewhere in OAR Chapter 340.**

(4) **"Biosolids Derived Products" means materials derived from composting domestic wastewater treatment facility solids or other processes, such as thermal drying, which result in a material which meets pollutant concentrations in 40 CFR §503.13(b)(3), the Class A pathogen requirements in 40 CFR §503.32(a), and one of the vector attraction reduction requirements in 40 CFR §503.33(b)(1) to §503.33(b)(8). Biosolids derived products also include any soil amendments which, in**

part, contain biosolids meeting these criteria. Biosolids derived products are acceptable for distribution to the general public for immediate use.

- ~~[(4) “Cation Exchange Capacity” (CEC) means the sum total of exchangeable cations that a soil can absorb. Expressed in milli-equivalents per 100 grams of soil.]~~
- (5) “Chemical Treatment” means the process of mixing lime or other chemicals with ~~[municipal sludge]~~ domestic wastewater solids or domestic septage to reduce the number of ~~[bacterial]~~ pathogens or amount of putrescible matter.
- (6) “Composting” means a process by which ~~[dewatered sludge]~~ domestic wastewater treatment facility solids, biosolids, or septage are [is] mixed with carbonaceous material and aerated with controlled ~~[high]~~ elevated temperatures to promote rapid decomposition and ultimate stabilization as well as pathogen reduction.
- (7) “Controlled Access” means that public entry or traffic is unlikely, for example agricultural land that is privately owned. Parks or other public land may require fencing to ~~[H]~~ensure controlled access.
- (8) “Domestic Wastewater Treatment Facility Solids” means the accumulated suspended and settleable solids of domestic wastewater, deposited in tanks or basins mixed with water to form a semi-liquid mass. Grit and screenings removed from domestic wastewater during preliminary treatment are not considered solids under this definition.

- ~~{(8)}~~ **(9)** “Department” means the Oregon Department of Environmental Quality **(DEQ)**.
- ~~{(9)}~~ **(10)** “Dewatered ~~{Sludge}~~ **Solids**” means ~~{sludge}~~ **domestic wastewater treatment facility solids or biosolids** with a solids concentration between **ten (10)** ~~{six (6)}~~ and ~~{twenty (20)}~~ **fifty (50)** percent.
- ~~{(10)}~~ —“~~Digested Sludge~~” means ~~sludge resulting from a controlled process which significantly reduces volatile solids and pathogens.~~]
- ~~{(11)}~~ —“~~Disposal Site~~” means a Department approved site used for disposal of sludge or septage in excess of agronomic application rates. ~~Beneficial Use Sites do not constitute disposal sites for purposes of this definition.~~]
- (11)** “Domestic Septage” means liquid or solid material removed from a septic tank, cesspool, portable toilet, Type III marine sanitation device, holding tanks, or similar treatment works that receive only domestic wastewater. Domestic septage does not include liquid or solid material removed from a septic tank, cesspool, or similar treatment works that receive either commercial wastewater or industrial wastewater and does not include grease removed from a grease trap at a restaurant.
- (12)** “Domestic ~~{Waste Water}~~ Wastewater” ~~{— See Sewage.}~~ means the water-carried human wastes from residences, buildings, industrial establishments or other places, together with such groundwater infiltration and surface water as may be present that flow to ~~{waste water}~~ wastewater treatment facilities.

(13) “Dried [~~Sludge~~] Solids” means [~~sludge~~] domestic wastewater treatment facility solids or biosolids with a solids concentration of greater than ~~[twenty (20)]~~ fifty (50) percent accomplished by mechanical means or air drying ~~[that will result in a dry solids content in excess of fifty (50) percent].~~

(14) “~~Exceptional Quality Biosolids~~” means domestic wastewater treatment facility solids containing trace pollutant concentrations which are below federal alternative pollutant limits recognized under 40 CFR §503.13 (b)(3) that have been treated by a Class A pathogen reduction process recognized under 40 CFR §503.32(a) and one of the vector attraction reduction procedures established under 40 CFR §503.33(b)(1) through (8). These solids are recognized as soil amendments which are acceptable for distribution and marketing to the public.

(15) “~~Federal Regulations~~” means Part 503 Standards for the Use or Disposal of Sewage Sludge, Subchapter O in Chapter I of Title 40 of the Code of Federal Regulations (§503).

~~[(14) “Heat Drying” means a process of applying heat as a means of removing excess water from sludge as well as destroying pathogens.]~~

~~[(15) “Heat Treated” means a process of subjecting sludge to high pressure and/or temperature such that all organisms are destroyed.]~~

~~[(16) “Incinerator Sludge Ash” means sludge ash from a system where over ninety-eight (98) percent of the water is evaporated and the organic material is reduced to less than five (5) percent by combustion at temperatures in excess of 1300°F.]~~

~~{(17)}~~ **(16)** “Liquid ~~[Sludge]~~ **Biosolids**” means ~~[sludge]~~ **domestic wastewater treatment facility biosolids** with a solids concentration of less than ten (10) percent.

~~{(18)}~~ **(17)** “Non-~~[d]~~**Digested [Sludge] Solids**” means ~~[sludge]~~ **raw domestic primary, secondary, or advanced wastewater treatment facility solids, or solids that ~~[has]~~ have accumulated in a digester which is either not operating efficiently or has not provided adequate time or temperature for digestion to occur; a lagoon where settled solids have not decomposed to the extent that they comply with 40 CFR §503.32 pathogen or 40 CFR §503.33 vector attraction reduction requirements;** or a septic tank process whose function is confinement and/or separation of liquids and solids.

~~{(19)}~~ **(18)** “NPDES Permit” means a waste discharge permit issued in accordance with requirements and procedures of the National Pollutant Discharge Elimination System authorized by the Federal Clean Water Act and of OAR **Chapter** 340, Division 45.

~~{(20)}~~ **(19)** “Person” means the United States and agencies thereof, any state, any individual, public or private corporation, political subdivision, governmental agency, municipality, co-partnership, association, firm, trust, estate or any other legal entity whatever.

(20) **“Site Authorization Letter” means a Department issued document which establishes minimum site management conditions for applying biosolids to a specific land application site.**

~~[(22)]~~ ~~“Septage” means the pumpings from septic tanks, cesspools, holding tanks, chemical toilets and other sewage sludges not derived at sewage treatment plants.]~~

~~[(23)]~~ ~~“Sewage” means the water carried human or animal wastes from residences, buildings, industrial establishments or other places, together with such groundwater infiltration and surface water as may be present that flow to waste water treatment plants.]~~

~~[(24)]~~ ~~“Sewage Sludge” means the accumulated suspended and settleable solids of sewage or waste water, respectively, deposited in tanks or basins mixed with water to form a semi-liquid mass.]~~

~~[(25)]~~ (21) ~~“Sludge” or “Sewage Sludge”-- See [Sewage Sludge] Biosolids.~~

~~[(26)]~~ (22) “Treatment” means the alteration of the quality of domestic [waste waters] wastewater, wastewater derived solids, or septage by physical, chemical or biological means, or a combination thereof, such that the tendency of said [wastes] liquids or solids to cause any degradation in water quality or other environmental conditions is reduced.

~~[(27)]~~ ~~“Waste Treatment”-- See Treatment.]~~

~~[(28)]~~ (23) “WPCF Permit” means a [w]Water [p]Pollution [e]Control [f]Facility permit issued by the Department in accordance with the procedures of OAR Chapter 340, Division 14 or OAR Chapter 340, Division 71 and which is not an NPDES permit.

PERMIT[S] OR LICENSE REQUIRED

340-50-015

- (1) Any person engaged in [sewage] domestic wastewater collection, or treatment [for collection] processes where [sludge] domestic wastewater treatment facility solids, biosolids, biosolids derived products, or domestic septage are [is] produced and subsequently land applied or disposed [of], must have in their possession either a valid NPDES or WPCF permit obtained pursuant to ORS 468B.[740]050; or a [s]Solid [w]Waste [d]Disposal permit obtained for a specific site as provided by ORS 459.205; or a valid sewage disposal service license issued pursuant to ORS 454.695. [Permit issuance or renewal will require evaluation of the sludge management plan which must identify all sites used for sludge application or disposal.]**
- (2) Any person who prepares a biosolids derived product pursuant to 40 CFR §503.7 which includes domestic wastewater treatment facility solids, biosolids, or domestic septage, shall have in their possession a valid NPDES or WPCF permit issued pursuant to ORS 468B.050.**
- (3) Persons who land apply either Bulk Class B biosolids derived from sources outside Oregon or alkaline stabilized domestic septage shall first obtain a valid WPCF permit obtained pursuant to ORS 468B.050.**
- (4) Permit or license issuance or renewal applicants shall submit a biosolids or domestic septage management plan to the Department developed pursuant to OAR 340-50-040. No plan shall be approved by the**

Department unless, at a minimum, the plan demonstrates compliance with all requirements specified under OAR 340-50-020.

- (5) Conditions in Department biosolids and septage management plan approvals and site authorization letters may be appealed to the Commission pursuant to ORS Chapter 183 and OAR Chapter 340, Division 11. Appeals shall be limited to topics pertaining to Department approved biosolids or septage management plan or site authorization letters.
- (6) Any person operating a sewage disposal service business shall comply with all license conditions required under Department approved septage management plans.
- (7) Where biosolids will be land applied during the term of a permit, permit applications submitted to the Department shall include a land application plan developed pursuant to 40 CFR §501.15 and OAR 340-50-040(7).
- (8) Biosolids management and land application plans shall be subject to review and comment during the public participation process required prior to permit issuance or renewal under OAR 340-14-025, OAR 340-45-035, or OAR 340-71-162.
- (9) All conditions contained in Department approved biosolids or septage management plan approval and site authorization letters are considered permit requirements.

(10) Except as otherwise required by this Division, the permitting provisions in 40 CFR Part 122; 40 CFR Part 501; OAR Chapter 340, Division 14; OAR Chapter 340, Division 45; and OAR Chapter 340, Division 71 are applicable.

RESPONSIBILITY

340-50-020

- (1) It is the responsibility of the permittee and/or licensee to ~~fi~~ensure the proper handling ~~[, disposal and application]~~ of all ~~[sludge] domestic wastewater treatment facility solids, biosolids and domestic septage~~ generated or pumped. Transportation of ~~[the sludge] domestic treatment facility wastewater solids, biosolids and septage~~ to ~~domestic wastewater treatment facilities; permitted septage pits, ponds or lagoons [the disposal];~~ or ~~solids land~~ application sites shall be ~~[made] achieved~~ in ~~[such] a manner [as to] which~~ prevents leaking or spilling ~~of the [sludge] solids~~ onto highways, streets, roads, waterways, or other land surfaces not approved for ~~[sludge] solids~~ application ~~or disposal~~.

LIMITATIONS AND RESTRICTED USES

340-50-025

- (1) Written authorization must ~~[first]~~ be obtained from the Department prior to burial, containment or direct soil incorporation of raw and/or non-digested ~~[sludge] wastewater treatment facility solids [or septage]. [Surface application of septage or non-digested sludge will be permitted only on remote sites where there is little likelihood of creating a public nuisance or adverse impact to public waters of the state.]~~
- (2) ~~[Sludge] Biosolids or biosolids derived products~~ shall not be given or sold to the public without their knowledge as to its origin. ~~[Sludge] Biosolids~~

analysis shall be available on request from the wastewater treatment ~~[plant]~~
facility.

(3) ~~[Sludge]~~ Biosolids land application to agricultural or forest land, or a public contact site, shall not exceed the nitrogen loading required (agronomic loading rate) for maximum crop yield.

~~(4)~~ On a case-by-case basis, at reclamation sites, the Department may allow a single application of biosolids which is sufficient to supply enough organic matter to establish a vegetative cover. Application rates at these sites may exceed the short-term agronomic loading rate of the vegetation established.

~~(5)~~ On a case-by-case basis, the Department may impose conditions or limitations for the beneficial use of biosolids or domestic septage which are more stringent than the requirements specifically contained in this Division where it considers additional requirements necessary to protect the public health and environment.

~~[(4) — No sludge or sludge derived product shall be used directly on fruits or vegetables that may be eaten raw.]~~

~~[(5) — Sludge ash applied to farmland shall not exceed the loading rates for heavy metals established for sludge in Table 2.]~~

GENERAL STANDARDS

340-50-026

- (1) Unless the Department determines that the context requires otherwise, all general provisions of 40 CFR §503.1 through §503.9 and land application requirements in 40 CFR §503.10 through §505.18 are applicable for the purpose of this rule.

- (2) To be considered acceptable for land application, biosolids or domestic septage shall meet:

 - (a) Pollutant concentration and cumulative pollutant loading limits required under 40 CFR §503.13. (Note: not required for domestic septage.);
 - (b) One of the pathogen reduction standards established under 40 CFR §503.32;
 - (c) One of the vector attraction reduction standards required under 40 CFR §503.33; and
 - (d) Management practices required under 40 CFR §503.14 and 40 CFR §503.32(b)(5).

- (3) In addition to meeting pollutant concentration and loading limits required under 40 CFR §503.13, biosolids derived products must meet federal Class A pathogen reduction standards pursuant to 40 CFR

§503.32(a) and one of the vector attraction reduction standards required under 40 CFR §503.33(b)(1) through (8).

(4) Biosolids imports must meet the following criteria:

(a) 40 CFR §503.13(b)(1), Table 1 pollutant ceiling concentration limits;

(b) One of the 40 CFR §503.32(b) Class B pathogen reduction standards;

(c) One of the 40 CFR §503.33(b)(1) through (8) vector attraction reduction standards;

(d) Minimum biosolids quality requirements of the County, State, or Regional government where they are produced; and

(e) They must be applied within beneficial use (agronomic) rates.

(5) Prior to land application, domestic septage shall be screened to ensure the removal of hair, plastics, and other course materials. Screenings shall be disposed at a permitted solid waste landfill. Further, septage shall undergo the following additional treatment prior to land application:

(a) Domestic septic tank pumpings: The pH of the domestic septage shall be increased by introducing and actively mixing sufficient alkaline agent to elevate the pH to 12 or higher (without further addition of alkaline agent) for a minimum period of 30 minutes.

(b) Domestic holding tank, chemical toilet, and vault toilet pumpings:

(A) Prior to alkaline stabilization, domestic holding tank, chemical toilet, or vault toilet pumpings shall be mixed with domestic septic tank pumpings at a ratio of at least three gallons septic tank pumpings per gallon holding tank, vault toilet, or chemical toilet pumpings.

(B) The pH of blended domestic septage shall be increased to 12 or more by introducing and actively mixing sufficient alkaline agent to elevate the pH to 12 or more (without further addition of alkaline agent) for a minimum period of 2 hours. At the end of the active mixing process, the domestic septage-alkaline agent mixture shall be allowed to further react for at least 22 additional hours. At the end of the 22-hours reaction process, the pH of the domestic septage-alkaline agent mixture shall be at least 11.5.

(6) When biosolids will be applied above normal agronomic rates for the purpose of land reclamation, the Department may require that an evaluation for potential groundwater quality impacts be conducted in accordance with OAR Chapter 340, Division 40. If the Department determines the application rate proposed could cause an adverse impact on groundwater quality, a groundwater quality protection program shall be required pursuant to OAR 340-40-030.

**BIOSOLIDS AND DOMESTIC SEPTAGE LAND APPLICATION SITE SELECTION
AND APPROVAL**

340-50-030

- (1) Prior approval must be obtained in writing from the Department for the **land** application of ~~sludge~~ **biosolids** or **domestic** septage on beneficial use sites.
- ~~5~~ (2) Prior to the approval of any proposed site that may be sensitive with respect to residential housing, runoff potential or threat to groundwater, the Department ~~may require~~ **shall ensure that an opportunity is provided for public comment and, if required as noted in (a) below, public hearing.**
- (a) **If, during the public comment period, at least 10 people, or an organization representing at least 10 people, indicate concerns about the proposed action, then opportunity shall be provided for public hearing.**
- (b) **The Department shall take final action on site authorization within 30 days of the closure of the public comment period, or 30 days of the closure of the hearing's record.**
- (3) **Land application site authorization letters are considered an integral part of the biosolids or domestic septage management plan. Provisions specified by the Department in site authorization letters, in accordance with a Department approved biosolids or domestic septage management**

plan, shall be considered enforceable conditions under the permitted source's NPDES, WPCF, or Solid Waste Disposal permit.

~~(2) All persons engaged in sludge disposal or application activity shall submit a sludge management plan to the Department for review and approval. Unless notified of an earlier schedule established by the Department, all plans shall be submitted within one (1) year of enactment of these rules.~~

~~(3) The sludge management plan shall be current and kept on file with the permit or license. The plan must include but not be limited to:~~

~~(a) Method(s) of sludge removal;~~

~~(b) Sites identified for land application or disposal;~~

~~(c) Method(s) for determining degree of sludge stability;~~

~~(d) Projected use of sludge storage basins if appropriate; and~~

~~(e) Sludge analyses, application rates and heavy metal limitations.~~

~~(4) New sites for sludge application and the expansion of existing sites must be proposed to the Department in writing and prior to the use of such sites written authorization received. New approved sites shall be made a part of the sludge management plan.~~

~~(6) Plans for sludge impoundment ponds or reservoirs proposed for temporary storage to facilitate the application of sludge must be~~

~~submitted to the Department and written approval received prior to the use of such ponds or reservoirs.~~

~~(7) Requests for approval of sludge disposal sites shall be accompanied by a statement of land use compatibility from the responsible planning jurisdiction.]~~

BIOSOLIDS AND DOMESTIC SEPTAGE MANAGEMENT PLANS

340-50-031

- (1) Any person who intends to land apply biosolids or domestic septage shall submit a solids management plan to the Department for review and approval. Unless otherwise authorized in writing by the Department, solids management plans shall be submitted a minimum of sixty (60) days before biosolids land application commences.**
- (2) Provisions established in Department approved biosolids or domestic septage management plans shall be considered NPDES, WPCF, or Solid Waste Disposal permit conditions.**
- (3) The biosolids or domestic septage management plan shall be kept current and remain on file with the permit or license. Plan modification requires written Department approval.**
- (4) Septage management plans must address the quantities of septages handled annually, types of septage processed, solid storage facilities, and solids land application or disposal facilities.**
- (5) Biosolids and domestic septage management plans must include:**

 - (a) A description of the method(s) of solids removal;**
 - (b) For wastewater and septage treatment facilities, a detailed description of the wastewater processing facility, including unit processes used in wastewater treatment; source design flow (gpd);**

and wastewater flow origin (e.g., percent domestic, industrial, commercial, and domestic septage);

(c) An indication of how primary, secondary, and tertiary solids or septages are removed, thickened, digested, and dewatered;

(d) A description of the quantities of raw and stabilized solids volumes generated annually;

(e) The means used to attain pathogen reduction, and data confirming pathogen reduction has been accomplished;

(f) The method(s) for determining degree of solids stability, and data supporting means of stabilization;

(g) The projected use and volume of solids storage basins (if appropriate) and a description of additional treatment which occurs during storage;

(h) A description of the means used to transport, temporarily store (if applicable), and apply biosolids or domestic septage at Department authorized land spreading sites;

(i) A description of biosolids monitoring and sampling program and biosolids analysis, including but not limited to nitrate-nitrogen, ammonia nitrogen, total Kjeldahl nitrogen (TKN), phosphorus, potassium, total solids, volatile solids, arsenic, cadmium, copper, lead, mercury, molybdenum, nickel, selenium, zinc, and pH. (Note: Septage management plans do not require these analyses.);

- (j) The delineation of land application site selection criteria, crops and crop assimilative capacity (nitrogen), and site management practices, including but not limited to annual and long-term application rates, and testing and sampling;**
- (k) The identification of all Department authorized biosolids or domestic septage land application sites;**
- (l) A description of biosolids or domestic septage land application site monitoring, recordkeeping, and reporting procedures; and**
- (m) A description of remedial procedures that would be implemented in the event of a solids treatment process failure (e.g., digester breakdown or upset), solids spill at the wastewater treatment facility or solids generating source, or biosolids or domestic septage spill between the generating source and land application site.**
- (6) New Department authorized sites shall be made a part of the biosolids or domestic septage management plan.**
- (7) Biosolids Land Application plans shall, at a minimum, list:**

 - (a) All known sites that will receive biosolids during the life of the permit;**
 - (b) The geographic location of new sites which are not specifically listed at the time of application;**

(c) Criteria which will be used in the selection of new sites; and

(d) Management practices which will be implemented where new sites are authorized by the Department.

BIOSOLIDS FACILITIES PLANS AND SPECIFICATIONS

340-50-032

- (1) Plans and specifications for biosolids or domestic septage impoundments, reservoirs, tanks, or other containment structures proposed for storage may be required by the Department as part of an upgrade or as a permit or solids management plan approval condition.**
- (2) Detailed plans and specifications for biosolids or septage composting facilities shall, at a minimum, meet requirements included under OAR 340-96-020.**
- (3) Plans and preliminary engineering reports must be submitted to the Department pursuant to OAR 340-52-015. Written Department approval shall be obtained prior to the construction or use of biosolids or septage storage or composting facilities.**

MONITORING, RECORDKEEPING, AND REPORTING

340-50-035

(1) The permittee shall provide ~~[sludge]~~ **the Department with biosolids** analyses and maintain a log **indicating the quantity, quality, and location** of ~~[sludge]~~ **biosolids** applied to **Department** approved sites. The ~~[agricultural-application]~~ **site application** log shall become **a condition of the site authorization letter** ~~[part of the site authorization]~~ and must be available for Department review during the life of the application site. Site logs shall be maintained as part of the permittee's permanent records.

(2) (a) ~~[Sludge]~~ **Biosolids** analyses shall be performed on a representative sample and shall include, but not be limited to, **all pollutants listed in 40 CFR §503.13(b)(3) Table 1 and the following:**

- (F) Total **Kjeldahl** Nitrogen (~~[N]~~**TKN**) % dry weight;
- (G) Nitrate Nitrogen ($\text{NO}_3\text{-N}$) % dry weight;
- (H) Ammonium~~[a]~~ Nitrogen ($\text{NH}_4\text{-N}$) % dry weight;
- (I) **Total** Phosphorous (P) % dry weight;
- (J) Potassium (K) % dry weight;
- (K) pH standard units;
- (L) Total Solids % **dry weight**;
- (M) Volatile Solids % **dry weight**.

(b) All tests shall be performed using ~~[either]~~ **sampling and analytical methods established under 40 CFR §503.8; the Environmental Protection Agency's (EPA) POTW Sludge Sampling and Analysis Guidance (1989) document; EPA's Control of Pathogens and Vector**

Attraction in Sewage Sludge (EPA/625/R-52/013) guidance (1992), and EPA's POTW Sludge Sampling Procedures and Protocols for the National Sewage Sludge Survey (1989) document. [standard methods¹ or EPA Laboratory methods²][.]; [Except as otherwise permitted by the Department, minimum frequency of sludge analyses shall be:

<u>Plant Size</u>	<u>Frequency</u>
(A) Is greater than 10 MGD	Quarterly
(B) 2-10 MGD	Semi-Annually
(C) 0.5-2 MGD	Annually
(D) Is less than 0.5 MGD	As required

~~—1—Standard Methods for the Examination of Water and Wastewater. Published by: American Public Health Association American Water Works Association Water Pollution Control Federation~~

~~—2—EPA-EP toxicity test procedure as described in Federal Register, Vol.45, No. 98.33127, May 19, 1980]~~

~~Publications: The publication(s) referred to or incorporated by reference in this rule are available from the office of the Department of Environmental Quality, Portland]~~

(c) Sampling locations and frequency shall be representative of the quality and quantity of biosolids generated, but in no case, unless

otherwise authorized in writing by the Department, less frequent than required under 40 CFR §503.16, Table 1.

- (3) Recordkeeping requirements shall conform to 40 CFR §503.17.
- (4) Domestic Wastewater Treatment Facilities that produce biosolids with one or more trace pollutants whose annual average pollutant concentration exceeds 40 CFR §503.13(b)(3) limits (based on a 95 percent confidence interval), shall track cumulative pollutant loading pursuant to 40 CFR §503.13(b)(2), Table 2 and maintain records adequate to demonstrate that pollutant additions do not exceed Table 2 limits.
- (5) Unless otherwise required by the Department, the quality and quantity of biosolids and land application actions shall be reported to the Department at least once annually. The Department may require more frequent reporting on biosolids production, treatment, characteristics, and land application activities. Monthly reporting is not required where exceptional quality biosolids are land applied.
- (6) Annually, by February 19, each domestic NPDES, WPCF, and Solid Waste permitted source that has generated and land applied bulk biosolids or domestic septage, or prepared biosolids or biosolids derived products for distribution and marketing during the prior year, shall provide the Department with a comprehensive report that describes solids handling activities for the previous year. At a minimum, the report shall include, but is not limited to:
- (a) Data, on each site that received solids, which is adequate to characterize solids quality and to demonstrate that solids were

applied within agronomic loading rates and other required site management practices.

(b) Sources generating and applying biosolids that are required to track cumulative pollutant additions pursuant to 40 CFR §503.13(b)(2), Table 2, shall also be required to submit information on annual and cumulative pollutant additions;

(c) Information sufficient to demonstrate that solids met pathogen reduction requirements required under 40 CFR §503.32 and vector attraction reduction standards required under 40 CFR §503.33;

(d) Information describing any substantive modifications to solids handling or land application site management practices;

(e) A detailed description of any violation of 40 CFR §503 or OAR Chapter 340, Division 50 and remedial actions taken to prevent the recurrence of similar violations in the future.

(7) Annually, as a requirement of license renewal, sewage disposal service businesses shall submit information adequate to characterize solids handling activities which occurred during the previous licensing period. Information must include data describing the quantities and varieties of septages handled and locations where solids are used and disposed.

**[GUIDELINES] BEST MANAGEMENT PRACTICES FOR SITE SELECTION AND
THE USE[,] [SITE-SELECTION] AND APPLICATION [OR-DISPOSAL] OF
[SLUDGE] BULK BIOSOLIDS AND DOMESTIC SEPTAGE**

PURPOSE

340-50-060

The following ~~[guidelines are]~~ **best management practices are** meant to provide assistance in the development of environmentally acceptable ~~[sludge]~~ **biosolids** and **domestic** septage use ~~[and/or disposal]~~ programs. They convey many of the criteria considered by the Department to be important in the use, site selection, and application ~~[or disposal]~~ of ~~[sewage]~~ **domestic wastewater** treatment **facility [plant]** ~~[sludge]~~ **biosolids**, ~~[sludge]~~ **biosolids** derived products, and **domestic** septage.

USE LIMITATIONS

340-50-065

- (1) **The quantity of bulk biosolids or domestic septage applied to any Department authorized land spreading sites shall not exceed the agronomic rate for the particular cultivar grown. Best management practices are recommended where exceptional quality biosolids are land applied.**

- (2) **Where [sludge is] bulk biosolids and domestic septage are applied for agricultural use, [N]nitrogen requirements for particular crops can be**

obtained from the Oregon ~~{Cooperative}~~ State University Extension Service. ~~{Surface applications may be doubled on some perennial crops where bulk biosolids are applied since NH₃ volatilization may account for up to a fifty (50) percent loss of available N.}~~

~~(3)~~ Biosolids and domestic septage shall be applied at rates and methods which prevent the occurrence of runoff, erosion, leaching, and nuisance conditions, or the likelihood of groundwater contamination.

~~{(1)}~~ (4) Controlled access to ~~{municipal sludge}~~ bulk Class B domestic biosolids and domestic septage land application sites is required for a minimum of twelve (12) months ~~{for 12 months}~~ following ~~{a}~~ surface application ~~{is required}~~ of solids. Access control is assumed on rural private land.

~~{(3)}~~ (5) As a general rule, crops grown for direct human consumption (fresh market fruits and vegetables) should not be planted ~~{until 18}~~ for at least fourteen (14) months after bulk Class B biosolids or domestic septage ~~{municipal sludge}~~ application. If the edible parts will not be in contact with the ~~{sludge}~~ Class B biosolids or domestic septage amended soil, or if the crop is to be treated or processed prior to marketing such that pathogen contamination is not a concern, this requirement may be waived for root crops pursuant to §503.32(b)(5). No time restrictions are required where Class A biosolids derived products are land applied to sites used for the cultivation of fresh market fruits or vegetables.

~~{(4)}~~ (6) Grazing animals should not be allowed on pasture to forage nor should livestock feed crops be harvested where ~~{digested sludge has}~~ bulk Class B biosolids or domestic septage have been applied ~~{until}~~ for a minimum of thirty (30) days after application. ~~{Grazing restrictions may be~~

~~extended to six (6) months where non-digested sludges are applied. Grazing restrictions may be reduced to seven (7) days after application of air-dried sludge.]~~

~~[(5)] (7) Exceptional Quality biosolids and biosolids derived products [Compost derived from sludge, heat dried sludge, and sludge from other processes equivalent in Pathogen reduction] may be used on indoor and outdoor ornamental plants, shrubs, trees, home gardens and lawns, and high public contact areas [and grass] without restricting public access.~~

~~[(6) Suggested criteria for complete digestion are as follows:~~

~~(a) Anaerobic digestion: The process is conducted in the absence of air at residence times ranging from 60 days at 20°C to 15 days at 35°C to 55°C, with a volatile solids reduction of 30 to 40 percent, or volatile solids content of 60 percent or less.~~

~~(b) Aerobic digestion: The process is conducted by agitating sludge with air or oxygen to maintain aerobic conditions at residence times ranging from 60 days at 15°C to 40 days at 20°C with a volatile solids reduction of 30 to 40 percent, or volatile solids content at 60 percent or less.]~~

CRITERIA FOR SITE SELECTION AND APPROVAL

340-50-070

(1) Normally, tillable agricultural land is suitable for the land application of biosolids and domestic septage.

(2) To be considered for biosolids or domestic septage land application, sites should meet all the following conditions:

{(1)} (a) Sites should be on a stable geologic formation not subject to flooding or excessive runoff from adjacent land. If periodic flooding cannot be avoided, the period of application should be restricted and soil incorporation is recommended.

{(2)} (b) At the time **when liquid biosolids or domestic septage are applied,** **{of application}** the minimum depth to permanent groundwater should be four (4) feet and the minimum depth to temporary groundwater should be one (1) foot. Sites approved for year-round application should be evaluated carefully to **{}**ensure that groundwater separation distances conform with these requirements.

{(3)} (c) Topography of the site should be suitable to allow normal agricultural operations. Where needed, runoff and erosion control measures should be constructed. In general, liquid **biosolids or domestic septage** **{sludge}** should not be surface applied on bare soils where the ground slope exceeds twelve (12) percent. **Well vegetated** **{S}**sites with slopes up to **{twenty (20)}** **thirty (30)** percent may be used for dewatered or dried **{sludge} biosolids,** **{for direct incorporation of**

~~liquid sludge into the soil,]~~ or for liquid ~~[sludge]~~ **biosolids or domestic septage** application with appropriate management to ~~[eliminate]~~ **prevent** runoff. ~~[In Western Oregon where soil incorporation on sloping ground is not feasible, sludge applications should be restricted to the dry seasons.]~~

~~[(4)]~~ **(d)** Soil should have a minimum rooting depth of twenty-four (24) inches. The underlying substratum **to at least twenty-four (24) inches** should not be rapidly draining so that leachate will not be short circuited ~~[into]~~ **to** groundwater.

~~[(5)]~~ **(e)** ~~[Where heavy metal "accumulator" crops are grown, the soil should have a pH of 6.5 to 8.2. If the pH is below 6.5 at sites where sludge is applied above agronomic rates on an annual basis, or where sludges contain unusually high concentrations of heavy metals, the soil should be limed to raise and maintain the pH 6.5 or above.]~~ **Sites with s[S]aline and/or [alkali] sodic soils should be avoided.**

~~[(6)]~~ **(3)** Discretion should be used in approving application of ~~[sludge]~~ **biosolids or domestic septage** on land that is in close proximity to residential areas.

(a) A buffer strip large enough to prevent nuisance odors or wind drift ~~[problems]~~ is needed. Size of the buffer strip will **be determined by the Department on a case-by-case basis and** depend upon the method of application used, **total solids content**, and proximity to sensitive areas, for example:

~~[(a)]~~ **(A)** Direct injection: no limit required;

~~[(b)]~~ **(B)** Truck spreading **(liquid)**: 0 to ~~[50]~~ **200** feet;

~~[(e)]~~ **(C)** Spray irrigation: ~~[300]~~ **50** to 500 feet;

(D) Cake or dried solids: 0 to 50 feet.

~~[(7)]~~ **(b)** Buffer strips should be provided along well traveled highways. The size of the buffer strip will vary with local conditions and should be left to the discretion of the Department field representative.

(c) No ~~[sludge]~~ **bulk Class B biosolids or domestic septage** should be spread at the site closer than fifty (50) feet to any ditch, channel, pond or waterway or within two hundred (200) feet of a domestic water source or well.

MONITORING AND REPORTING

340-50-075

~~(1) — Where sludge is applied at or below agronomic rates (based on crop N requirements), no monitoring other than the sludge analyses and cumulative application of sludge to a site will be required. If sludge contains high concentrations of heavy metals (Table 1) or other toxic elements, or if crop N requirements are exceeded on an annual basis, additional monitoring and special management practices may be required.~~

- ~~(2) Sludge or septage may be applied to approved disposal sites above agronomic rates so long as runoff, nuisance conditions or groundwater contamination do not occur.~~
- ~~(3) Test wells may be required on any site on a case-by-case basis at the discretion of the Department.~~
- ~~(4) The quantity and type of sludge from the municipal sewage treatment plant used either for disposal or beneficial use purposes shall be reported on the monthly operational report form and returned to the DEQ. In service areas where industrial processes are likely to create heavy metal concentrations higher than those found in domestic sludge, pretreatment is required to reduce the concentration of heavy metals and extend the useful life of the application site.]~~

APPLICATION OF ~~[MUNICIPAL SLUDGE]~~ BIOSOLIDS AND DOMESTIC SEPTAGE

340-50-080

- ~~{(2)}~~ (1) ~~[Sludge]~~ Biosolids analyses offer a guide to determine the annual application rate [rate of application] for a particular crop[-]; ascertain whether cumulative pollutant tracking is required; and establish that solids are sufficiently stable to comply with pathogen and vector attraction reduction standards required under 40 CFR §503.32 and 40 CFR §503.33, respectively.
- ~~{(1)}~~ (2) The application of ~~[sludge]~~ biosolids or domestic septage on agricultural land should be managed to utilize the fertilizer and organic matter value

to the maximum extent possible. The recommended rate of ~~[sludge]~~ **biosolids or domestic septage** application is **normally** based on the nitrogen requirement of the crop grown and will vary depending on the nitrogen content of the ~~[sludge]~~ **solids**. ~~[Calculations to determine the amount of heavy metals being applied to land in sludge are also necessary to insure long term conformance with loading limits (Table 2).]~~

~~(2)~~ (3) Crop nitrogen requirements are used routinely to determine application rates for commercial fertilizer and these figures are readily available from state or county Extension Service offices. Applying ~~[sludge]~~ **biosolids and domestic septage** within these limits **helps [i]ensure[s]** that ~~[sludge]~~ **solids** nitrogen will be utilized for plant growth and that excess nitrogen which could leach into groundwater will not be of concern.

(4) Exceeding crop nitrogen requirements may occasionally be justified **on a temporary basis** in order to achieve rapid soil improvement or to prolong beneficial effects. **Biosolids applications exceeding normal crop nitrogen requirements may be approved on a case-by-case basis for reclamation or soil improvement, if justification for a single high rate application is provided to the Department.**

(a) **Where a site has previously been amended with biosolids at soil improvement or reclamation rates, documentation of background soil nitrate-nitrogen (NO₃-N) shall be submitted for Department approval prior to the application of additional biosolids;**

(b) **Soil samples shall be collected and tested according to protocols published by Oregon State University and the American Society of Agronomy.**

(5) Sites proposed for routine annual application at agronomic rates must periodically be assessed to determine the impact of nitrogen from biosolids and other sources.

(a) The criteria for requiring evaluation or performance monitoring [e.g., soil testing for carry-over nitrate-nitrogen (NO₃-N)] will be biosolids applications exceeding two (2) out of three (3) successive years at agronomic rates;

(b) Soil samples shall be collected and tested according to protocols published by Oregon State University and the American Society of Agronomy.

~~**(3) Municipal sludge contains trace amounts of potentially toxic substances including: zinc (Zn), copper (Cu), nickel (Ni), and cadmium (Cd). Many agricultural chemicals including commercial fertilizers and pesticides are also potentially toxic; however, with safe and appropriate management, these products are used with proven success and cause little if any environmental degradation.**~~

~~**(4) Zn, Cu, and Ni can be toxic to plants when present in soils in excessive amounts. These metals, however, constitute little hazard to the food chain through plant accumulation. The total amount of these metals which may be applied to soil can be limited to prevent toxicity problems (Table 2). The concentration of metals in Oregon sludges is generally low so sludge may be applied annually to a given site for many years before loading limits would be reached. Where background soil pH is less than 6.5, cumulative Cd application should not exceed 5 kg/ha (4.5**~~

~~lb/acre). Cumulative loading rates of other metals should be considered where concentrations exceed those listed in Table 1.~~

- ~~(5) Soil pH has been shown to affect Cd uptake for leafy green vegetables and some root crops. Lime should be applied to raise soil pH to a 6.5 or greater where these metal "accumulator" crops are grown to minimize Cd uptake. Soil pH adjustment may be warranted on other fruit or vegetable crops grown for processing to satisfy liability concerns.~~
- ~~(6) For most crops grown in Oregon (grasses, forage crops, grains, and fruits) field studies indicate there is no correlation between soil pH and Cd uptake.~~
- ~~(7) Sewage sludge and septic tank pumpings contain microorganisms which may be pathogenic to man. Treatment plant digestion processes and septic tank residence times greatly reduce the number of disease causing organisms which will be found in the final product. Those which survive the treatment process die off rapidly when subjected to sunlight, soil incorporation, and competition with other microorganisms.~~
- ~~(8) Crops grown for direct consumption (fresh market) have the potential of contamination by low numbers of intestinal worm eggs and pathogenic organisms. Root crops and leafy vegetables which are grown in direct contact with sludge amended soil require an 18 month waiting period between sludge application and planting to insure sanitation. When concern exists regarding possible indirect contamination of fresh marketed crops such as green beans, pole crops, sweet corn, fruit and nuts, the same waiting period restriction applies. Management practices~~

~~such as soil incorporation or injection in advance of planting or fruit set may reduce the hazard of contamination. There is no restriction on planting time for crops not grown for direct human consumption. There is also no restriction on the use of compost for food chain crops which are not grown for direct human consumption and when the portion of the plant to be eaten does not come in direct contact with the compost if the metal content of the compost is below the concentration shown in Table 1.~~

~~(9) Application of digested sludge is of some concern with pasture and forage crops. "Animals whose products are consumed by humans" should be prevented from grazing for at least one month following sludge application. This is particularly true for dairies, where animal contact or direct ingestion of sludge could result in milk contamination. Where non-digested sludges are applied to pasture, restrictions on grazing should be extended to 6 months.]~~

**Table 1
(340-50-075)**

Acceptable levels of Metal Content of Sludge for General Application to Agricultural Land	
Element	Concentration (mg/kg)
Zn	2000
Pb	1000
Cu	800
Ni	100
Cd	25

**Table 2
(340-50-080)**

**Maximum Heavy Metal Loading Recommended for Sludge
Applications to Privately Owned Farmland**

Maximum Metal Addition (kg/ha) with a Soil Cation Exchange Capacity (meq/100g)			
Metal	Less than 5	5—15	Greater than 15
Pb	—500	1,000	—2,000
Zn	—250	—500	—1,000
Cu	—125	—250	—500
Ni	—50	—100	—200
Cd	—5	—10	—20
<p>1. The maximum application of Cadmium (Cd) for soils with pH values of 6.5 or less is 4.5 lbs/acre regardless of the CEC.</p> <p>2. Kg/ha is roughly equivalent to lbs/acre.</p>			

Oregon Department of Environmental Quality

A CHANCE TO COMMENT ON . . .

Domestic Wastewater Treatment Facility Sludge (Biosolids),
Biosolids Derived Products, and Domestic Septage
Rule Revisions

Date Issued:	1/30/95
Public Hearings:	3/3/95 (Pendleton) 3/3/95 (Roseburg) 3/6/95 (Portland)
Comments Due:	3/10/95

**WHO IS
AFFECTED:**

Owners and operators of publicly and privately owned domestic wastewater treatment facilities that generate wastewater solids or septage; persons who prepare biosolids (sludge) derived products for marketing and distribution; domestic septage pumpers; persons who chemically treat and land apply domestic septage; persons who land apply biosolids in Oregon.

**WHAT IS
PROPOSED:**

Proposed rules encourage the beneficial recycling of treated domestic wastewater biosolids, biosolids derived products, and domestic septage through land application programs managed in a manner which protects the public health and maintains or improves environmental quality.

Rule modifications will update biosolids and domestic septage rules to make them consistent with new and recently amended federal technical (40 CFR Part 503) and administrative (40 CFR Parts 122, 123 and 501) regulations. In addition, several house keeping changes are proposed which are designed to make the rules more comprehensive, clear and enforceable.

Concurrent with rule making, the Environmental Quality Commission will be asked to authorize the Department to seek delegation for the land application portion of the federal biosolids program.



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

11/1/86

FOR FURTHER INFORMATION: - 1 -

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

WHAT ARE THE HIGHLIGHTS:

The Proposed rules and best management practices would:

1. Incorporate federal standards on biosolids and domestic septage land application, pollutant concentration limits, site management practices, site and crop restrictions, and pathogen reduction and vector attraction reduction criteria.
2. Establish formal policy encouraging the beneficial recycling of treated biosolids and domestic septage.
3. Establish conditions for permitting the land application of biosolids imports.
4. Establish minimum provisions for domestic septage land application.
5. Establish provisions which allow a single application of biosolids at reclamation rates.
6. Require persons who land apply or prepare biosolids or domestic septage to operate under a NPDES, WPCF, or Solid Waste Disposal permit.
7. Acknowledge Department issued biosolids and domestic septage management plan and site authorization letter approval provisions as enforceable permit conditions.
8. Establish criteria for biosolids and domestic septage management plans.
9. Revise minimum biosolids and domestic septage monitoring, recordkeeping and reporting standards to reflect federal requirements.
10. Establish best management practices for the land application of biosolids and domestic septage.

**HOW TO
COMMENT:**

Public Hearings to provide information and receive public comment are scheduled as follows:

Pendleton Convention Center
1601 Westgate, Room 2
Pendleton, OR 97801
March 3, 1995
10:00 a.m.

Oregon Department of Environmental Quality
DEQ Conference Room
725 S.E. Main
Roseburg, OR 97470
March 3, 1995

Oregon Department of Environmental Quality
Conference Room 3A
811 SW 6th Avenue
Portland, OR 97204
March 6, 1995
10:00 a.m.

Written comments must be received by 5:00 p.m. on March 10, 1995 at the following address:

Department of Environmental Quality
Water Quality Division
Wastewater Control Section
811 S. W. 6th Avenue
Portland, Oregon, 97204
Attention: Mark Ronayne

A copy of the Proposed Rule may be reviewed at the above address. A copy may be obtained from the Department by calling the Water Quality Division at 229-5279 or calling Oregon toll free 1-800-452-4011. People wishing to attend the hearing(s) who need accommodation for physical disabilities may contact DEQ Public Affairs at (503) 229-5766 or toll free in Oregon 1-800-452-4011. People with hearing impairments may contact DEQ's TTY at (503) 229-6993.

**WHAT IS THE
NEXT STEP:**

The Department will evaluate comments received and will make a recommendation to the Environmental Quality Commission. Interested parties can request to be notified of the date the Commission will consider the matter by writing to the Department at the above address.

**ACCESSIBILITY
INFORMATION:**

This publication is available in alternate format (e.g. large print, braille) by contacting Ed Sale in DEQ Public Affairs at (503) 229-5766 or toll free in Oregon 1-800-452-4011. People with hearing impairments may call DEQ's TTY at (503) 229-6993.

MW\WC13\WC13168.5

State of Oregon
Department of Environmental Quality

Memorandum[†]

Date: January 31, 1995

To: Interested and Affected Public

Subject: Rulemaking Proposal - Domestic Wastewater Treatment Facility Sludge (Biosolids), Biosolids Derived Products, and Domestic Septage Rule Revisions

This memorandum contains information on a proposal by the Department of Environmental Quality (DEQ) to amend domestic wastewater sludge (biosolids) land application rules and guidelines.

In addition, when the Environmental Quality Commission (EQC) is requested to adopt proposed rule revisions, the Department will ask them for permission to pursue primacy for the administration of the federal biosolids land application program.

What's in this Package?

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

- Attachment A Summary of proposed rule revisions (a copy of the actual proposed rule revision can be obtained by calling Mark P. Ronayne at 503-229-6442).
- Attachment B The "Legal Notice" of the Rulemaking Hearing. (required by ORS 183.335)
- Attachment C The official Rulemaking Statements for the proposed rulemaking action. (required by ORS 183.335)
- Attachment D The official statement describing the fiscal and economic impact of the proposed rule. (required by ORS 183.335)

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

Memo To: Interested and Affected Public
January 31, 1995
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- Attachment E A statement providing assurance that the proposed rules are consistent with statewide land use goals and compatible with local land use plans.
- Attachment F Questions to be Answered to Reveal Potential Justification for Differing from Federal Requirements.

Hearing Process Details

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

Pendleton Convention Center
1601 Westgate, Room 2
Pendleton, OR 97801
March 3, 1995
10:00 a.m.

Oregon Department of Environmental Quality
DEQ Conference Room
725 S.E. Main
Roseburg, OR 97470
March 3, 1995

Oregon Department of Environmental Quality
Conference Room 3A
811 SW 6th Avenue
Portland, OR 97204
March 6, 1995
10:00 a.m.

Deadline for submittal of Written Comments:

Written comments must be received by 5:00 p.m. on March 10, 1995 at the following address:

Department of Environmental Quality
Water Quality Division
Wastewater Control Section
811 S. W. 6th Avenue
Portland, Oregon, 97204

Memo To: Interested and Affected Public
January 31, 1995
Page 3

Attention: Mark Ronayne

Ed Liggett will be the preside over the Pendleton hearing; Ron Baker will be the Presiding Officer at the Roseburg hearing and Tom Lucas will preside over the Portland hearing. Following close of the public comment period, each Presiding Officer will prepare a report which summarizes the oral testimony presented and written comments submitted. The EQC will receive a copy of each Presiding Officer's report and all written comments submitted. Although public hearings will be tape recorded, tapes will not be transcribed.

If you wish to be kept advised of this proceeding and receive a copy of the recommendation that is presented to the EQC for adoption, you should request that your name be placed on the mailing list for this rulemaking proposal.

What Happens After the Public Comment Period Closes

The Department will review and evaluate comments received, and prepare responses. Final recommendations will then be prepared, and scheduled for consideration by the EQC.

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 May 19, 1995. 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, submit written comment during the comment period, or ask to be notified of the recommended final action on this rulemaking proposal.

The EQC expects testimony and comment on proposed rules to be presented during the hearing process so that full consideration by the Department may occur before a final recommendation is made. The EQC may elect to receive comment during the meeting where the rule is considered for adoption; however, such comment will be limited to the effect of changes made by the Department after the public comment period in response to testimony received. The EQC strongly encourages people with concerns on either the proposed rule or the Department's recommendation that delegation for the administration of the biosolids land application program be sought by DEQ be pursued from EPA Region X to communicate those concerns to the Department at the earliest possible date so that an effort may be made to understand the issues and develop options for resolution where possible.

Background on Development of the Rulemaking Proposal

What is the problem

The current biosolids rule has not been updated since its inception (8/10/84). Modifications are necessary to update rules and guidelines to make them consistent with new and recodified federal technical (40 CFR Part 503) and administrative (40 CFR Parts 122, 123 and 501) regulations. In addition, several housekeeping changes are needed to make the rule more comprehensive, clear and enforceable.

Since the promulgation of 40 CFR Part 503, permitted domestic wastewater sources that produce biosolids in Oregon have been regulated by two agencies, DEQ and EPA Region X. The Department's Domestic Biosolids Technical Advisory Committee (TAC) and the Oregon Association of Clean Water Agencies (ACWA) Biosolids Subcommittee have requested that biosolids land application and distribution and marketing activities in Oregon be regulated by DEQ only to (1) eliminate conflicts between the federal and State regulatory programs; (2) avoid duplication of regulatory resources; and (3) eliminate redundancy in permitted source monitoring, recordkeeping, and reporting requirements. Further, they view DEQ's means of regulating biosolids more progressive and considerably more responsive than EPA Region X's.

How does this proposed rule help solve the problem

The proposed rule would eliminate inconsistencies that exist between current federal technical regulations and State biosolids rules and guidelines by incorporating directly, or by reference all applicable features of the federal technical regulation into Oregon rule. In addition, appropriate housekeeping changes would be made to make the rule more readable and enforceable.

How was the rule developed

Between March 4, 1993, and June 28, 1994, the Department's TAC met on 16 occasions to consider various aspects of Oregon biosolids management policy and draft rule revisions. On November 17, 1994, the Committee (1) agreed on draft rule language and (2) reiterated their desire that the Department obtain permission to pursue partial biosolids program delegation from EPA Region X at the time the Commission was asked to adopt the revised rule and best management practices.

Federal biosolids regulations were revised in 1993. They embody recent information on secondary wastewater treatment facility biosolids characteristics obtained from a comprehensive national biosolids survey completed in 1989, consider scientific research and multi-media models which account for environmental and public health risks and benefits associated with biosolids land application, and establish scientifically based pollutant and pathogen limits. Proposed Division 50 amendments incorporate all principal federal technical standards included in 40 CFR Part 503.

How does it affect the public, regulated community, other agencies

The revised rule and best management practices establish technical and operational standards which require land spread biosolids to be high quality (trace pollutants and pathogens), sufficiently stabilized, and applied to suitable, properly managed sites.

Approximately 99 percent (50,000 dry tons) of the domestic wastewater treatment works biosolids generated from permitted Oregon sources (480) are beneficially recycled to land annually. Proposed rule revisions would continue to promote this practice.

Land application at agronomic rates is favored by sources over more costly and less environmentally desirable alternatives such as landfilling, dedicated land disposal, surface disposal and incineration. Biosolids provide plant micronutrients as well as other plant essential nutrients, such as calcium, magnesium, zinc, iron, manganese, boron and copper, not normally found in commercial fertilizers. Although not considered a high grade fertilizer, biosolids typically provide Oregon farmers with \$50 to \$60 per dry ton worth of organic nitrogen and phosphorus. Due to their organic matter content, the demand for biosolids on semi-arid eastern Oregon farmlands has increased markedly in recent years where past tillage practices have reduced soil organic matter content, severely limiting the soil's ability to sustain crops, and, in some instances, prompting severe erosion. Biosolids land spreading in these areas has successfully rejuvenated marginal sites by sharply increasing crop yields, crop residue and topsoil organic matter.

How does the rule relate to federal requirements or adjacent state requirements

Proposed rule modifications would implement changes in the management of domestic wastewater treatment facility biosolids and domestic septage prompted by the amendment of federal administrative (40 CFR Part 122, 123 and 501) technical (40 CFR Part 503) regulations, along with other revisions identified by the Department to promote improved biosolids program operation. The proposed rule

amendments would revise and expand definitions to recognize federal biosolids regulations; incorporate minimum federal standards required for biosolids land application; and alter permitted source biosolids monitoring, recordkeeping and reporting requirements to make them consistent with 40 CFR Part 503. Best management practices would continue to include siting criteria. Site selection criteria are absent from federal technical regulations. Attachment F contains additional discussion on the relationship between federal and State requirements.

Proposed rules are consistent with federal technical regulations. Rule and best management practices are not more stringent than adjacent states like Washington and California. Biosolids are regulated in California via ordinance at the County level. County ordinances tend to be more restrictive, subject to political influence, and less scientifically based than Oregon standards. Local health districts in Washington and Idaho regulate certain aspects of biosolids management. Biosolids rules in Washington are currently being revised by the Department of Ecology to reflect federal technical standards. They may include a few provisions which are more stringent than proposed Oregon rule modifications (e.g., subjectively based biosolids compost cadmium pollutant concentration limits). At the State level, Idaho remains undecided on whether it will adopt rules affecting the land application of biosolids.

How will the rule be implemented

The rule will continue to be implemented through the issuance of NPDES, WPCF and Solid Waste disposal permits to domestic wastewater treatment and disposal facilities that generate, treat, prepare, or land apply biosolids and domestic septage in Oregon and licensed sewage disposal service businesses who remove domestic septage from wastewater generating sources. In addition, the rule will be expanded to require sources who export biosolids to Oregon to obtain a land application permit. Permittees who land apply or dispose solids in Oregon will continue to be required to operate under a DEQ approved biosolids or domestic septage management plan. Permittees who land apply biosolids or treated domestic septage will continue to be required to receive advance written site authorization approval from the Department. Provisions in domestic wastewater solids management plan and site authorization letters will be considered enforceable permit or license requirements.

The rule and best management practices would become effective following adoption by the EQC immediately upon filing with the Secretary of State.

Memo To: Interested and Affected Public
January 31, 1995
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Are there time constraints

No state or federal deadlines constrain the schedule of this rulemaking action.

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:

Mark P. Ronayne (503-229-6442)
Department of Environmental Quality
Water Quality Division
Wastewater Control Section
811 S. W. 6th Avenue
Portland, Oregon, 97204

MW\WC13\WC13166.5

Attachment A Summary of Proposed Biosolids Rule Revisions

On February 19, 1993, pursuant to an amendment of Section 405(d) of the Clean Water Act, the Environmental Protection Agency (EPA) promulgated technical biosolids regulations (40 CFR Part 503) designed to protect the public health and the environment from any reasonably anticipated adverse effects of certain chemical and biological pollutants that may be present in biosolids and domestic septage. The regulations established scientifically based standards and management requirements for biosolids and septage land application. They embraced numerical limits on biosolids pollutant concentrations; technology based criteria for solids treatment; operational requirements; land application site management standards; monitoring, recordkeeping and recording standards; and compliance deadlines. Although the Part 503 Regulation is self implementing, federal administrative rules require that biosolids regulation occur through permits issued to sources that produce, land apply, or prepare solids for distribution in marketing.

The existing Oregon biosolids rule is being revised to: (1) reflect Part 503 regulatory standards related to trace pollutants, pathogens, solids stability, management practices, site management restrictions, monitoring, recordkeeping and reporting; and (2) make a number of house keeping changes which are necessary to (a) clearly establish the Department's preference towards beneficial recycling of treated solids via land application; (b) update definitions to recognize appropriate federal definitions and better address biosolids regulation in Oregon; (c) more explicitly articulate the relationship between solids management plans, site authorization letters and source permits; (d) establish minimum permitting requirements and provisions for the physical and chemical treatment and the land application of domestic septage; (e) create permitting requirements and minimum standards for Class B bulk biosolids imports; (f) enable, on a case-by-case basis, the Department to authorize biosolids to be applied in a single application which provides sufficient organic matter to establish and sustain a viable vegetative cover on drastically disturbed land; (g) define the content of biosolids and domestic septage management plans; (h) establish provisions for the Department's review and approval of detailed plans and specifications for biosolids storage and composting facilities; (i) replace existing State guidelines related to minimum site selection criteria and management requirements with best management practices; (j) modify site management and access restrictions to correspond with 40 CFR Part 503 standards; (k) eliminate the current requirement to track cumulative trace pollutant additions where biosolids meet Part 503 "clean solids concentration limits"; (l) abolish the need to limit biosolids site loading on the basis of solids cadmium concentration; (m) more clearly define the meaning of the term "agronomic loading rate"; and (n) require baseline soil monitoring for nitrate-nitrogen at sites where biosolids have been applied for two successive years prior to applying solids to the same site during a third consecutive year or anytime before an additional application of biosolids could be land applied to a site that had previously received solids at a soil improvement rate.

NOTICE OF PROPOSED RULEMAKING HEARING

(Rulemaking Statements and Statement of Fiscal Impact must accompany this form.)

Department of Environmental Quality

Water Quality Division

OAR Chapter 340

DATE:	TIME:	LOCATION:
March 3, 1995	10:00 a.m.	Pendleton Convention Center 1601 Westgate, Room 2 Pendleton, OR 97801
March 6, 1995	10:00 a.m.	Oregon Department of Environmental Quality Conference Room 3A 811 SW 6th Avenue Portland, OR 97204
March 3, 1994	10:00 a.m.	Oregon Department of Environmental Quality DEQ Conference Room 725 S.E. Main Roseburg, OR 97470

HEARINGS OFFICER(s): Ed Liggett (Pendleton); Tom Lucas (Portland); & Ron Baker (Roseburg)

STATUTORY AUTHORITY: ORS 468B.095; ORS 468B.050; ORS 454.695; ORS 459.205; & ORS 468.020

ADOPT: OAR 340-50

AMEND: OAR 340-50

REPEAL:

- 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:

Proposed rule modifications would implement changes in the management of domestic wastewater treatment facility biosolids and domestic septage prompted by the amendment of federal administrative (40 CFR Part 122, 123 and 501) technical (40 CFR Part 503) regulations, along with other revisions identified by the Department to promote improved biosolids program operation. The proposed rule amendments would promote the beneficial recycling of biosolids and domestic septage; revise and expand definitions to recognize federal biosolids regulations; establish minimum general standards required for biosolids land application; on a case-by-case basis, enable the Department to establish special conditions or limitations not specifically addressed elsewhere in rules to protect the public health or environment; establish minimum permitting requirements for out-of-state biosolids

conditions or limitations not specifically addressed elsewhere in rules to protect the public health or environment; establish minimum permitting requirements for out-of-state biosolids imports and domestic septage treatment/land application operations; make conditions in biosolids and septage management plan and site authorization approval letters enforceable permit provisions; provide means for the appeal of plan approval and site authorization letter provisions; establish minimum biosolids and domestic septage management plan criteria; establish minimum requirements for biosolids/domestic septage storage and composting facilities plans and specifications; alter permitted source biosolids monitoring, record keeping and reporting requirements to make them consistent with 40 CFR Part 503; and revise and replace existing biosolids/domestic septage site selection and land application guidelines with updated best management practices.

LAST DATE FOR COMMENT: March 10, 1995

DATE PROPOSED TO BE EFFECTIVE: Upon adoption by the Environmental Quality Commission and subsequent filing with the Secretary of State.

AGENCY RULES COORDINATOR:

Chris Rich, (503) 229-6775

AGENCY CONTACT FOR THIS PROPOSAL:

Mark P. Ronayne

Water Quality Division

Wastewater Control Section

811 SW 6th Avenue

Portland, OR 97204

503-229-6442 or

Toll Free 1-800-452-4011

Interested persons may comment on the proposed rules orally or in writing at the hearing. Written comments will also be considered if received by the date indicated above.

Thomas J. Lucas
Signature

1/11/95
Date

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking Proposal
for
Domestic Wastewater Treatment Facility Sludge (Biosolids),
Biosolids Derived Products,
and
Domestic Septage
Rule Revisions

Rulemaking Statements

Pursuant to ORS 183.335(7), this statement provides information about the Environmental Quality Commission's intended action to adopt a rule.

1. Legal Authority

ORS 468B.095, ORS 468B.050, ORS 468.020; ORS 454.695 & ORS 459.205

2. Need for the Rule

The current rule has not been updated since its inception (8/10/84). Modifications are necessary to update rules and guidelines to make them consistent with new (40 CFR Part 503) and amended (40 CFR Parts 122, 123 and 501) federal technical and administrative regulations. In addition, several housekeeping changes are needed to make the rule more comprehensive, clear and enforceable.

3. Principal Documents Relied Upon in this Rulemaking

1. OAR Chapter 340 Division 50
2. OAR Chapter 340 Division 14
3. OAR Chapter 340 Division 40
4. OAR Chapter 340 Division 45
5. OAR Chapter 340 Division 96
6. 40 CFR Part 501 (*Federal Register*, February 19, 1993)
7. 40 CFR Part 503 (*Federal Register*, February 19, 1993)
8. Biosolids Technical Advisory Committee Position Papers (June 14, 1994-10 Papers)
9. Biosolids Technical Advisory Committee Meeting Minutes (16 Meetings held between March 4, 1993 and June 28, 1994)

These documents are available for review during normal business hours at Department Headquarters, 811 SW 6th Avenue, Portland, Oregon.

4. Advisory Committee Involvement

Between March 4, 1993, and June 28, 1994, the Department's Domestic Biosolids Technical Advisory Committee (TAC) met on 16 occasions to consider various aspects of draft rule revisions. On November 17, 1994, the Committee (1) unanimously agreed on draft rule language and (2) recommended the Department seek permission for partial biosolids program delegation from the Commission simultaneous with revised rule adoption. In addition, on October 25, 1994, staff reviewed draft rule revisions with the Oregon Association of Clean Water Agencies (ACWA) Biosolids Subcommittee (BAC). The BAC endorses the proposed rule modifications. They also desire that the Commission grant DEQ permission to seek primacy for delegation of the federal biosolids land application program from EPA.

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking Proposal
for
Sludge (Biosolids) Rule Amendments

Fiscal and Economic Impact Statement

Overall Economic Impact

Revised biosolids rules and best management practices promote the beneficial recycling of high quality domestic wastewater residuals via land application. Land application is generally more economical and environmentally harmonious than biosolids disposal or incineration.

Regulatory redundancies between EPA and DEQ would be eliminated with (a) rule adoption and (b) delegation for the administration of the federal biosolids land application program from EPA to DEQ. If delegation for the biosolids land application program were obtained, the need for dual regulation by EPA and DEQ would be eliminated, conceivably saving regulated permitted sources and rate payers considerable time and money.

General Public

Homeowners, businesses, institutions and industry that discharge wastewater to domestic sewage treatment works are assessed user fees. The proposed rule, for the most part, reflects a continuation of the existing rule and its implementation should not cause user fees to increase.

Oregon households (358,022) who discharge their domestic wastewater to on-site (septic tank-drainfield) systems are apt to realize reduced septic tank pumping costs under revised rules. Homeowner household septic tank pumping varies widely (once per four to twelve years). Statewide, the cost of pumping a 1,000 gallon septic tank is in the range of \$190.00. Proposed rules enable the alkaline stabilization and land application of domestic septage. This practice costs approximately twenty-five per cent less (\$45 per septic tank cleaning) than the cost of septage disposal at a wastewater treatment works or a solid waste disposal facility.

Small Business

Several small commercial establishments located in non-sewered areas where natural site conditions prohibit on-site wastewater treatment system construction rely on holding tanks to collect and store their sanitary wastes pending septage removal by licensed pumping businesses. Many businesses discharge to holding tanks which require regular solids removal twice or more per month. Average annual disposal costs to small business range of \$900 from \$3,600 where septages are discharged at conventional wastewater treatment works. As an option to treatment works disposal, rules allow the screening, blending, alkaline stabilization, and land application of holding and septic tank pumpings. Average annual costs associated with this residuals handling alternative are estimated to be in the range \$765 to \$3,060 (i.e., \$135 to \$440 per year lower than holding tank septage pumping and disposal at a treatment works).

Rule adoption would be apt to stimulate the emergence of small businesses that chemically treat and land apply domestic septage. The cost of solids removal, treatment and land application is typically less than removal and disposal at a conventional domestic wastewater treatment works. Thus, small businesses who discharge sanitary wastewaters to holding tanks could ultimately realize wastewater handling savings.

Large Business

The proposed rule is a refinement to existing rules and should not have measurable economic impact on large businesses.

Local Governments

The proposed rule may result in a net savings to local governments (cities, counties and service districts) that operate domestic wastewater treatment works. Treatment works must currently comply with existing State rules and federal regulations. Revised rules incorporate federal technical land application requirements into state rules. The consolidation of all biosolids and domestic septage regulatory requirements into a single rule which is implemented by DEQ alone will eliminate conflicts and redundancies between State and federal administrative and technical standards, possibly resulting in a net savings of approximately \$200 per site annually (\$100,000 per year statewide) to permitted sources.

Proposed rule amendments may decrease the expense of biosolids regulation incurred by domestic wastewater treatment works. For example, most permitted sources would no longer be required to track cumulative trace metal additions at each biosolids land application site under suggested rule revisions. Current rules require all permittees to track biosolids-borne cadmium, copper, lead, nickel and zinc accumulation at all land application sites regardless of biosolids quality. Recent scientific studies suggest the long-term application of well managed, high quality, biosolids typically produced by

most Oregon wastewater treatment works would not adversely impact the public health or the environment. Trace metal tracking would not be required under revised regulations where high quality biosolids were generated. This would potentially result in a net savings to many permitted sources.

State Agencies

The scope of proposed rule changes and program delegation is limited to biosolids land application. Existing DEQ staff resources (4.75 FTE) should be adequate to implement proposed rules and the land application portion of the federal biosolids program.

Some additional short term resource would be required by DEQ in order to develop and submit a proposal for program delegation to EPA. No new resource will be added to the biosolids program; however, duties may have to be modified for some staff until program delegation is made. This process may take from eighteen to twenty-four months. EPA Region X, has advised DEQ that it will attempt to make an EPA contractor available to help facilitate and expedite the partial program delegation process.

Aside from DEQ, other State agencies within Oregon would not be directly affected by the adoption of revised biosolids rules.

Biosolids Exporters

Biosolids exporters who intend to land apply their biosolids at beneficial rates within the State would have to secure a permit from DEQ. Every five years, they would be assessed a permit application fee (currently \$550) and an annual compliance determination fee of (\$200) to cover regulatory costs.

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking Proposal
for
Adoption of Sludge (Biosolids) Rule Amendments

Land Use Evaluation Statement

1. Explain the purpose of the proposed rules.

Proposed rules encourage the beneficial recycling of treated domestic wastewater biosolids, biosolids derived products, and domestic septage through land application programs managed in a manner which protects the public health and maintains or improves environmental quality.

Rule modifications will update biosolids and domestic septage rules to make them consistent with new and recently amended federal technical (40 CFR Part 503) and administrative (40 CFR Parts 122, 123 and 501) regulations. In addition, several house keeping changes are proposed which are designed to make the rules more comprehensive, clear and enforceable.

Concurrent with rule making, the Environmental Quality Commission will be asked to authorize the Department to seek primacy for the land application portion of the federal biosolids program.

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

Yes No

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

Biosolids land application is regulated under domestic wastewater source permits issued pursuant to OAR 340 Division 14 and Division 45.

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

Yes No (if no, explain):

Domestic wastewater source permit actions require local governmental approval of land use compatibility statements before a permit is processed by the Department.

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

Staff should refer to Section III, subsection 2 of the SAC document in completing the evaluation form. Statewide Goal 6 - Air, Water and Land Resources is the primary goal that relates to DEQ authorities. However, other goals may apply such as Goal 5 - Open Spaces, Scenic and Historic Areas, and Natural Resources; Goal 11 - Public Facilities and Services; Goal 16 - Estuarine Resources; and Goal 19 - Ocean Resources. DEQ programs or rules that relate to statewide land use goals are considered land use programs if they are:

1. Specifically referenced in the statewide planning goals; or
2. Reasonably expected to have significant effects on
 - a. resources, objectives or areas identified in the statewide planning goals, or
 - b. present or future land uses identified in acknowledged comprehensive plans.

In applying criterion 2. above, two guidelines should be applied to assess land use significance:

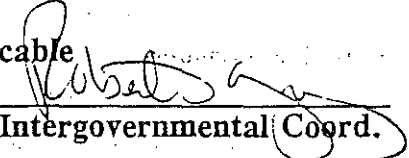
- The land use responsibilities of a program/rule/action that involves more than one agency, are considered the responsibilities of the agency with primary authority.
- A determination of land use significance must consider the Department's mandate to protect public health and safety and the environment.

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

Not Applicable

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 1/4/95

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

The following questions should be clearly answered, so that a decision regarding the stringency of a proposed rulemaking action can be supported and defended:

Note: If a federal rule is relaxed, the same questions should be asked in arriving at a determination of whether to continue the existing more stringent state rule.

1. *Are there federal requirements that are applicable to this situation? If so, exactly what are they?*

Yes. Federal technical (40 CFR Part 503) and administrative (40 CFR Parts 122, 123 and 501) apply to domestic wastewater sludge (biosolids) regulation. Technical regulations establish minimum requirements for biosolids and domestic septage quality (e.g., pathogen reduction, vector attraction reduction and trace pollutant concentration limits) and prescribe minimum management practices required at biosolids land application operations (e.g., relationship of biosolids amendment areas to threatened and endangered species habitat; prohibitions governing when biosolids can be applied to frozen or snow covered ground to avert surface water runoff; requirements that solids be applied within recognized agronomic rates to reduce the potential for groundwater contamination by nitrate nitrogen; crop grazing, harvest, and site access restrictions at biosolids amended sites designed to prevent livestock and the public from unreasonable exposure to pathogens and other biosolids-borne trace contaminants).

In addition, current and proposed Oregon biosolids rules and federal administrative regulations require that biosolids land application activities be regulated through issuance of domestic wastewater treatment works National Pollutant Discharge Elimination System (NPDES) and Water Pollution Control Facility (WPCF) source permits.

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

Most federal requirements (40 CFR Part 503) were based on field research gleaned from actual biosolids land application projects, risk assessment modeling, and recognized treatment technologies. Trace inorganic pollutant concentrations, pollutant cumulative loading limits, and pathogen reduction requirements related to biosolids land application recognize university field

studies at biosolids amended sites and the application of comprehensive, multimedia risk assessment models. Vector attraction reduction requirements are technology based.

The proposed rule incorporates by reference technically based federal pathogen and vector attraction reduction and trace inorganic pollutant standards.

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

Yes. Federal technical regulations reflect actual operations information, biosolids quality data, and field studies data, collected from secondary wastewater treatment facilities located throughout the United States (including four Oregon treatment works) under a comprehensive National Sewage Sludge Survey which was completed in 1989; university research (including field studies involving the land application of biosolids from several Oregon sources at Oregon State University's North Willamette Experiment Station, the University of Washington's Pack Forest, and several Washington State University biosolids research and demonstration projects); a comprehensive multi-media risk analysis related to trace inorganic pollutants and pathogens; and solids stabilization technologies which are being practiced in Oregon and elsewhere in the US.* In addition, throughout the federal technical regulation making process, Oregon DEQ, the Department's Domestic Biosolids Technical Review Committee (TAC), and the Oregon Association of Clean Water Agencies Biosolids Subcommittee provided written comments on federal draft rule language related to areas which were of particular concern in Oregon. Oregon concerns were adequately addressed in the final regulation (promulgated February 19, 1993).

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?*

Proposed rule and guideline changes were developed to clarify several issues and make rules less ambiguous. Implementation of proposed rules and best management practices are not expected to cause permitted sources to realize increased costs.

Modifications will eliminate inconsistencies between current guidelines and federal biosolids stabilization standards. In a few instances, federal regulations have caused sources who have stabilized solids by means of aerobic digestion to modify their treatment practices to meet minimum federal pathogen and vector attraction reduction requirements. However, the majority of sources affected by this federal requirement have already augmented treatment practices by including post-digestion alkaline stabilization (e.g., the City of Seaside added alkaline stabilization facilities at a cost of approximately \$55,000) or entering into arrangements with other sources to provide additional treatment of their solids. In other cases, sources have adapted existing facilities to chemical stabilization of biosolids at little added capital cost.

The modified rule is likely to collectively save permitted Oregon sources approximately \$100,000 in monitoring costs annually. Current biosolids guidelines require biosolids-borne metal additions to be continuously tracked at all solids amended sites, regardless of solids quality. The revised rule and federal technical regulations only require biosolids trace metal additions to be tracked in those instances where one or more biosolids constituents exceeds an "alternate pollutant concentration" limit. Most Oregon biosolids are high quality and would not require solids cumulative tracking.

The proposed rule will also allow permitted sources to prepare a single annual report which reflects both EPA and DEQ monitoring, recordkeeping, and reporting requirements, saving sources considerable money.

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

No. Proposed Oregon rule revisions do not address federally mandated compliance deadlines. Treatment works in Oregon that produce domestic biosolids have been aware of federal requirements (40 CFR Part 503) through mailings from EPA Region X and a number of DEQ workshops held statewide since federal regulations were promulgated on February 19, 1993.

Federal technical regulations (40 CFR Part 503) require compliance with pathogen and vector attraction reduction requirements by February 19, 1995, where substantive capital improvements are necessary in order to achieve regulatory compliance. Most sources who stabilized solids via aerobic digestion who were affected by federal requirements have already modified stabilization system operations, added alternative facilities to fulfill stabilization requirements, or contracted to transfer their solids to sources that operate facilities that can treat solids to the extent that they meet

minimum federal standards required for land application. In addition, federal standards provide a number of options that sources can apply to demonstrate compliance with pathogen and vector attraction reduction standards.

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

Yes. Proposed rule and best management practices revisions are designed to continue to offer sufficient flexibility to encourage future beneficial biosolids recycling via land application. Like the federal technical standards, the Oregon rule leaves the actual selection of the specific option chosen to comply with pathogen and vector attraction reduction up to the regulated community.

7. *Does the proposed requirement establish or maintain reasonable equity in the requirements for various sources? (level the playing field)*

Yes. Proposed rule and best management practices would maintain the level of equity in requirements between permitted domestic wastewater treatment sources that are currently available under the existing biosolids rule and guidelines.

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

No. No increased costs are envisioned as a result of the adoption of the proposed rule and best management practices.

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. The proposed rule is being realigned to eliminate inconsistencies between the current rule and guidelines and federal regulations (40 CFR Part 503) which relate to permitted source monitoring, recordkeeping and reporting requirements. For example, under the current rule and guidelines, annually, permitted sources are required to report biosolids handling actions which occurred during the previous calendar year by January 15 of the succeeding year. Federal technical regulations (40 CFR §503.18) require major sources to report on biosolids treatment, quality and land application or distribution and marketing activities annually by February 19, of the year following the report period. Revised rules will adjust reporting deadlines to coincide with federal regulations.

Also, monitoring parameters (trace pollutants, pathogen indicators) and stabilization measurement parameters will be changed in revised rules to conform with federal regulations.

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

Yes. The proposed rule recognizes twelve technology based solids pathogen treatment options that are featured in federal technical regulations [40 CFR §503.32(a)&(b)]. Similarly, the proposed rule acknowledges ten technology and field management based alternatives for achieving vector attraction reduction which are embodied in federal technical regulations (40 CFR §503.33). Most technology based alternatives are currently being used by permitted Oregon sources.

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. Current Oregon biosolids guidelines and proposed best management practices recognize that minimum site selection standards and buffers are essential to prevent surface and groundwater pollution, protect the public health, maintain and enhance environmental quality, and mitigate potential for citizen concerns related to odor (which may temporarily emerge from solids amended sites immediately after solids land application). Existing guidelines and proposed best management practices contain criteria related to the minimum vertical separation required between the point of biosolids or domestic septage application and (a) seasonal groundwater table; (b) permanent water table; (c) rapidly and very rapidly draining soil and geological materials; (d) layers which limit effective soil depth (such as silt pans, clay pans or calcium and silica cemented hard pans); and (e) bedrock or highly weathered rock (saprolite). They also include minimum standards for (a) site (soil) drainage class; (b) topography and slope; and (c) climate (e.g., annual precipitation). Federal regulations lack specific site criteria.

Federal regulations (40 CFR §503.14) establish a 10 meter buffer between surface water and the edges of areas amended with biosolids; however, they lack minimum horizontal separation distance standards between land application areas and springs, tidelands, and other areas susceptible to surface or groundwater contamination. Oregon best management practices recognize buffers are necessary between a variety of natural and

anthropogenic features in order to help prevent the inadvertent contamination of groundwater, surface water, and soils and mitigate potential public concerns related to odor or aesthetic features associated with land application activities.

Federal standards lack specific criteria for assessing potential impacts biosolids land application operations may have on groundwater. Proposed best management practices require periodic testing of nitrate nitrogen at sites where biosolids have been land applied for two successive years before they can be amended a third consecutive year to help assure continued biosolids application activities would not adversely affect groundwater. Similarly, background nitrogen level monitoring is required when solids have been previously applied to a particular site at soil reclamation rates. Decisions on appropriate additional biosolids loading are required in both instances to determine if additional solids can be applied to a site or adjustments in nitrogen loading rates are necessary. The Department views this requirement necessary to help assure biosolids and domestic septage land application actions will not have marked negative impact on groundwater quality. No corollary to this requirement exists in federal technical regulations.

The proposed rule will continue to require advance written approval of all sites considered for biosolids or domestic septage amendment. DEQ issued authorization letters include site specific management conditions and afford a dynamic, practical, flexible means for assuring land application areas are regulated in a specific manner designed to protect the public health and environment. EPA regulations lack similar requirements. Instead, federal administrative regulations (40 CFR §501.15) require land application sites to be broadly managed under a generic land application plan. No deviations from plan criteria can be entertained without entering into a costly, time-consuming permit modification. In contrast the proposed Oregon biosolids rule, like the current rule, will continue to require that permitted sources operate their land application programs under site, and crop specific biosolids authorization letters which reflect biosolids quality. Under the proposed rule, permit modifications would not normally be required in order to address changes in site operating requirements.

State of Oregon
 Department of Environmental Quality

Memorandum

Date: March 3, 1995

To: Environmental Quality Commission

From: Edward A. Liggett *EAL*
 Environmental Specialist
 Eastern Region

Subject: Presiding Officer's Report for Rulemaking Hearing

Hearing Date and Time: March 3, 1995, beginning at 10:00 a.m.

Hearing Location: Pendleton Convention Center
 Pendleton, OR

Title of Proposal: Rulemaking Proposal for Domestic Wastewater
 Treatment Facility Sludge (Biosolids), Biosolids
 Derived Products and Domestic Septage Rule
 Revisions

The rulemaking hearing on the above titled proposal was convened at 10:00 a.m. People were asked to sign witness registration forms if they wished to present testimony. People were also advised that the hearing was being recorded and of the procedures to be followed.

One person was in attendance. The individual did not sign up to give testimony.

Don Caldwell, Eastern Region Water Quality Community Service Coordinator, briefly explained the specific rulemaking proposal, the reason for the proposal, and responded to questions from the audience.

No oral testimony was offered.

No written comments were received.


The hearing was closed at 10:45 a.m.

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MAR 07 1995

Water Quality Division
 Dept. of Environmental Quality

Date: March 15, 1995

To: Environmental Quality Commission
From: Thomas J. Lucas 
Subject: Presiding Officer's Report for Rulemaking Hearing
Hearing Date and Time: March 6, 1995, beginning
at 10:00 a.m.
Hearing Location: Conference Room 3A, DEQ
Headquarters

Title of Proposal: Proposed Rule Amendments to
Division 50, Land Application of
Domestic Wastewater Treatment
Facility Biosolids Derived
Products, and Domestic Septage.

The rulemaking hearing on the above titled proposal was convened at 10:00 a.m.. People were asked to sign witness registration forms if they wished to present testimony. People were also advised that the hearing was being recorded and of the procedures to be followed.

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

Prior to receiving testimony, Mark Ronayne, Domestic Biosolids Coordinator, briefly explained the specific rulemaking proposal, the reason for the proposal, and responded to questions from the audience.

People were then called to testify in the order of receipt of witness registration forms and presented testimony as noted below.

Ross Peterson, City of Albany. Mr. Peterson was chair of the Association of Clean Water Agencies (ACWA) Biosolids Subcommittee during the time the proposed rules were drafted. The ACWA Subcommittee appreciates the opportunity for involvement in rule preparation, and supports the rule as proposed. The Subcommittee strongly recommends that DEQ actively pursue delegation of the 503 and biosolids regulations from EPA, as long as DEQ can continue to provide consistent, technical and defensible management of this issue.

There was no further testimony and the hearing was closed at 10:30 a.m..

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50
March 6, 1995 Rulemaking Hearing
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No written testimony was submitted. Several in attendance stated that they would submit written testimony by March 10, 1995.

State of Oregon
Department of Environmental Quality

Memorandum

Date: 6/14/1995

To: Environmental Quality Commission

From: Paul Kennedy

Subject: Presiding Officer's Report for Rulemaking Hearing
Hearing Date and Time: March 3, 1995 beginning at 1:30 pm
Hearing Location: Roseburg DEQ conference room

Title of Proposal: Proposed amendments to Div. 50 rules regarding beneficial land application of domestic wastewater treatment facility derived biosolids, biosolid products, and domestic septage.

The rulemaking hearing on the above titled proposal was convened at 1:30 pm. People were asked to sign witness registration forms if they wished to present testimony. People were also advised that the hearing was being recorded and of the procedures to be followed.

Four (4) people were in attendance, four (4) people signed up to give testimony.

Prior to receiving testimony, Paul Kennedy briefly explained the specific rulemaking proposal, the reason for the proposal, and responded to questions from the audience.

People were then called to testify in the order of receipt of witness registration forms and presented testimony as noted below.

- 1) John Ulicny, U.S. Forest Service: Mr. Ulicny asked if the Forest Service which already has a NDPES permit for the wastewater treatment facility is required to obtain any other permits in order to land apply biosolids. (no written testimony received).
- 2) John Hebard, (Administrator)
Douglas County Public Works: Mr. Hebard offered his appreciation to the Department for the Div. 50 Rule revisions which reflect the Department's careful consideration of input received from the wastewater treatment industry.

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2) John Hebard, (Administrator)
Douglas County Public Works:

Mr. Hebard encouraged the DEQ to pursue Biosolids program primacy from the EPA.

Mr. Hebard asked whether a WPCF permit holder for septage collection, stabilization, and land application would be required to get certified under Division 49?

Mr. Hebard asked would the DEQ consider a type of Div. 49 certification for Domestic Septage Alkaline Stabilization permittees to ensure that they are familiar with the alkaline stabilization and land application processes. Mr. Hebard also commented that the State of Oregon's Biosolids program be consistent in approach and implementation (State wide). (no written testimony received).

3) Jim Collatt,
Oregon Coast Sanitation:

Mr. Collatt asked if there was any evidence problems associated with lime stabilization program? Mr. Collatt indicated he did not have an opinion of the proposed rule changes. Mr. Collatt asked if there was further policing required for this type of permit? (no written testimony received).

4) David Burr, U.S. Forest Service:

Mr. Burr signed up but did not offer oral testimony.

No written testimony was received.

There was no further testimony and the hearing was closed at 2:10 pm.

LIST AND SUMMARY OF WRITTEN COMMENTS RECEIVED

The Department received the following written testimony related to proposed biosolids rule modifications (OAR Chapter 340, Division 50) and the Department's request for authority to seek primacy from the Environmental Quality Commission for partial delegation of the federal biosolids land application program.

1. **Gregory L. Kellogg, Chief, Wastewater Management and Enforcement Branch, EPA Region X, Seattle, Washington--February 13, 1995.**

EPA advises that they have reviewed the proposed revisions to the Oregon rules on sewage sludge (biosolids). Their review concluded that no significant conflicts exist between the national standards and the proposed state rule revisions. Further the EPA encourages the DEQ to investigate delegation of the biosolids permitting program.

2. **Thomas Walker, P.E, Senior Associate, W&H Pacific, Inc., 155 N.E. River Avenue, Bend--March 2, 1995.**

Mr. Walker commented on behalf of small and remote wastewater treatment and disposal facilities, asking for special consideration of this particular type of facility. While generally in support of the proposed rule amendments, the commenter expressed two concerns. First, that the adoption of proposed rule modifications would burden small treatment works owners and operators with additional regulatory burdens and recommended that rule exemptions be granted where appropriate for facilities generating less than 250,000 gallons per day in raw sewage contributions. Second, the commenter noted that few facilities in Central Oregon accept hauled septage (septic tank pumpings), and that the proposed rule amendments may tend to discourage municipalities from accepting these types of contributions.

3. **Gareth S. Ott, Manager, Sanitary Sewer and Wastewater Treatment Plant Division, City of Gresham, Department of Environmental Services--March 3, 1995.**

The City of Gresham generally supports the proposed rulemaking action. Mr. Ott states that he found the proposed rule revisions to be clear and well crafted, and that the rule modifications appear to be consistent with past DEQ practice while incorporating new federal technical requirements. Several suggestions were included in this letter to further clarify specific sections of the rule. These are addressed in Attachment E, Department's Evaluation of Public Testimony.

4. **Mark Yeager, P.E., Public Works Director, City of Albany--March 2, 1995.**

The City of Albany supports the adoption of proposed rule modifications. In addition, the City recommends that the Department of Environmental Quality seek authorization from the Environmental Quality Commission to pursue delegation of the federal biosolids program administration as part of the Department's Water Quality program.

5. **Ann Gardner, Administrative Manager, City of Portland Bureau of Environmental Management, Columbia Boulevard Wastewater Treatment Plant--March 7, 1995.**

Ms. Gardner conveys the City of Portland's pleasure in supporting the adoption of proposed biosolids rule modifications and recommended that the State of Oregon seek delegation for the land application portion of the federal biosolids program. In Portland's estimation, this rulemaking action will further enhance the state's model biosolids program, and provide comprehensive and consistent technical support to biosolids generators, thereby assuring successful management of Oregon's biosolids.

6. **Steve Hanson, POTW Supervisor, City of Canby-March 9, 1995.**

The City of Canby supports the adoption of proposed biosolids rule modifications, encourages the Environmental Quality Commission and the Department of Environmental Quality to retain regulatory responsibility over biosolids program management, and advocates that the State of Oregon seek delegation for the land application portion of the federal biosolids program.

7. **Ken Vanderford, Residuals Supervisor, City of Eugene, Public Works Department, Wastewater Division--March 10, 1995.**

The City of Eugene supports the adoption of proposed biosolids rule modifications, encourages the Environmental Quality Commission and the Department of Environmental Quality to retain regulatory responsibility over biosolids program management, and advocates that the State of Oregon seek delegation for the land application portion of the federal biosolids program. Mr. Vanderford and the City of Eugene believe that local regulatory control of biosolids management practices is key to maintaining a positive public image for the safe and responsible use of biosolids, and that DEQ is the best agency in terms of regulatory oversight.

8. **Daniel R. Hanthorn, Wastewater Operations Manager, City of Corvallis Public Works Department--March 8, 1995.**

Mr. Hanthorn writes on behalf of the City of Corvallis in support of proposed biosolids rule modifications. The City of Corvallis also strongly encourages the Environmental Quality Commission to authorize the Department of Environmental Quality to seek delegation for the land application portion of the federal biosolids program.

9. **Albert Guenther, Operations Superintendent, Oak Lodge Sanitary District, Milwaukie--March 10, 1995.**

The Oak Lodge Sanitary District supports the adoption of proposed biosolids rule modifications, encourages the Environmental Quality Commission and the Department of Environmental Quality undertake the necessary steps to retain regulatory responsibility over biosolids program management, and advocates that the Department seek delegation for the land application portion of the federal biosolids program.

10. **Ron Bittler, Plant Manager, City of McMinnville--March 9, 1995.**

The City of McMinnville also expresses support for the proposed biosolids rule modifications. Further, the City states the position that the DEQ has provided a positive presence for biosolids management, and encourages the Environmental Quality Commission and the Department of Environmental Quality to take appropriate actions to retain regulatory responsibility for this program.

11. **Wayne McGehee, Contract Supervisor, Cloverdale Sanitary District, Cloverdale--March 8, 1995.**

The Cloverdale Sanitary District supports the adoption of proposed biosolids and domestic septage rule modifications, encourages the Environmental Quality Commission and the Department of Environmental Quality to retain regulatory responsibility over biosolids program management, and advocates that the State of Oregon seek delegation for the land application portion of the federal biosolids program.

12. **Wayne McGehee, Contract Supervisor, Netarts Oceanside Sanitary District, Tillamook--March 8, 1995.**

The Netarts Oceanside Sanitary District expresses support for the proposed biosolids and domestic septage rule modifications, encourages the Environmental Quality Commission and the Department of Environmental Quality to retain regulatory responsibility over biosolids program management, and favors that the State of Oregon seek delegation for the land application portion of the federal biosolids program.

13. **Pamela F. Gratton, Technical Services Manager, Wheelabrator Clean Water Systems, Inc., Annapolis, Maryland--March 10, 1995.**

Wheelabrator Clean Water Systems, Inc. supports the beneficial use of biosolids and the products made from biosolids, and states that the proposed rule amendments will provide the framework for prudent recycling of this nutrient rich organic product. Ms. Gratton and her company also encourage other states to use the Oregon biosolids program rules as a model for their domestic residuals management programs.

14. **John Hebard, Division Manager, Administrative Services, Douglas County Public Works Department--March 9, 1995.**

Writing on behalf of the Douglas County Public Works Department, Mr. Hebard commends the Department for the manner in which the rule amendments were developed, and encourages the pursuit of state primacy for the federal biosolids program. He also states his concern that independent commercial septage pumpers would not be subject to the certification requirements associated with WPCF permits, and in this light, encourages the Department to implement some sort of certification program for these handlers of domestic biosolids.

15. **Harley C. James, Water Reclamation Division Superintendent, Public Works Department, Regional Water Reclamation Facility City of Medford--March 6, 1995.**

The City of Medford encourages the Environmental Quality Commission to authorize the Department of Environmental Quality to pursue delegation for the land application portion of the federal biosolids program and supports the adoption of most proposed biosolids and domestic septage rule modifications.

The City expressed the opinion that some suggested rule and best management practices revisions were considerably more stringent than the minimum federal administrative and

technical regulations pertaining to biosolids. These comments are addressed in more detail in Attachment E.

16. **Katherine Schacht, General Manager, Metropolitan Wastewater Management Commission, Springfield--March 10, 1995.**

The Metropolitan Wastewater Management Commission, along with the Cities of Eugene and Springfield, supports the adoption of proposed biosolids rule modifications, urges the Environmental Quality Commission and the Department of Environmental Quality to retain regulatory responsibility over biosolids program management, and advocates that the State of Oregon seek delegation for the land application portion of the federal biosolids program.

17. **Frank Sinclair, POTW Superintendent, City of Woodburn--March 10, 1995.**

The City of Woodburn fully supports the Department's efforts to encourage beneficial use of treated domestic wastewater biosolids and biosolids derived products, and further supports the Department's need to update rules for consistency with federal requirements. Mr. Sinclair notes, however, that the City feels less comfortable with the proposed domestic septage rule revisions, and expresses specific concerns which are addressed in Attachment E, Department's Evaluation and Response to Public Testimony.

18. **Harry Bludworth, Operations Superintendent, Unified Sewerage Agency of Washington County--March 9, 1995.**

The Unified Sewerage Agency of Washington County strongly encourages the EQC to adopt the proposed rule revision, urges the Environmental Quality Commission and the Department of Environmental Quality retain regulatory responsibility over biosolids program management, and advocates that the State of Oregon seek delegation for the land application portion of the federal biosolids program.

19. **Brian Rabe, Senior Soils Scientist, Cascade Earth Sciences, Ltd., 3425 Spicer Drive, Albany, OR 97321--March 10, 1995 (FAX).**

Mr. Rabe provided several comments and suggested revisions to the draft rule, most of these being editorial in nature. He raised two technical questions; one concerning the methods of treatment for domestic septage, and another questioning well setbacks.

ATTACHMENT D

20. **Kevin Hanway (for Cathryn Collis), Chair, Oregon Association of Clean Water Agencies--March 10, 1995.**

Oregon ACWA strongly encourages the EQC to adopt the revisions to OAR 34, Division 50.

21. **Daniel B. Helmick, Manager, Fiscal and Regulatory Affairs, Clackamas County Department of Utilities--March 10, 1995.**

Clackamas County is pleased with the level of service provided by the Department in the regulation of biosolids, and feels that the best opportunity to continue this level of service is through DEQ's control and management. Clackamas County encourages the EQC and DEQ to take the necessary steps to confirm local control, and adopt the proposed rule revisions to OAR 340, Division 50.

22. **Barry Evensen, Residuals Management Supervisor, Willow Lake Wastewater Treatment Plant, City of Salem--March 13, 1995.**

The City of Salem encourages the DEQ and EQC to take appropriate steps to ensure that the DEQ retains regulatory responsibility for biosolids management practices in the State of Oregon, and supports adoption as proposed of the revisions to OAR 340, Division 50.

EVALUATION OF PUBLIC COMMENT

1. **Thomas Walker, P.E, Senior Associate, W&H Pacific, Inc.,155 N.E. River Avenue, Bend--March 2, 1995.**

Mr. Walker commented on behalf of small and remote wastewater treatment and disposal facilities, asking for special consideration of this particular type of facility. While generally in support of the proposed rule amendments, the commenter expressed two concerns. First, that the adoption of proposed rule modifications would burden small treatment works owners and operators with additional regulatory burdens and recommended that rule exemptions be granted where appropriate for facilities generating less than 250,000 gallons per day in raw sewage contributions. Second, the commenter noted that few facilities in Central Oregon accept hauled septage (septic tank pumpings), and that the proposed rule amendments may tend to discourage municipalities from accepting these types of contributions.

Response: The proposed rules will not modify existing wastewater solids monitoring, recordkeeping and reporting requirements, nor will it place additional management requirements on small sources. The rule was designed to allow small sources generating domestic septage with an additional solids handling option (alkaline stabilization followed by land application) which could result in an overall reduction on operating expenses for some small treatment works.

Staff recommends proposed modifications be adopted as presented. (Note: On March 8, 1995, staff called the commenter and explained the nature, principals and basis of proposed rule modifications. The commenter seemed satisfied with the proposed rule as a result of that discussion).

2. **Gareth S. Ott, Manager, Sanitary Sewer and Wastewater Treatment Plant Division, City of Gresham, Department of Environmental Services--March 3, 1995.**

The City of Gresham generally supports the proposed rulemaking action. Mr. Ott states that he found the proposed rule revisions to be clear and well crafted, and that the rule modifications appear to be consistent with past DEQ practice while incorporating new federal technical requirements. Several suggestions were included in this letter to further clarify specific sections of the rule.

Response: The City recommended that the term "high" in the definition for composting be replaced by the term "elevated". The draft rule has been changed to reflect this.

ATTACHMENT E

Gresham also advised that the proposed definition for domestic wastewater treatment facility solids be amended to exclude grit and screenings. The draft rule now includes language for this exclusion. In addition, the City recommended that the rule be amended to include a definition for "site authorization letter". This definition has been added.

Further, the City suggests the rule be amended to require a time line for taking action on biosolids and domestic septage site authorization proposals. Language has been added to the rule under OAR 340-50-030(2) which sets some time constraints on site authorization actions in the event that a proposed land application site is subject to a public process.

In addition, the City recommends the statement appearing as the last sentence of proposed OAR 340-50-065 (1) be rewritten to be made clearer; however, no suggestions on revised language were offered. This sentence was refined to clarify meaning.

3. **John Hebard, Division Manager, Administrative Services, Douglas County Public Works Department--March 9, 1995.**

Writing on behalf of the Douglas County Public Works Department, Mr. Hebard commends the Department for the manner in which the rule amendments were developed, and encourages the pursuit of state primacy for the federal biosolids program. He also states his concern that independent commercial septage pumpers would not be subject to the certification requirements associated with WPCF permits, and in this light, encourages the Department to implement some sort of certification program for these handlers of domestic biosolids.

Response: Douglas County expressed concern that independent commercial septage pumpers who operate alkaline stabilization and land application programs under Water Pollution Control Facilities Permits were not subject to certification requirements. They encouraged the Department to implement some form of operator certification for these permittees. Domestic septage alkaline stabilization and land application operator certification requirements were not considered during the rule making process. This matter will be referred to Water Quality operator certification staff for consideration in future Division 49 rulemaking.

4. **Harley C. James, Regional Water Reclamation Facility Administrator, City of Medford-March 6, 1995.**

The City of Medford encourages the Environmental Quality Commission to authorize the Department of Environmental Quality to pursue delegation for the land application portion of the federal biosolids program and supports the adoption of most of the

proposed biosolids and domestic septage rule modifications. However, the City viewed some suggested rule and best management practices revisions as considerably more stringent than minimum federal administrative and technical regulations pertaining to biosolids. Specifically, Mr. James felt the following rules and best management practices were more stringent than federal:

- A. Mr. James expressed the opinion that prior DEQ approval should not be required for new land application sites that are consistent with the already approved biosolids management plan. He commented that site authorization letters should only be necessary for application sites that deviate from the approved management plan. Further, he is of the opinion that the Department should not consider various site specific conditions as extensions of the source's wastewater discharge permit (His comments relate to 340-50-45(1) and (3)).

Response: The proposed rule will continue to require advance written approval of all sites considered for application of biosolids or domestic septage. DEQ site authorization letters list site specific management conditions to provide assurance that these sites are managed to protect public health and the environment. The federal regulations are less specific; 40 CFR §501.15 requires land application sites to be broadly managed under a generic plan.

This issue was discussed at length by the DEQ Biosolids Advisory Committee. Their conclusion was that, although permit requirements and management plans cover application sites to some degree, the separate site review process and formal authorization letter covering specific management requirements for individual sites served as a useful and essential tool to accomplish good biosolids management.

- B. Mr. James recommended that the Department only require periodic nitrogen monitoring on sites where the rate of biosolids application exceeds the agronomic loading rates. (see 340-50-080(5)).

Response: Federal standards lack specific criteria for assessing potential impacts on groundwater from biosolids land application. The Department's proposed best management practices require periodic testing of nitrate-nitrogen at sites where biosolids have been land applied for two consecutive years prior to the third consecutive application. Background nitrogen level monitoring is also required when solids have been applied to a particular site at soil reclamation rates. Test results provide information for decisionmaking; application may proceed, or adjustments to nitrogen loading rates may be necessary before application. Periodic monitoring and testing helps to assure that continued biosolids application does not adversely affect groundwater quality.

The DEQ Biosolids Advisory Committee prepared a position paper on this subject. The committee recommended that biosolids application rates should be generally maintained at an agronomic level to prevent leaching losses and groundwater contamination, and that the criteria should require performance monitoring (specifically for nitrogen) on biosolids applications exceeding 2 out of 3 successive years at agronomic rates, or before a second application of biosolids. The proposed rule incorporates the advisory committee's recommendation.

5. **Frank Sinclair, POTW Superintendent, City of Woodburn--March 10, 1995.**

The City of Woodburn fully supports the Department's efforts to encourage beneficial use of treated domestic wastewater biosolids and biosolids derived products, and further supports the Department's need to update rules for consistency with federal requirements.

Mr. Sinclair notes, however, that the City feels less comfortable with the proposed domestic septage rule revisions, and expresses specific concerns about domestic septage rule modification entertained under proposed rule modifications as follows:

- A. In the City's view, the proposed modifications did not adequately address provisions in federal technical regulations reflected under §503.6(j). Part 503.6(j) excludes the regulation of commercial and industrial septage from 40 CFR Part 503.

Response: Instead of being regulated under 40 CFR Part 503, commercial and industrial septages are regulated under 40 CFR Part 257, the federal technical regulation that governs the land application of commercial and industrial residuals. The Department would continue to regulate commercial and industrial septages under an industrial or domestic wastewater treatment facilities source permit (WPCF or NPDES permit) or a solid waste disposal permit. DEQ licensed septage pumps are not authorized to pump hazardous waste.

- B. The City expressed the concern that the definition for domestic septage in 40 CFR §503.9(f) and other federal technical regulations differed from that proposed under modified Division 50 regulations.

Response: Although the actual language in §503.9(f) and proposed 340-50-010(11) differ slightly, the two definitions are harmonious.

- C. The City opined that non-household septage sources would not be adequately regulated under proposed rule amendments. However, no explanation for the basis of this opinion was provided.

Response: DEQ requires septage variety documentation tracking from the point of origin to the point of use or disposal under OAR 340-71-600(13)(c), (d) & (e). No modifications to this classification and documentation method are suggested under proposed rule modifications. The Department views the current septage tracking system adequate for executing septage treatment and land application entertained under proposed 340-50-026.

6. **Brian Rabe, Senior Soils Scientist, Cascade Earth Sciences, Ltd., 3425 Spicer Drive, Albany, OR 97321--March 10, 1995 (FAX).**

Mr. Rabe provided several comments and suggested revisions to the draft rule, most of these being editorial in nature. He raised two technical questions; one concerning the methods of treatment for domestic septage, and another questioning well setbacks.

Response: This rule would not preclude the opportunity to continue the existing alternatives for non-alkaline stabilization treatment or land application. For example, the rule allows the current practice of septage composting and wastewater lagoon treatment with subsequent land application, provided federal pathogen reduction and vector attraction reduction standards are met.

Concerning well setbacks--Consistent with 40 CFR Part 503 regulations, in general, exceptional quality biosolids would fall outside the regulations, thus no well setbacks are established. Best management practices are flexible enough to allow for discretion in the setbacks for bulk Class A products; for instance, the horizontal separation distances could be relaxed. For dewatered biosolids (cake or dried solids), application is permitted from zero to 50 feet in sensitive areas.

DETAILED CHANGES TO RULEMAKING PROPOSAL

After evaluation of public comment and review by staff, the following changes were made to the proposed rule:

1. DEFINITIONS 340-50-010:

- A. Under the definition for "Biosolids" (340-50-010(3)) the following language was added at the end of the paragraph to cross-reference the term "biosolids" with the statutorily recognized term "sludge", and the term "sewage sludge" found elsewhere in state rules:

This term has the same meaning as the term "sludge" in ORS 468B.095, and the term "sewage sludge" found elsewhere in OAR Chapter 340.

- B. The word "alteration" in the definition for "Biosolids Derived Products" (340-50-010(4)) was changed to correct term, "attraction".

- C. The definition of "Composting" in 340-50-010(6) was changed by deleting the word "high" and replacing it with the word "elevated", as follows:

"Composting" means a process by which ~~{dewatered sludge}~~ domestic wastewater treatment facility solids, biosolids, or septage are ~~[is]~~ mixed with carbonaceous material and aerated with controlled ~~[high]~~ elevated temperatures to promote rapid decomposition and ultimate stabilization as well as pathogen reduction.

- D. To further refine applicability, the following language was added to the definition for "Domestic Wastewater Treatment Facility Solids" under 340-50-010-(8):

Grit and screenings removed from domestic wastewater during preliminary treatment are not considered solids under this definition.

- E. The definition of "liquid solids" (340-50-010(16)) was changed to "liquid biosolids" to remove a seeming oxymoron.

- F. A definition for site authorization letter was added as 340-50-010(20) as follows:

"Site Authorization Letter" means a Department issued document which establishes minimum site management conditions for applying biosolids to a specific land application site.

- G. The terms "sludge" and "sewage sludge" were reinstated into the definitions as 340-50-010(21) and cross-referenced to the definition for "biosolids". (See A above).
- H. The words "or septage" were inserted between "...wastewater derived solids" and "by physical, chemical..." in the definition for "Treatment" (340-50-010(22)) as follows:

“Treatment” means the alteration of the quality of domestic ~~[waste waters]~~ wastewater, wastewater derived solids, or septage by physical, chemical or biological means, or a combination thereof, such that the tendency of said ~~[wastes]~~ liquids or solids to cause any degradation in water quality or other environmental conditions is reduced.

2. GENERAL STANDARDS 340-50-026:

- A. In 340-50-026(5), at the end of the paragraph, the wording was changed from "land spreading" to "land application".
- B. In paragraph 340-50-026(5)(a), "alkaline **compound**" was changed to "alkaline agent".

3. LAND APPLICATION SITE SELECTION AND APPROVAL 340-50-030:

- A. 340-50-030(2) was revised to more accurately reflect the statutory intent of ORS 468B.095, which requires that sludge rules include procedures and criteria for sludge application sites, including providing the opportunity for public comment and public hearing:

Prior to the approval of any proposed site that may be sensitive with respect to residential housing, runoff potential or threat to groundwater, the Department ~~{may require}~~ shall ensure that an opportunity is provided for public comment and, if required as noted in (a) below, public hearing.

(a) If, during the public comment period, at least 10 people, or an organization representing at least 10 people, indicate concern about the proposed action, then opportunity shall be provided for public hearing.

(b) The Department shall take final action on site authorization within 30 days of the closure of the public comment period, or 30 days of the closure of the hearing's record.

4. BIOSOLIDS AND DOMESTIC SEPTAGE MANAGEMENT PLANS 340-50-031:
 - A. In 340-50-031(5)(l), at the beginning of the paragraph, the words "**The depiction**" have been corrected to "**A description**", and the word "**procedures**" has been inserted between "reporting" and "; and".
 - B. Under 340-50-031(7)(d), the word "**imposed**" has been replaced by "**implemented**".

5. MONITORING, RECORD KEEPING, AND REPORTING 340-50-035:
 - A. In 340-50-035(2)(a)(I), the word "**Total**" has been inserted in front of "Phosphorus".
 - B. 340-50-035(6)(b) has been changed, with "**pollutant inputs**" now reading "**pollutant additions**".

6. BEST MANAGEMENT PRACTICES--USE LIMITATIONS 340-50-065:
 - A. The following underlined words have been added to 340-50-065(3):

Biosolids and domestic septage shall be applied at rates and methods which prevent the occurrence of runoff, erosion, leaching, and nuisance conditions, or the likelihood of groundwater contamination.
 - B. In 340-50-065(5), the phrase "**for root crops, pursuant to §503.32(b)(5)**" has been inserted after the word "waived, and before the sentence beginning "No time restrictions...".

7. BEST MANAGEMENT PRACTICES--CRITERIA FOR SITE SELECTION: 340-50-070:
 - A. In 340-50-070(c), toward the end of the section, "**eliminate runoff.**" has been changed to "**prevent runoff.**"
 - B. 340-50-070(e) has been changed, with the word "**alkali**" replaced with the word "**sodic**".
 - C. The word "**problems**" has been removed from 340-50-070(3)(a).
 - D. The phrase "**bulk Class B**" has been inserted between "No" and "biosolids" in 340-50-070(3)(c).

DOMESTIC SLUDGE TECHNICAL ADVISORY COMMITTEE

MAILING LIST

updated February 12, 1992

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B R O W N A N D
C A L D W E L L

~~How-Linear~~ TL
Mark

November 17, 1994

Mr. Mark Ronayne
Oregon Department of Environmental Quality
811 Southwest Sixth Avenue
Portland, Oregon 97204

13-9202-04

Subject: Division 50 Final Revision and Pursuit of
 EPA Part 503 Delegation

Dear Mr. Ronayne:

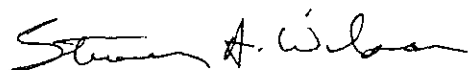
I have polled Advisory committee members by phone and obtained unanimous consensus that the latest revision of the Division 50 rule for biosolids regulation is acceptable. Further, the committee agrees that delegation of authority for administering the EPA 503 rule should be pursued as soon as possible.

Please keep me and other committee members informed on the status of this effort. If you need any support in making the case that regulatory authority for biosolids needs to be maintained within DEQ, let us know.

We appreciate the professional manner in which you have facilitated this rule revision in cooperation with the committee. I look forward to providing any further assistance that may be needed as the delegation process is implemented.

Very truly yours,

BROWN AND CALDWELL



Steven A. Wilson
DEQ Technical Advisory Committee Chair

SAW:wmp
Enclosures

cc: Mr. Mike Downs, Water Quality Administrator, DEQ, Portland, Oregon
 Mr. Barry Evanson, ACWA Biosolids Committee Chair, Salem, Oregon

454.505 to 454.535, 454.605 to 454.745 and ORS chapters 468, 468A and 468B.

(2) The department may extend the time of compliance for any person, class of persons, municipalities or businesses upon such conditions as it may deem necessary to protect the public health and welfare if it is found that strict compliance would be unreasonable, unduly burdensome or impractical due to special physical conditions or cause or because no other alternative facility or method of handling is yet available. [Formerly 449.150 and then 468.770]

468B.085 Depositing motor vehicles into water prohibited. Subject to ORS 468B.065, no person, including a person in the possession or control of any land, shall deposit, discard or place any chassis, body or shell of a motor vehicle as defined by ORS 801.360 or of any vehicle as defined by ORS 801.590, or parts and accessories thereof, including tires, into the waters of the state for any purpose, or deposit, discard or place such materials in a location where they may be likely to escape or be carried into the waters of the state by any means. [Formerly 449.109 and then 468.775]

468B.090 Permit authorized for discharge of shrimp and crab processing by-products; conditions. (1) The department may issue a permit to discharge shrimp and crab processing by-products into the waters of an Oregon estuary under ORS 468B.050 for the purpose of enhancing aquatic life production. The permit shall impose the following conditions:

(a) No toxic substances shall be present in the by-products discharged.

(b) The oxygen content of the estuarine waters shall not be reduced.

(c) The discharge shall not create a public nuisance.

(d) Other beneficial uses of the estuary shall not be adversely affected.

(2) The department shall consult the State Department of Fish and Wildlife and obtain its approval before issuing a permit under this section. [Formerly 468.777]

468B.095 Use of sludge on agricultural, horticultural or silvicultural land. The Environmental Quality Commission shall adopt by rule requirements for the use of sludge on agricultural, horticultural or silvicultural land including, but not limited to:

(1) Procedure and criteria for selecting sludge application sites, including providing the opportunity for public comment and public hearing;

(2) Requirements for sludge treatment and processing before sludge is applied;

(3) Methods and minimum frequency for analyzing sludge and soil to which sludge is applied;

(4) Records that a sludge applicator must keep;

(5) Restrictions on public access to and cropping of land on which sludge has been applied; and

(6) Any other requirement necessary to protect surface water, ground water, public health and soil productivity from any adverse effects resulting from sludge application. [Formerly 468.778]

Note: 468B.095 was enacted into law by the Legislative Assembly but was not added to or made a part of ORS chapters 468, 468A or 468B or any series therein by legislative action. See Preface to Oregon Revised Statutes for further explanation.

(Forest Operations)

468B.100 Definitions for ORS 468B.105 and 468B.110. As used in ORS 468B.105 and 468B.110, "forestlands" and "operation" have the meaning for those terms provided in ORS 527.620. [1991 c.919 §22a]

468B.105 Review of water quality standard affecting forest operations. Upon request of the State Board of Forestry, the Environmental Quality Commission shall review any water quality standard that affects forest operations on forestlands. The commission's review may be limited to or coordinated with the triennial or any other regularly scheduled review of the state's water quality standards, consistent with ORS 468B.048, 468B.110 and applicable federal law. [1991 c.919 §23]

468B.110 Authority to establish and enforce water quality standards; limitation on authority; instream water quality standards. (1) Except as provided in subsection (2) of this section, as necessary to achieve and maintain standards of water quality or purity adopted under ORS 468B.048, the commission or department may, by rule or order, impose and enforce limitations or other controls which may include total maximum daily loads, wasteload allocations for point sources and load allocations for nonpoint sources, as provided in the federal Water Pollution Control Act (33 U.S.C. § 1321) and federal regulations and guidelines issued pursuant thereto.

(2) Unless required to do so by the provisions of the Federal Clean Water Act, neither the Environmental Quality Commission nor the Department of Environmental Quality shall promulgate or enforce any effluent limitation upon nonpoint source discharges of pollutants resulting from forest operations on forestlands in this state. Implementation of any limitations or controls applying to

Environmental Quality Commission

- Rule Adoption Item
 Action Item
 Information Item

Agenda Item D
July 7, 1995 Meeting

Title:

Proposed Revision of the Bear Creek Basin Nonpoint Source Management Implementation and Compliance Schedule

Summary:

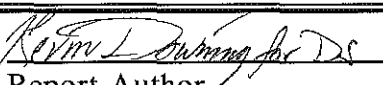
In 1989, the Environmental Quality Commission (EQC) adopted by rule total maximum daily loads (TMDLs) for phosphorus, ammonia, and biochemical oxygen demand (BOD) for Bear Creek in the Medford-Ashland area. Load allocations for nonpoint sources of pollutants were assigned to designated management agencies (DMAs) for Bear Creek. The DMAs are the cities of Ashland, Medford, Central Point, Phoenix, Talent and Jacksonville; Jackson County; the Oregon Dept. of Forestry and the Oregon Dept. of Agriculture.

In 1993, the EQC adopted the Bear Creek Nonpoint Source Implementation and Compliance Schedule for the DMAs. Although progress has been made, for a variety of reasons deadlines have been missed and a modification to the schedule is proposed.

During the public comment period in May, 1995, only the Dept. of Agriculture suggested changes to the Department's proposed schedule, most of which have been made.

Department Recommendation:

Adopt the revised Nonpoint Source Management Implementation and Compliance Schedule as shown in Attachment A.


Report Author


Division Administrator


Director

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

State of Oregon
Department of Environmental Quality

Memorandum[†]

Date: June 21, 1995

To: Environmental Quality Commission
From: Langdon Marsh, Director
Subject: Agenda Item D, July 7, 1995, EQC Meeting

Proposed revision of the Bear Creek Basin Nonpoint Source Management Implementation and Compliance Schedule

Statement of the Issue

The Nonpoint Source Management Implementation and Compliance Schedule (Schedule) is an EQC order which identifies tasks to be conducted by designated management agencies (DMAs) and dates for completion. The revised schedule (see Attachment A) is being proposed because the dates in the current schedule have passed but the tasks have not yet been completed. In addition, the Total Maximum Daily Load (TMDL) rule for Bear Creek (OAR 340-41-385) states that no activities or discharges may occur after December 31, 1994 which will cause the TMDLs to be exceeded unless authorized by the Commission or modified by an approved program plan. The revised schedule qualifies as that program plan modification.

The revised schedule will provide additional time for task completion and includes a few minor task revisions. In addition, a task is added that reflects the Oregon Department of Agriculture's (ODA) new responsibility under Senate Bill 1010 (1993) to develop Agricultural Water Quality Management Plans for TMDL basins. Attachment B provides a summary of the status of each task in the current schedule and the staff recommendation for how to proceed.

Background

TMDLs for phosphorus, ammonia and biochemical oxygen demand (BOD) were established for Bear Creek by rule in 1989. The purpose of the TMDLs is to bring Bear Creek into compliance with water quality standards for pH, dissolved oxygen and ammonia toxicity, and to protect the beneficial uses of the stream.

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

Memo To: Environmental Quality Commission
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Load allocations were assigned to DMAs for nonpoint sources of pollutants. The DMAs include the cities of Ashland, Medford, Central Point, Phoenix, Talent and Jacksonville, Jackson County, the Oregon Department of Forestry and the Oregon Department of Agriculture. The DMAs were required to develop program plans describing how they would achieve their allocation. In 1993, when the program plans were due, the Commission conditionally approved the program plans and adopted the Nonpoint Source Management Implementation and Compliance Schedule. The program plan approval was contingent on meeting the Schedule milestones.

Much activity has taken place in the basin since the TMDL rule was adopted. Many tasks in the Schedule have been started and some have been completed. Several factors have led to the fact that others remain incomplete. These include, to varying degrees: a lack of recognition as a top priority and inadequate resources on the part of both the DMAs and the Department, a lack of Department guidance and timely response to draft submittals, and, given these conditions, a significant amount of work be done within the 2 year timeframe.

Department staff feel that over the last year momentum has been building in the basin and there is movement in the right direction. We expect an increased probability of success in meeting the revised schedule due to the fact that the Department has additional regional resources to track progress and provide assistance to the DMAs, and because we have built better working with the DMAs and other local organizations. In addition, staff are optimistic that this review of the issue by the Commission and a reaffirmation of the DMA's commitment to the Commission will maintain the momentum. Finally, there is increased citizen and federal agency involvement in working to improve water quality and beneficial use protection in Bear Creek.

Authority to Address the Issue

The Implementation and Compliance Schedule is a mechanism for implementing Total Maximum Daily Loads and meeting water quality standards. Both TMDLs and water quality standards are requirements of the federal Clean Water Act which DEQ administers in Oregon on behalf of and in cooperation with the Environmental Protection Agency. The authority of the Commission to implement the federal Act and to control water pollution is found in ORS 468B.005 to 468B.035 (Water Pollution Control and the Implementation of Federal Water Pollution Control Act).

The Commission adopted the Bear Creek TMDL rule in 1989 (OAR 340-41-385, Special policies and Guidelines for the Bear Creek subbasin of the Rogue Basin).

In 1993, the Commission adopted the Bear Creek Nonpoint Source Implementation and Compliance Schedule.

Alternatives and Evaluation

1. Extend the deadlines in the schedule, providing the DMAs more time to complete the tasks, and revise the tasks as determined appropriate.

This is the alternative proposed by staff. Schedule deadlines have been extended, some minor task revisions were made, and a new task was added related to ODA's responsibility to develop an Agricultural Water Quality Management Plan. The deadlines selected were intended to provide a reasonable amount of additional time, but also to maintain pressure for progress toward achieving water quality improvement.

2. Take enforcement action for tasks that are clearly worded but not yet completed.

This alternative is not recommended at this time. Progress has been made by the DMAs and we expect it will continue. In addition, DEQ shares the responsibility for delays. Due to a lack of staff resources we have not always been timely with our response to submittals of draft materials required by the schedule. We now have a nonpoint source staff person in our Medford office who can better respond and assist the local DMAs with the TMDL implementation.

Summary of Any Prior Public Input Opportunity

There has been an opportunity for public comment and a hearing was held on May 16, 1995. The attached hearing officer's report summarizes the comment received (see Attachment E). The only comment received specifically on the revised Nonpoint Source Implementation and Compliance Schedule was from the Oregon Department of Agriculture.

ODA suggested that dates be specified to several tasks now just identified as ongoing. This change was made with a footnote; while we will evaluate progress on these tasks at the specified date, we expect the types of activity identified (i.e. education, monitoring) will need to continue beyond that date. In addition, ODA recommended some wording changes to the task related to the Agricultural Water Quality Management Plan development. We accepted most, but not all, of their suggested wording.

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Conclusions

The tasks and dates in the proposed schedule appear to be acceptable to the DMAs. If the Commission adopts the revised schedule, it will be re-evaluated again in mid-1997. Prior to that time, DEQ region staff will track implementation of the schedule and take any enforcement action they determine to be necessary.

Recommendation for Commission Action

Staff recommends that the Commission adopt the revised Nonpoint Source Management Implementation and Compliance Schedule presented in Attachment A of this report.

Attachments

- A. Proposed Action
- B. A Summary of the Status of the Bear Creek Nonpoint Source Management Implementation and Compliance Schedule and Recommendations for Revision.
- C. Hearing Officer's Report
- D. OAR 340-41-385

Reference Documents (available upon request)

- 1. Statutory Authority: ORS 468B.005 to 468B.035
- 2. Supporting Technical References: TMDL Documents
- 3. EQC Report (April 23, 1993), Review of Bear Creek (Jackson County) Nonpoint Source Control Plans and Implementation and Compliance Schedule

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July 7, 1995 Meeting
Page 5

Approved:

Section: Kevin Downing

Division: Michael Pouns

Report Prepared By: Debra Sturdevant

Phone: 229-6691

Date Prepared: June 15, 1995

DJS:DJS
E:\wp51\bear\npsstaff
June 15, 1995

June 5, 1995 ~~April 23, 1993~~

Bear Creek Basin Nonpoint Source Management
Implementation and Compliance Schedule for
Designated Management Agencies (DMAs)

Urban DMAs:

City of Ashland
City of Central Point
City of Jacksonville
City of Medford
City of Phoenix
City of Talent

Rural DMAs:

Oregon Dept. of Agriculture
Oregon Dept. of Forestry
Jackson County

The dates specified below assume adoption of the compliance schedule by the EQC at the July 7, 1995 ~~April 23, 1993~~ Commission meeting. Dates were established to allow for necessary consultation with the respective Councils of the DMAs. Any delays in EQC action or changes in dates will be communicated to the DMAs in writing. The dates are due dates by which the specified action and/or report is to be completed and, if required, submitted to the Department. All due dates are the last day of the month specified in the schedule below.

TASKS FOR ALL DMAsDATETASK**MONITORING**

Complete
~~09/30/93~~

Submit to DEQ an acceptable ambient and ~~stormwater~~ monitoring plan which identifies sites to be sampled, frequency of sampling, parameters to be measured, methods of analysis, mechanisms of reporting results to DEQ, and quality assurance mechanisms. The ambient effort is intended to characterize the conditions in Bear Creek and its tributaries. ~~The stormwater monitoring effort is intended to characterize the nature of effluent discharging from storm sewers to Bear Creek and its tributaries.~~

Complete
~~6/93~~

Submit a draft plan to DEQ for comment and begin implementation. Identify budgets necessary to carry out the plan and document availability of resources. There should be at least a sub-set of sites at which each of the following parameters are measured on at least a quarterly basis (preferably more frequently to

provide sufficient data for assessing trends): phosphorus, dissolved oxygen, pH, bacteria, and temperature.

6/30/97 ***
6/93-12/94

Continue to implement monitoring efforts while finalizing monitoring plan. After the final plan is submitted, monitoring will be on-going but the monitoring program is expected to evolve over time. Data should be evaluated on an annual basis. Results of data evaluation may be used to justify changes to the monitoring plan. Implementation of the monitoring plan may occur in phases so long as there is at least a sub-set of sites that are sampled regularly for the parameters listed above and that can be used for trending. DEQ staff will be available to assist with development of the plan and with data evaluation. DEQ may also assist with implementation by providing partial funding and/or laboratory services. But the responsibility to insure that the minimum monitoring requirements are met lies with the DMAs.

9/30/95

Submit to DEQ an acceptable stormwater monitoring plan which identifies sites to be sampled, frequency of sampling, parameters to be measured, methods of analysis, mechanisms of reporting results to DEQ, and quality assurance mechanisms. The stormwater monitoring effort is intended to characterize the nature of effluent discharging from storm sewers to Bear Creek and its tributaries. At a minimum this effort should include a representative sampling of effluent from flowing storm sewers during wet weather and during dry weather from any storm sewers found to have dry season flows. Parameters analyzed for should include phosphorus, BOD, pH, and bacteria.

PUBLIC AWARENESS

Complete
9/30/93

Develop and submit to DEQ an draft acceptable, detailed, written public awareness plan. The plan should reflect a coordinated, basin-wide effort that includes activities for all DMAs. The plan should identify specific activities/products and schedules which will be implemented prior to 12/94. The strategy should include such things as: developing

exhibits that can be placed in shopping malls, colleges, area banks, etc., media involvement -- participation in local talk shows, generation of news stories, a series of well publicized public seminars, a system for receiving public feed-back. Identify budgets and schedules, document availability of resources. In addition, identify any optional activities/products to be implemented prior to 12/94 and activities/products which will be on-going.

11/30/95 Submit a final acceptable public awareness plan.

6/30/97 ***
9/93-12/94 Implement the accepted public awareness plan.
Submit copies of all printed public awareness/education materials to DEQ as they are produced.

STREAM INVENTORIES

6/30/96
12/1/93 Conduct a Complete problem inventory of high priority sections of Bear Creek and/or its tributaries within the jurisdiction. This can be done using streamwalk methods, aerial evaluation, or other methods. Submit a report to DEQ which identifies and sets priorities for problems/locations identified that need attention/resolution. The report should include recommended course of action and schedule for action. Include such items as streambank erosion sites, pipes of unknown origin discharging to stream, illegal dump sites, sites where re-vegetation is needed, etc.

Complete 10/93 Identify areas of responsibility for each DMA.

11/30/95 11/93 Prioritize stream segments for inventorying.

6/30/96 12/93 Complete streamwalk/inventory for high priority segments. Submit report described above to DEQ.

1/31/97
12/93-12/94 Begin addressing problems identified and complete inventories for remaining segments. Submit report to DEQ identifying problems that have been addressed and schedule for addressing remaining problem sites.

6/30/97 *** Continue addressing problem sites identified.
Periodically update DEQ on progress towards addressing problem sites.

LOCAL ORDINANCES

1/31/97
9/1/94

Review existing ordinances and, if necessary, revise or adopt new ordinances to minimize the movement off site of soil, sediment, and contaminated runoff from development sites, building sites, agricultural operations, road building sites, or other sites where soils have been disturbed. Emphasis should be on prevention of erosion, rather than on control after the fact. Encourage the installation of permanent runoff treatment systems for new development.

Complete 8/93

Compile existing ordinances and provide to DEQ for comment. DEQ will comment on existing ordinances by June 30, 1995. ~~within 30 days of receiving a complete package of existing ordinances.~~

3/94

Conduct public hearings on new or modified local ordinances. Report to DEQ.

1/31/97 6/94

Adopt and enact new or modified local ordinances as necessary. Report to DEQ.

ADDITIONAL PRACTICES

11/30/96
10/1/93

~~Make selections and~~ Identify any other options, alternatives or BMPs and select those to be implemented. Develop implementation schedules for meeting TMDL requirements and maintenance of water quality. This may include, but is not limited to: selection of practices, sites and schedules for construction of treatment facilities (including pilot projects), selection and implementation schedules for flow augmentation options, ~~selection and implementation schedules for farm plan options,~~ or irrigation conversions, or other options or ~~for agricultural, other BMPs.~~

Final decision for large capital improvement projects/construction of treatment facilities may be delayed until the impact on Bear Creek of the construction of modifications to the Ashland sewage treatment plant have been evaluated and TMDLs adjusted accordingly. However, an acceptable and firm schedule for making decisions should be identified and submitted to DEQ.

TASKS FOR URBAN DMAs

DATE

TASK

STORM SEWER SYSTEMS

11/30/96
12/31/94

Investigate design and conditions of the sanitary sewer system and storm sewer system. Identify problems, develop a plan to address the identified problems, and implement the plan. Report to DEQ.

Complete 10/93

Develop and refine storm sewer and sanitary sewer system maps. Submit copies to DEQ.

1/31/96 10/93

Survey storm sewers for dry weather flows. If such flows are found, identify the sources and determine whether corrective actions are necessary. Set priorities and begin implementation of corrective actions. Report status to DEQ.

Complete 3/94

Develop and/or refine an inspection and maintenance program for the storm sewer system. Include regular cleaning of drains and catch basins.

11/30/96 12/94

Complete implementation of necessary corrective actions. Report on actions taken.

Note: Federal guidance for NPDES stormwater requirements (including monitoring requirements) for municipalities under 100,000 in population has not yet been developed. When the rules are promulgated, the above tasks will be re-evaluated by the Department, and any conflicts between the above tasks and the federal regulations will be rectified. ~~is due in October, 1993. It is anticipated that permit requirements for cities in critical basins will be similar to requirements already in existence for larger cities. Urban DMAs in the Bear Creek watershed are encouraged to begin now to investigate the nature of effluent discharging from storm sewers and report results to DEQ. At a minimum this effort should include a representative sampling of effluent from flowing storm sewers during wet weather and during dry weather from any storm sewers found to have dry season flows that are expected to continue after the summer of 1994. Parameters analyzed for should include phosphorus, BOD, pH, and bacteria.~~

TASKS FOR AGRICULTURE DMAs

DATE

TASK

CAFO

6/30/96
~~11/30/93~~

Complete inspections of all permitted CAFOs and, if needed, develop enforceable schedules that will result in all CAFOs being in compliance with permit conditions ~~prior to December 31, 1994~~. Report to DEQ identifying all permitted CAFOs, and their compliance status, and all actions taken or to be taken.

Complete 6/93

Conduct aerial surveys inspections complete.
Report to DEQ.

8/95 10/93

Conduct on-ground follow-up inspections complete.

11/30/95

Submit report to DEQ identifying all permitted CAFOs and their compliance status, and all actions taken or to be taken.

6/30/96

Develop enforceable schedules for all permitted CAFOs not in compliance with permit conditions or water quality rules that will result in compliance.

AGRICULTURAL WATER QUALITY MANAGEMENT PLAN

9/30/96

Develop an Agricultural Water Quality Management Plan for the Bear Creek basin to prevent and control water pollution from agricultural activities and soil erosion, and to achieve the water quality goals (e.g. TMDLs) and standards needed to protect the beneficial uses of Bear Creek and its tributaries (ORS 568.900-933, OAR Chapter 603, Div. 90). The plan shall include a schedule for implementation. The plan shall address non-permitted CAFOs and other agricultural activities causing or contributing to water quality problems in Bear Creek or its tributaries.

NURSERIES

Complete
~~10/01/93~~

All containerized nurseries inspected, during the irrigation season, to determine compliance with container nursery requirements. Report to DEQ identifying status of all container nurseries.

TASKS FOR JACKSON COUNTY

DATE

TASK

SEPTIC SYSTEMS

6/30/96
9/1/93

Develop and begin implementation of a program to identify and correct failing septic systems. Submit a report to DEQ identifying the program elements, schedule, budget requirements, and documentation of availability of resources.

COUNTY ROAD DITCHES

1/31/96
9/1/93

Develop and begin implementation of a program to maintain county roadside ditches in such a way to minimize transport of sediment, nutrients, and other pollutants to waters of the state. Include provisions for testing of effective ~~to establish and maintain~~ vegetative cover(s) to be planted on ~~entire~~ county road right-of-ways. Where possible, convert ditches to vegetated swales and direct road ditch discharges into passive treatment facilities (infiltration basins, wet ponds, detention ponds, etc.) prior to entering waters of the state. Examine whether current herbicide application can be minimized. Submit an acceptable report to DEQ identifying the program elements, schedule, budget requirements and documentation of availability of resources.

1/31/97

Report to DEQ on the effectiveness of program implementation to date, and additional ditch maintenance practices developed.

*** These tasks are expected to be ongoing beyond June 30, 1997, but progress will be evaluated at this time. The tasks are expected to continue until the TMDLs and water quality standards are achieved and beyond, at some level, in order to maintain that achievement.

A Summary of the Status of the Bear Creek Basin Nonpoint Source Management Implementation and Compliance Schedule (1993), and Recommendations for Revision

The following is a summary of the tasks assigned to the various designated management agencies (DMAs) in the Nonpoint Source Management Implementation and Compliance Schedule adopted by the EQC in 1993. All the tasks listed in the schedule were to have been completed by December 31, 1994, but this date is passed and many of the tasks are not yet completed. Therefore, a brief progress report on each task and recommendations on how to proceed are included below (see also the proposed revised Schedule shown in Attachment A). The DMAs include the cities of Ashland, Medford, Phoenix, Talent, Central Point and Jacksonville, Jackson County, the Oregon Department of Agriculture and the Oregon Department of Forestry.

1) MONITORING (all DMAs)

Task 1. Submit to DEQ an acceptable ambient and stormwater monitoring plan.

Status: The ambient sampling plan is complete. A stormwater sampling plan is not included.

Recommendation: Develop a stormwater monitoring plan consistent with EPA guidelines for NPDES stormwater permits.

Task 2. Submit a draft plan to DEQ for comment and begin implementation.

Status: Complete

Task 3. Implement monitoring efforts while finalizing the monitoring plan.

Status: Ongoing

Recommendation: Phase in new sites and analytical tests as training allows. Review data from this season in November, 1995 so that DMAs may discuss program before funding for 1996 is allocated. Continue to develop Quality Assurance (QA) plan in cooperation with DEQ laboratory. Document sampling sites, laboratory procedures, and laboratory results in acceptable field/laboratory notebook. Update notebook(s) as the monitoring effort evolves.

Discussion

The Rogue Valley Council of Governments (RVCOG) has been monitoring water quality in the Bear Creek Basin since 1978. The RVCOG will continue to do the NPS sampling and lab analysis under contract to the TMDL DMAs. The DMAs have signed a monitoring contract and have committed a total of \$24,500 for the 1995 calendar year. The current NPS monitoring effort will expand the existing RVCOG network in the number of sites sampled, the frequency of data collection in the summer, will increase the number of parameters sampled and will use better instrumentation for testing. Training in field sampling and laboratory analysis was done in February and March of 1995 by DEQ staff.

The Oregon Department of Forestry has elected to continue an existing monitoring effort in the Bear Creek watershed rather than contribute financially to the RVCOG program. Data from their monitoring is being shared with the other DMAs. Their data is from sites high in the watershed and enhances the total monitoring effort.

2) PUBLIC AWARENESS (all DMAs)

Task 1. Develop and submit to DEQ an acceptable, detailed written public awareness plan.

Status: In progress. A draft plan was submitted to DEQ in September, 1993 and is awaiting review and comment by DEQ.

Recommendation: DEQ comment by July 31, 1995. Provide the DMAs additional time to finalize the plan.

Task 2. Implement the accepted public awareness plan.

Status: Ongoing, parts of the plan have been implemented.

Recommendation: Continue to identify and perform activities as outlined in the public awareness plan.

Discussion

The public awareness plan has not yet been finalized in part because DEQ has not yet responded to the draft submittal. DEQ now has temporary staff dedicated to TMDL implementation in the Bear Creek basin that is working with the RVCOG and the DMAs to provide that feedback and obtain a final public awareness plan.

Although the public awareness plan is not finalized, numerous active public awareness activities are being conducted in the schools and for the general public. Several high schools and Southern Oregon College are involved in projects ranging from sampling and analysis, to

riparian area plantings and creek cleanup days, to developing educational materials for the community. See the July 6 EQC information item report on Bear Creek for more detail.

The Bear Creek Watershed Council (local watershed council recognized by SWMG) has established a public information and education subgroup. Their first goal is to establish a partnership of area schools for water quality education. Each of the five basin high schools will develop expertise in one facet of water quality monitoring. The RVCOG, through an AmeriCorp position, is supporting a full time coordinator for this group.

In addition, the Watershed Enhancement Team (WET) from Headwaters (a local environmental group), the Bear Creek Watershed Council, RVCOG, the cities of Ashland, Medford, Phoenix, Jacksonville and Talent, Southern Oregon State College and the Natural Resources Conservation Service have conducted many public information activities, including sending information to residents in utility bills or as door hangers and conducting a variety of town meetings, workshops and conferences.

3) STREAM INVENTORIES (all DMAs)

Task 1. Complete a problem inventory for the high priority sections of Bear Creek and its tributaries. Submit a report to DEQ which identifies and sets priorities for the problems/locations identified that need attention/resolution.

- a. Identify area of responsibility for each DMA.

Status: Complete

- b. Prioritize stream segments for inventory.

Status: In Progress

- c. Complete streamwalk/inventory for high priority segments and submit report to DEQ.

Status: In progress.

Recommendation: Provide additional time to complete this task.

Task 2. Begin addressing problems identified and complete inventories for remaining segments. Submit report to DEQ identifying problems that have been addressed and schedule for addressing remaining problem sites.

Status: Not Begun.

Recommendation: Move program from data gathering phase (task 1) to problem resolution phase (task 2). Provide additional time for this task and request progress updates on addressing problems sites be provided to DEQ periodically.

Discussion

RVCOG is coordinating collection of data sets for development into Geographic Information System (GIS) data layers. At the time of the original Schedule, GIS technology was not widely available. This technology has matured and is a tool that can be used to prioritize and display problem segments. RVCOG would then contact responsible DMAs for problem resolution. RVCOG should share GIS compatible data with DEQ.

The cities of Central Point, Phoenix and Jacksonville have photo and/or video documented streamwalks of Bear Creek and tributaries within their city limits.

The RVCOG has funded the following projects:

- Jackson Street dam assessment. This was a successful grant proposal to the Watershed Health program for \$400,000 to remove an irrigation dam in downtown Medford. The dam has been shown to limit fish passage and to raise stream temperatures.
- Bear Creek Habitat and Temperature Study (1991). Investigation by Oregon Department of Fish and Wildlife, Rogue River National Forest and RVCOG.
- Aerial photography survey of streamside habitat of agricultural areas in the Bear Creek Basin. Data are being coded into GIS format for analysis on problem areas for instream temperature, sedimentation/land stability and irrigation runoff (ongoing).
- Instream flow study on Bear Creek. Weekly discharge measurements at 14 Bear Creek sites from June to December. Basic flow information to calibrate computer models and calculate pollution loadings. By far the most complete study on how agricultural irrigation practices impact the natural flow conditions in Bear Creek (results not yet published).
- A survey of fish spawning areas in Bear Creek. Three one-mile segments were surveyed three times for spawning redds (ongoing for next five years).

The Natural Resources Conservation Service office is developing a proposal for a USDA PL566 project to be done in conjunction with the three irrigation districts in the basin. One goal of the project is to increase the efficiency of water delivery and use with a specific objective to maintain a minimum of 10 cfs of flow in Bear Creek throughout the summer months. Another goal of the project is to provide water quality benefits to Bear Creek through increase instream flows and decreased agricultural runoff. The NRCS has encoded several GIS format data layers, including soil type, irrigation district service areas,

sprinkler/flood irrigation areas and crop type areas. They have also done tributary discharge monitoring for calibration of a basin flow model.

The Rogue River National Forest is currently conducting a watershed assessment for Neil, Ashland and Upper Wagner Creeks. The assessment will identify specific areas where roads require new culverts, new engineering or can be permanently closed. The Forest Service and RVCOG are currently sharing GIS data layers.

4) LOCAL ORDINANCES (all DMAs)

Task 1. Review existing ordinances and, if necessary, revise or adopt new ordinances to minimize the movement off site of soil, sediment and contaminated runoff.

- a. Compile existing ordinances and provide to DEQ for comment.

Status: Complete. Awaiting review and comment by DEQ.

- b. Conduct public hearings on new or modified ordinances. Report to DEQ.

Status: Not done.

Recommendation: DEQ comment by July 31, 1995. Provide additional time to complete this task.

- c. Adopt and enact new or modified ordinances as necessary. Report to DEQ.

Status: Not done.

Recommendation: Provide additional time to complete this task.

Discussion

A review of local ordinances from each of the DMAs was completed and a report submitted by the RVCOG in September of 1993. The report grouped the ordinances by the following categories: Roads; Grading, Excavating and Clearing; Buffering, Covering and Screening; Special Design Considerations; Standards for Forest Use; Standard for Agricultural Use; Reserves; Conditional Use; Destination Resorts; Floodplain; Drainage, Stormwater and Sewage; Nuisances; and Zoning. Not every DMA has an ordinance for each of these categories.

Following the initial review report, little additional work has occurred. No formal response to this document has been provided by DEQ. Review and response to this document is

currently being done by western region.

5) ADDITIONAL PRACTICES (all DMAs)

Task 1. Identify any other options, alternatives or management practices to be implemented and develop an implementation schedule. This may include, but is not limited to: treatment facilities, flow augmentation, farm plans, irrigation conversions, studies of irrigation delivery and/or farm water use efficiencies or other agricultural or Best Management Practice (BMP) options.

Status: Ongoing.

Recommendation: Have affected DMAs continue to work closely with DEQ regional staff in Medford.

Discussion

One option being considered has been put forward by the City of Medford. Their plan is to pump effluent from their wastewater treatment plant to provide water for two of the basin's irrigation districts. In exchange for this supply of water, the irrigation districts would exchange the stored water right for a 10 cfs minimum stream flow year round in Bear Creek. This is 5-10 times the flow seen in the lower portion of Bear Creek in 1994. The increased base flow would help to decrease instream temperatures. Placing the effluent upon agricultural crops would keep nutrients out of the Rogue River. The city has held a series of "stakeholder" meetings, and is now seriously seeking both funding and comments from regulatory agencies.

The City of Ashland has signed on as one of the interested stakeholders to Medford's plan. They are considering either sending their summertime effluent directly to the Medford plant or sending it to the third irrigation district in the basin. If properly managed, either of these two options would meet the TMDL requirements and could further enhance Bear Creek instream flows.

6) SEWER SYSTEMS (Urban DMAs)

Task 1. Develop and refine storm and sanitary sewer maps and submit copies to DEQ.

Status: Complete.

Task 2. Survey storm sewers for dry weather flows, identify sources and develop plan for correction. Report to DEQ.

Status: In progress

Recommendation: Provide additional time to complete this task.

Task 3. Develop and/or refine an inspection and maintenance program for the storm sewer systems.

Status: Complete

Task 4. Complete implementation of corrective actions and report to DEQ on actions taken.

Status: Not begun.

Recommendation: Provide additional time to complete this task.

Discussion

All of the stormwater systems have been mapped. Some stormwater monitoring has been done by Medford, Jacksonville and Ashland. One sanitary/stormwater system crossover link was identified and fixed by Medford. The purpose of this task is to minimize sediment, nutrients, bacteria and other pollutants that make their way to streams via the stormwater system.

7) CAFO PROGRAM (Oregon Dept. of Agriculture)

Task 1. Inspect all permitted CAFOs.

Status: Aerial survey complete. On the ground inspections in progress.

Recommendation: Provide additional time to complete inspections.

Task 2. Report to DEQ identifying all permitted CAFOs and their compliance status, and all actions taken or to be taken.

Status: In progress.

Recommendation: Provide additional time. Request that reports be sent to the Western Region staff in Medford by November 30, 1995.

Task 3. As needed, develop enforceable schedules that result in all permitted CAFOs being in compliance with permit conditions prior to December 31, 1994.

Status: In progress.

Recommendation: Provide additional time to complete this task. Updated and enforceable waste management plans are needed. ODA shall place all permitted CAFOs not in compliance with their permits or water quality laws on an enforceable schedule of correction by June 30, 1996.

Discussion

The Oregon Department of Agriculture has done an aerial survey of Jackson County. Three permitted CAFOs were identified within the Bear Creek basin and two of these have had follow-up ground inspections to date. The Department has not yet received a report from ODA on the compliance status and actions taken or to be taken for these three CAFOs and none of them are yet on enforceable schedules of correction with ODA.

8) NURSERY PROGRAM (Oregon Dept. of Agriculture)

Task 1. Inspect all container nurseries during the irrigation season to determine compliance with the requirements. Report to DEQ on the status of all container nurseries.

Status: Completed.

Discussion

ODA has done an aerial survey of the basin. One container nursery was identified and according to a report by the ODA, this nursery was inspected and is in full compliance.

The Department recommends that the USFS nursery and the OSU Experiment station develop a cooperative plan, explore new BMPs and distribute findings through OSU Extension.

9) SEPTIC SYSTEMS (Jackson County)

Task 1. Develop a program to identify and correct failing septic systems. Submit a report to DEQ identifying the program elements, schedule, budget requirements and documentation of resource availability.

Status: In progress.

Recommendation: Provide additional time to complete the task.

Task 2. Begin implementation of the program submitted under task 1.

Status: Not Begun.

Recommendation: Provide additional time to begin implementation.

Discussion

The county submitted a report on their septic system program in September of 1993 that did not include targets for reducing pollution from septic systems and did not identify a budget or schedule. The county is awaiting data from the nonpoint monitoring program to identify areas of concern.

The Department recommends that the county expand its existing complaint driven program and begin to use nonpoint source monitoring data to identify areas of potential septic system problems. In addition, the County should consider special "mini-studies" using existing monitoring equipment to follow up on these areas when identified.

10) COUNTY ROAD DITCHES (Jackson County)

Task 1. Develop a program to maintain county roadside ditches in such a way as to minimize transport of sediment, nutrients and other pollutants to waters of the state. Submit a report to DEQ identifying the program elements, schedule, budget requirements and documentation of resource availability.

Status: Not yet begun.

Recommendation: Provide additional time for this task and make a few changes in the wording of the task as follows: ask for testing the effectiveness of different vegetative substrates for filtering/trapping pollutants within the ditches, and examine whether current herbicide application can be minimized.

Task 2. Begin to implement the program developed in task 1.

Status: Not yet begun.

Recommendation: Provide additional time to begin implementation and request a report on the effectiveness of the program and additional ditch maintenance practices that may be developed.

Discussion

Jackson County submitted a document containing a short section on current (1992) roadside maintenance practices. Very little was said about future goals or targets for reducing nonpoint source pollution from roadside ditches. DEQ Regional staff need to emphasize this task in the immediate future.

DEQ suggests that the County work with urban DMAs and irrigation districts to identify and/or map the roadside ditch network in the basin, the points where ditch runoff enters Bear Creek or a tributary, and areas where ditch runoff could be diverted into passive treatment areas.

ADDITIONAL TASK - AGRICULTURAL WATER QUALITY MANAGEMENT PLAN

The Department recommends that one task not in the 1993 Implementation and Compliance Schedule be added. The task is the development of an Agricultural Water Quality Management Plan for the Bear Creek basin by Department of Agriculture, as required by state law (SB 1010). The purpose of the plan is to reduce agricultural pollution and to achieve the TMDLs and water quality standards. This plan should address non-permitted CAFOs and other agricultural activities that are causing or contributing to water quality problems in Bear Creek or its tributaries.

State of Oregon
Department of Environmental Quality

Memorandum

Date: June 5, 1995

To: Environmental Quality Commission
From: Gary Arnold Western Region - Medford, Water Quality
Subject: Presiding Officer's Report for Public Hearing

Hearing Date and Time: May 16, 1995, 7:00 pm
Hearing Location: Jackson County Auditorium, Medford

Title of Proposals: Proposed Revision of the Bear Creek Basin Nonpoint Source Management Implementation and Compliance Schedule; and Commission Authorization for Continue Discharges into Water of the Bear Creek Subbasin (Rogue River Basin) with Specified Conditions

The hearing on the above proposals was convened at 7:05 pm. People were asked to sign witness registration forms if they wished to present testimony. People were also advised that the hearing was being recorded and of the procedures to be followed.

Six people were in attendance. Three people signed up to give oral testimony and one person submitted written testimony (attached) without speaking. Additional written comment was submitted during the comment period, which is also attached.

Prior to receiving testimony, Dennis Belsky and Gary Arnold briefly explained the specific proposals, the reasons for the proposals, and responded to questions from the audience.

People were then called to testify in the order of receipt of witness registration forms and presented testimony as noted below. The hearing was closed at 8:00 pm.

None of the testimony received, either oral or written, was in opposition to the rules under consideration by the commission in this package. However, several points of possible interest to the commission are reported below.

Memo To: Environmental Quality Commission

June 5, 1995

Presiding Officer's Report on Discharges to Bear Creek, May 16, 1995 Hearing

TESTIMONY OF MR. RON ROTH.

Mr. Ron Roth is a part owner of Eagle Mill Farm near Ashland and owner of two restaurants in Ashland. Mr. Roth expressed concerns about how the Waste Load Allocations (WLAs) for phosphorus were calculated for 1) the City of Ashland's STP and 2) for agricultural practices throughout the basin. He noted that phosphorus loading would be reduced by 98% according to his calculations. He believes that the Total Maximum Daily Load (TMDL) limits on point source and nonpoint sources for phosphorus are too strict. He noted that agriculture's phosphorus limit will be held to 0.76 pounds of phosphorus per day in the lower seven miles of Bear Creek. As an example, he exhibited a five pound box of rhododendron fertilizer with 15% phosphate content, which he calculates to be equal to the allowable per day agricultural loading for phosphorus in lower Bear Creek during the irrigation season.

Mr. Roth noted that Bear Creek currently is fishable (except for Oregon Department of Fish and Wildlife restrictions) and swimmable now, and that the coliform problem came from septic tank problems that have been fixed.

Mr. Roth supports the removal of chlorine and ammonia toxicity from Ashland's municipal effluent. He also supports the construction of a pilot project for the testing of wetlands as a solution to meeting the City of Ashland's effluent limits.

Mr. Roth believes that DEQ only worries about water quality and that water quantity is not taken into consideration. He observed that 95% of the flow of Bear Creek is removed from the stream by the time it passes the Jackson Street Dam in Medford (the last of the three irrigation diversion dams on Bear Creek). He stated that Bear Creek is the most efficient irrigation canal in the valley; it is at the lowest point and that large stretches flow through bedrock which does not allow loss through leakage. Because of this, he stated that the water quality should not have to meet standards except those relating to irrigation canals. He stated that DEQ should look at Bear Creek as it is rather than how a computer model suggests it could be. Mr. Roth also expressed his interest in being shown how the DEQ applied the water quality model to set the Bear Creek WLAs.

Mr. Roth stated that perhaps DEQ should consider rethinking how TMDLs are set, rather than just playing to the regulations. He quoted a DEQ fact sheet about the TMDL process that stated that "DEQ WILL (his emphasis) modify TMDLs where appropriate".

Memo To: Environmental Quality Commission
June 5, 1995
Presiding Officer's Report on Discharges to Bear Creek, May 16, 1995 Hearing

Mr. Roth also stated throughout the testimony that his economic livelihood was directly dependant on his water right from Bear Creek and that during part of the year the flow in Bear Creek is made up almost entirely of Ashland municipal effluent.

Mr. Roth also submitted written testimony during the comment period (attached).

TESTIMONY OF MR. JOHN S. BILLINGS

Mr. Billings has farmed his land on the outskirts of Ashland for the last 70 years. The property has been owned by his family for 150 years. Mr. Billings is currently the Chair of the Jackson County Soil and Water District (JCSWD).

Mr. Billings supported Ron Roth's comment that much of the streambed of Bear Creek is bedrock.

Mr. Billings supports the option of effluent and sludge from the Ashland STP being used to grow hay and grass on this property. He stated that building a golf course on his pasture land, along with a trade of water rights between the City of Ashland and Mr. Billings, would be the very best way to provide Bear Creek with cleaner water than exists today.

As Chair of the JCSWD, Mr. Billings has supported several plans that would increase the minimum flows in Bear Creek. He stated that this additional water is important for the dilution of sewer effluent and septic tank runoff. His efforts through JCSWD are aimed at reducing irrigation runoff from fields by switching from flood irrigation to sprinkler irrigation to the maximum extent possible. Mr. Billings asked for the continued cooperation of DEQ in assisting these efforts.

Mr. Billings then addressed two comments found on page 4 of attachment B (the Status Summary document for the Nonpoint Source compliance schedule). In regards to the paragraph about the Instream Flow Study on Bear Creek he commented on the passage which reads "by far the most complete study on how agricultural irrigation practices disrupt the natural flow conditions in Bear Creek". Mr. Billings stated that perhaps that was an ill-advised statement because sometimes the natural flows are zero. His second comment was in support of the statement at the very bottom of page 4 that "Increased efficiency also equates to decreased agricultural runoff, which will further benefit water quality (in Bear Creek)."

Memo To: Environmental Quality Commission

June 5, 1995

Presiding Officer's Report on Discharges to Bear Creek, May 16, 1995 Hearing

Mr. Billing wound up his remarks with these thoughts. Public bodies, like DEQ should not hold farmers to unnatural and uneconomic rules and regulations unless 1) the farmer can be proved negligent or 2) it can be proved to Mr. Billing's satisfaction that the water quality is "harmful to body or soul". Water is owned by the farmers, and should be used, if available in this order: 1) For Humans, 2) For livestock or wildlife, 3) For the land and finally, 4) For recreation. The farming community should not be held responsible for providing water as stated in 3 and 4 above. Farmers are the original natural resource people.

Mr. Billings did not submit written remarks.

TESTIMONY OF MR. BOB MORRIS

Mr. Morris is the regional engineer for the Boise Cascade industrial facility located in Medford.

Mr. Morris supports the policy of allowing Boise Cascade to continue to discharge while DEQ regional and headquarters staff complete the review of the Boise Cascade program plan and complete the NPDES permit renewal process for the Medford facility.

Mr. Morris stated that Boise Cascade wants to continue to support DEQ's efforts to clean up Bear Creek as they have supported clean air efforts in the past.

Mr. Morris concluded his remarks by stating that Boise Cascade supports the DEQ plans presented for comment in this package.

Mr. Morris did not present written testimony.

WRITTEN TESTIMONY

Written comment (attached) was submitted by:

Mr. Glen R. Patrick, Environmental Chemist for the Boise Cascade Medford facility,

Mr. Ron Roth, Eagle Mill Farm

Mr. Mike Wolf, Oregon Department of Agriculture



Boise Cascade

Timber and Wood Products Division

Environmental and Energy Services
P.O. Box 8328
Boise, Idaho 83707-2328

May 16, 1995

Mr. Jon Gasik
Department of Environmental Quality
201 W. Main
Suite 2-D
Medford, OR 97501

**RE: COMMENTS FOR PROPOSED COMMISSION AUTHORIZATION
FOR CONTINUED DISCHARGES INTO WATERS OF THE BEAR
CREEK SUBBASIN (ROGUE RIVER BASIN) WITH SPECIFIED
CONDITIONS**

Dear Mr. Gasik

Boise Cascade's comments to the proposed actions referenced above are as follows:

- 1) Boise Cascade fully supports the Department's "Proposed Commission Authorization for Continued Discharges into waters of the Bear Creek subbasin (Rogue River Basin) with Specified Conditions."
- 2) The program plan submitted to the Department by Boise Cascade on May 22, 1991, requested an increase of the waste load allocation (WLA) for our Plywood facility on North Pacific Highway. In that plan, we noted that the Department proposed WLA was too restrictive because it was based on invalid data. We continue to believe that the information and arguments presented in the program plan are reasonable and valid.
- 3) The TMDL currently proposed for Industry is based on log pond discharges from three mills, Boise Cascade, Medco, and Kogap. Boise Cascade is the only remaining mill that discharges to through an NPDES outfall. We request that the WLA for Boise Cascade be increased as appropriate to account for the reduced WLA from these other sources.

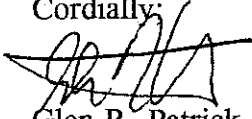
Boise Cascade welcomes the opportunity to comment on the above referenced action by the Department and the Commission. We believe that it is important that rules like

Jon Gasik
May 16, 1995
Page 2

the total maximum daily load (TMDL) must be developed as a result of constructive and cooperative efforts between industry and public interest groups. We also believe it is very important that the Department recognize that solutions to difficult technical issues (such as water quality in the Bear Creek) must provide for reasonable and achievable requirements for Industry.

If you have questions, please call me at (208) 384-6454.

Cordially:



Glen R. Patrick
Environmental Chemist

GRP/hre

cc: Garrett Andrew
Bob Morris



Eagle Mill Farm

Organic Produce

100 Eagle Mill Rd., Ashland, Oregon 97520

May 19, 1995


Dear DEQ,

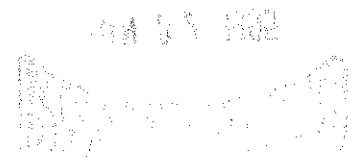
The purpose of this letter is to follow up my oral testimony given at the public hearing in Medford on Tuesday May 16, 1995.

I have several concerns about the TMDL process as applied to the Bear Creek Basin.

1. The DEQ does not consider water quantity, only water quality. Even though more than 95% of the water in Bear Creek was removed by irrigators last summer, DEQ maintains what seems like a very hard line about return flows. More than one DEQ employee has told me that Bear Creek would be better off with no flow than with treated effluent from the Ashland WWTP or return flow from irrigation canals.
2. Bear Creek is an irrigation canal. It is the most efficient irrigation canal in the basin. Please refer to testimony given by John Billings at last Tuesday's hearing.
3. What is Bear Creek's "natural" flow? As Mr. Billings pointed out in his testimony, Bear Creek historically went dry in the summer before Valley irrigators built the current reservoir and canal system. The Bear Creek flow is controlled and unnatural.
4. What is Bear Creek's "natural" background phosphate level? It is my understanding that testing was done by Gary Arnold of DEQ and other parties after irrigation was shut off last fall. What were the results of these tests?
5. The idea of using effluent treated to Class 4 level from Medford's WWTP has my support. The problem is, what happens at the end of the canal? I have heard and read conflicting DEQ responses to this question. I've heard "It's the irrigator's problem." I've heard "I don't know." "Maybe they'll put in a wetlands." I've heard or possibly even read that EQC might grant an exception. I don't see how DEQ can expect the City of Ashland to make an informed choice on our options until we know the answer to the question "What happens at the end of the canal?" My personal suggestion is that both the City of Ashland treated effluent and irrigation return flows be subject to similar reasonable nutrient/pollutant levels and that the water remain in Bear Creek.

Sincerely,


Ronald E. Roth
General Manager, Eagle Mill Farm



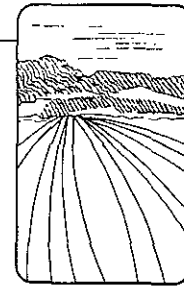
May 18, 1995

RECEIVED

MAY 22 1995

Gary Arnold
DEQ Medford Office
201 W Main St, Suite 2-D
Medford, OR 97501

Dept. Environmental Quality
MEDFORD



Oregon
Department
of Agriculture

Dear Gary:

Following is our response to your solicitation for written comments on proposed revisions to the Bear Creek Basin Nonpoint Source Management Implementation and Compliance Schedule for Designated Management Agencies. It is our understanding that the comment period closes on May 19, 1995.

First, some general comments:

- 1) We recommend that language be clarified which asserts completion of specific tasks as originally posed, and inclusion of any specific additional tasks which are needed to address outstanding issues. It seems awkward to revise/update a completion date by stating that the task is complete, and then changing the original task language. This occurs in a number of areas for DMA tasks as well as agricultural tasks.
- 2) In several areas of the Implementation and Compliance Schedule, tasks are listed as ongoing tasks. We recommend that there not be open-ended dates in the schedule, but rather, there be a date identified through which this Implementation and Compliance Schedule will be effective.

Specific comment:

- 1) Under "TASKS FOR AGRICULTURE DMAs, AGRICULTURAL WATER QUALITY MANAGEMENT PLAN", we suggest the following change to reflect language authorizing our department to develop such a plan:

"Develop an Agricultural Water Quality Management Plan for the Bear Creek basin to prevent and control water pollution from agricultural activities and soil erosion and to achieve the water quality goals and standards necessary to protect designated beneficial uses related to water quality in Bear Creek and its tributaries (ORS 568.900-933, OAR Chapter 603, Div. 90). The plan shall include a schedule for implementation. The plan shall address non-permitted CAFOs and other agricultural activities identified as causing or contributing to beneficial use impairment of Bear Creek or its tributaries."

We appreciate the opportunity to comment on the proposed changes in the schedule, and look forward to working with you and the other Designated Management Agencies in conducting water quality improvement activities in the Bear Creek basin.

Sincerely,

Michael J. Wolf
Project Coordinator
Natural Resources Division
503-986-4711 / 503-986-4730 FAX

John A. Kitzhaber
Governor



cc: John Billings, Jackson Soil and Water Conservation District
Debra Sturdevant, DEQ Portland Office

635 Capitol Street NE
Salem, OR 97310-0110

**OREGON ADMINISTRATIVE RULES
CHAPTER 340, DIVISION 41 — DEPARTMENT OF ENVIRONMENTAL QUALITY**

(d) Industrial cooling waters containing significant heat loads shall be subjected to offstream cooling or heat recovery prior to discharge to public waters;

(e) Positive protection shall be provided to prevent bypassing of raw or inadequately treated industrial wastes to any public waters;

(f) Facilities shall be provided to prevent and contain spills of potentially toxic or hazardous materials and a positive program for containment and cleanup of such spills should they occur shall be developed and maintained.

Stat. Auth.: ORS Ch. 468

Hist.: DEQ 128, f. & ef. 1-21-77

Special Policies and Guidelines

340-41-385 In order to improve water quality within the Bear Creek subbasin to meet existing water quality standards for dissolved oxygen and pH, the following special rules for total maximum daily loads, waste load allocations, load allocations, and program plans are established.

(1) After the completion of wastewater control facilities and program plans approved by the Commission under this rule and no later than December 31, 1994, unless otherwise modified by program plans no activities shall be allowed and no wastewater shall be discharged to Bear Creek or its tributaries without the authorization of the Commission that cause the following parameters to be exceeded in Bear Creek:

**Low-Flow Season
Approximately**

May 1 through November 30*

Ammonia Nitrogen Nitrogen as N (mg/l)	Instream Five-Day Biochemical Oxygen Demand (mg/l) ¹	Total Phosphorus as P (mg/l)
0.25	3.0	0.08

**High Flow Season
Approximately**

December 1 through April 30*

Ammonia Nitrogen Nitrogen as N (mg/l)	Instream Five-Day Biochemical Oxygen Demand (mg/l) ²
1.0	2.5

¹As measured at the Valley View Road Sampling Site. For the purposes of waste load allocations, the biochemical oxygen demand is calculated as the ammonia concentration multiplied by 4.35 and added to the measured effluent biochemical oxygen demand.

²Median value as measured at the Kirtland Road sampling site.

*Precise dates for complying with this rule may be conditioned on physical conditions, such as flow and temperature, of the receiving stream and shall be specified in individual permits or memorandums of understanding issued by the Department.

(2) The Department shall before September 30, 1990 distribute initial waste load and load allocations to point and nonpoint sources in the basin. These loads are interim and may be redistributed upon conclusion of the approved program plans;

(3) Before October 21, 1989, the City of Ashland shall submit to the Department a program plan and time schedule describing how and when they will modify their sewerage facility to comply with this rule and all other applicable rules regulating waste discharges;

(4) Before May 25, 1991, the industries permitted for log pond discharge, Boise Cascade Corporation, Kogap Manufacturing Company, and Medford Corporation shall submit program plans to the Department describing how and when they will modify their operations to comply with this rule and all other applicable rules regulating waste discharge;

(5) Before June 1, 1992, Jackson County and the incorporated cities within the Bear Creek subbasin shall submit to the Department a program plan for controlling urban runoff within their respective jurisdictions to comply with these rules;

(6) Before June 1, 1992, the Departments of Forestry and Agriculture shall submit to the Department program plans for achieving specified load allocations of state and private forest lands and agricultural lands respectively;

(7) Program plans shall be reviewed and approved by the Commission. All proposed final program plans shall be subject to public comment and hearing prior to consideration for approval by the Commission.

Stat. Auth.: ORS 468.710 & 468.735

Hist.: DEQ 17-1989, f. & cert. ef. 7-31-89; DEQ 40-1990, f. & cert. ef. 11-15-90

Willamette Basin

Beneficial Water Uses to be Protected

340-41-442 Water quality in the Willamette River Basin (see Figures 1 and 7) shall be managed to protect the recognized beneficial uses as indicated in Table 6.

Stat. Auth.: ORS Ch. 468

Hist.: DEQ 128, f. & ef. 1-21-77

Water Quality Standards Not to be Exceeded (To be Adopted Pursuant to ORS 468.735 and Enforceable Pursuant to ORS 468.720, 468.990, and 468.992)

340-41-445 (1) Notwithstanding the water quality standards contained below, the highest and best practicable treatment and/or control of wastes, activities, and flows shall in every case be provided so as to maintain dissolved oxygen and overall water quality at the highest possible levels and water temperatures, coliform bacteria concentrations, dissolved chemical substances, toxic materials, radioactivity, turbidities, color, odor, and other deleterious factors at the lowest possible levels.

(2) No wastes shall be discharged and no activities shall be conducted which either alone or in combination with other wastes or activities will cause violation of the following standards in the waters of the Willamette River Basin:

(a) Dissolved oxygen (DO):

(A) Multnomah Channel and main stem

Environmental Quality Commission

- Rule Adoption Item
 Action Item
 Information Item

Agenda Item D-1
July 7, 1995 Meeting

Title:

Proposed Authorization for Continued Point Source Discharges into Waters of the Bear Creek Subbasin (Rogue Basin) with Specified Conditions

Summary:

In 1989, the Environmental Quality Commission (EQC) adopted by rule the Special Policies and Guidelines for the Bear Creek subbasin of the Rogue Basin. Total maximum daily loads (TMDLs) for ammonia, chlorine, phosphorus, and biochemical oxygen demand (BOD) were established, and wasteload allocations (WLAs) were given to the City of Ashland sewage treatment plant and four log pond dischargers. No discharges which would cause the TMDL to be exceeded were to be allowed after December 31, 1994 unless authorized by the EQC.

The City of Ashland has not met the schedule of tasks approved by the EQC in 1990 and has exceeded the TMDL after December 31, 1994. The City is now under an Order with the Department, and the EQC must act if exceedances of the TMDL are to be allowed under the schedule established in the Order.

The only logpond which continues to discharge is Boise Cascade. Boise has proposed a modification of their WLAs and a discharge management plan. EQC action is necessary to allow Boise to continue to discharge while the Department considers these modifications.

Department Recommendation:

Adopt Commission Orders for the City of Ashland and Boise Cascade as shown in Attachments A and B.


Report Author


Division Administrator


Director

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

State of Oregon
Department of Environmental Quality

Memorandum[†]

Date: June 21, 1995

To: Environmental Quality Commission
From: Langdon Marsh, Director
Subject: Agenda Item^{D-1}, July 7, 1995, EQC Meeting

Proposed Commission Authorization for Continued Point Source Discharges into Waters of the Bear Creek subbasin (Rogue Basin) with Specified Conditions

Statement of the Issue

The Bear Creek Total Maximum Daily Load (TMDL) rule (OAR 340-41-385(1)) states that no discharges may occur after December 31, 1994 which will cause the TMDLs to be exceeded unless the program plan is modified or unless authorized by the Commission. December 31, 1994 has passed and the TMDLs continue to be exceeded. Therefore, further action is needed to comply with this rule. Staff recommend that the Commission adopt the Orders shown in Attachments A & B which authorize continued discharge with specified conditions.

Background

TMDLs for ammonia, chlorine, phosphorus, and biochemical oxygen demand (BOD) were established for Bear Creek by rule in 1989. The purpose of the TMDLs is to bring Bear Creek into compliance with water quality standards for pH, dissolved oxygen, chlorine toxicity and ammonia toxicity in order to protect the beneficial uses of the stream. Point sources that received wasteload allocations (WLAs) include the City of Ashland (Ashland) sewage treatment plant and four log pond dischargers. Only one of the four logponds continues to discharge, the Boise Cascade North Medford Plywood Mill (Boise).

The TMDL rule required the City of Ashland to submit a program plan and time schedule to the Department describing how and when they would modify their sewerage facility to comply with the TMDL and other waste discharge rules. The City submitted

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a draft program plan which was conditionally approved by the Commission in 1990. Ashland did not meet the schedule in the approved program plan and was put under a Stipulated and Final Order (SFO). In the fall of 1993, however the Director of DEQ by letter waived Ashland's obligation to comply with the SFO for an indefinite period of time. Staff recollection is that this was done to allow the City to explore options and due to interagency discussions about how some options would affect streamflows.

In late 1994, following DEQ's reorganization and related personnel shifts, region staff began developing a Mutual Agreement and Order (MAO) (see Attachment C) with Ashland. This was done in anticipation of the coming December 31, 1994 deadline and to once again get the City back on a schedule for decision-making and action. The MAO, signed in February of 1995, establishes a new, enforceable schedule for the City to select a preferred option for modifying their wastewater treatment facilities and to complete a facilities plan.

Boise Cascade was also required by the TMDL rule to submit a program plan to the Department describing how and when they would modify their operations to comply with the TMDL and all applicable waste discharge rules. Boise submitted a program plan for their North Medford Plywood Mill logpond discharge in 1991. In this plan, Boise proposed an increase in their WLAs and a discharge management plan which would meet the modified WLAs. The Department never responded to Boise's submittal and the program plan was never approved or rejected by the Commission. Boise is currently operating in compliance with the proposed discharge management plan and with their current permit. Department staff are currently reviewing the program plan and the WLAs and are also in the process of renewing their NPDES permit.

Authority to Address the Issue

ORS 468B.005 to 468B.035, Water Pollution Control (Generally) and the Implementation of the Federal Water Pollution Control Act (Clean Water Act), give the Commission and the Department the authority to implement the federal law on behalf of and in cooperation with the Environmental Protection Agency. Both TMDLs and water quality standards are requirements of the Clean Water Act.

The Commission adopted the Bear Creek TMDL rule in 1989 (OAR 340-41-385, Special Policies and Guidelines for the Bear creek subbasin of the Rogue Basin).

Alternatives and Evaluation

1. Through an order of the Commission, authorize the City of Ashland and Boise to continue discharging into waters of the Bear Creek basin under the conditions specified in the order. These conditions include following applicable MAOs and permit limits and conditions.

This is the alternative recommended by staff. The proposed orders are shown in Attachments A and B for the City of Ashland and Boise, respectively.

2. The TMDL rule also provides modification of the program plans as a means to alter the December 31, 1994 deadline to achieve the TMDLs.

Because Ashland is now operating under an MAO (shown in Attachment C) and the Boise program plan is under review, alternative one above is a simpler and more straight forward resolution of the problem.

3. Another option is to change the wording of OAR 340-41-385(1).

This would require a full rulemaking procedure. Alternative one above was judged to be a more efficient solution. In addition, leaving the rule in place provides a record of the original intent of the Commission.

4. Take enforcement action.

The Department and the City of Ashland have entered into an MAO which is expected to instigate progress toward achieving the City's WLA. An MAO is an enforcement tool used by the Department when a source is out of compliance with a permit or rule of the Commission and includes a schedule to bring the source into compliance.

Summary of Any Prior Public Input Opportunity

There has been an opportunity for public comment. A notice of opportunity to comment and information on the proposal was mailed to local officials, the permittees and others on the interested persons mailing list. A hearing was held on May 16, 1995. The attached presiding officer's report summarizes the comment received (see Attachment D). Comment received from both the City of Ashland and Boise Cascade support the staff recommendations.

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Conclusions

Adopting the staff recommended alternative or directing staff to pursue alternatives 2, 3 or 4 will continue progress toward achieving the Bear Creek water quality goals. No action may expose the permittees and the Department to suit under the Clean Water Act citizen suit provisions.

Staff believe that the MAO together with this review and attention of the Commission will lead to action and reasonably timely compliance on the part of the City of Ashland. If the program plan and WLA modification proposed by Boise Cascade are approved by the Department and Commission in the near future, Boise will be in compliance. If the Department finds Boise's proposals unacceptable, additional action will be necessary.

Recommendation for Commission Action

Staff recommend that the Commission adopt the proposed Orders as presented in Attachments A and B of the Department Staff Report, authorizing continued discharge by the City of Ashland and Boise Cascade with specified conditions.

Attachments

- A. Proposed Commission Order regarding the City of Ashland STP
- B. Proposed Commission Order regarding the Boise Cascade Plywood Mill
- C. Mutual Agreement and Order between the Department and the City of Ashland
- D. Presiding Officer's Report for Public Hearing
- E. OAR 340-41-385

Reference Documents (available upon request)

- 1. ORS 468B.005 to 468B.035
- 2. TMDL Documents
- 3. September 21, 1990 EQC Report, City of Ashland: Request for Approval of Program Plan for Reducing Wastewater Discharges and Meeting the Total Maximum Daily Loads for Bear Creek.

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Approved:

Section: Rev. J. Dowling

Division: Michael Hous

Report Prepared By: Debra Sturdevant

Phone: 229-6691

Date Prepared: June 15, 1995

DJS:DJS
E:\wp51\bear\pntstaff
June 15, 1995

Before the Environmental Quality Commission
of the State of Oregon

In the Matter of National Pollutant)
Discharge Elimination System Waste)
Discharge Permit No. 100862 issued)
to the City of Ashland on)
March 6, 1992)
_____)

ORDER ALLOWING
CONTINUED DISCHARGE
INTO BEAR CREEK

The Department of Environmental Quality has requested that the City of Ashland be allowed to continue discharges of wastewater from its sewage treatment facility into Ashland Creek which exceed their Waste Load Allocations (WLAs) and the standards specified in OAR 340-41-385 (1), provided that:

1. the discharge meets all permit limitations and conditions as modified by the Mutual Agreement and Order (MAO), AND that
2. the City complies with all provisions and schedules in the MAO.

FINDINGS

1. City of Ashland owns and operates a municipal wastewater treatment plant in Jackson County. The treatment plant discharges into Ashland Creek about 1/4 mile upstream from the confluence with Bear Creek.
2. In 1989 the Environmental Quality Commission promulgated OAR 340-41-385 which set water quality standards within the Bear Creek subbasin and set a deadline of December 31, 1994 to meet these standards. The standards included Total Maximum Daily Load (TMDL) waste load allocations and required the City of Ashland to submit a program plan describing how and when they will modify their plant and/or operations to comply with these rules.
3. On September 21, 1990, the Environmental Quality Commission conditionally approved the proposed program plan submitted by the City of Ashland. This plan outlined a plan that would bring the City of Ashland into compliance by December 1996. Part of the approval was a requirement that a final facilities plan report be due on September 1, 1991.
4. On February 7, 1992, Stipulation and Final Order (SFO) number WQ-SWR-91-202 was issued to the City of Ashland because they could not meet the permit limitation for chlorine residual discharge. This

SFO also included the requirement that by September 1, 1992, the Permittee shall submit a complete facilities plan report for providing upgraded and expanded wastewater control as needed to:

- (a) meet the TMDL for Bear Creek
- (b) assure that any toxic impact of the Permittee's discharge of chlorine residual or any other toxic substance complies with OAR 340-41-965(2)(p) for toxic substances and OAR 340-41-965(4) for mixing zones; and,
- (c) comply with state and federal sewage sludge management requirements.

- 5. Several extensions were granted through addenda to the SFO.
- 6. On February 6, 1995, because the City of Ashland could not meet the requirements of OAR 340-41-385 and the permit limitations on chlorine residual discharge, Mutual Agreement and Order (MAO) No. WQMWW-WR-94-325 was issued to the City of Ashland. This MAO requires that the City of Ashland submit a final facilities plan by October 1, 1995 and commence with a Department approved schedule to upgrade the facilities.

ORDER

The request by the Department of Environmental Quality to allow the City of Ashland to continue discharges of wastewater from its sewage treatment facility into Ashland Creek which exceed the Waste Load Allocations (WLAs) and standards specified in OAR 340-41-385 (1), provided that:

- 1. the discharge meets all permit limitations and conditions as modified by the Mutual Agreement and Order (MAO), AND that
- 2. the City complies with all provisions and schedules in the MAO,

is hereby granted.

Dated this day of

On behalf of the Commission

Langdon Marsh, Director
Department of Environmental Quality

Before the Environmental Quality Commission
of the State of Oregon

In the Matter of National Pollutant)	
Discharge Elimination System Waste)	
Discharge Permit No. 100438 issued)	ORDER ALLOWING
to Boise Cascade Corporation on)	CONTINUED DISCHARGE
March 18, 1988.)	INTO BEAR CREEK
_____)	

The Department of Environmental Quality has requested that Boise Cascade Corporation be allowed to continue discharges of wastewater from their log pond into Elk Creek which exceed the Waste Load Allocations (WLAs) and the standards specified in OAR 340-41-385(1) provided that:

1. Boise meets the limits and conditions in their existing permit or their renewed permit when that permit becomes in effect; OR, if necessary,
2. Boise enters into a Mutual Agreement and Order (MAO) with the Department, that they meet the limits and conditions of their renewed permit as modified by the MOA, and that they comply with all provisions and schedules of the MAO. The MAO will set out a schedule for obtaining compliance with the WLAs.

Before the Boise NPDES permit is renewed, the Department will review the Boise Cascade Corporation program plan (submitted in 1991) and their request to revise the WLAs, and will provide a formal response to Boise on these items.

FINDINGS

1. Boise Cascade Corporation owns and operates a lumber mill in Jackson county. Wastewater from the log pond discharges to Elk Creek which discharges to Beak Creek.
2. In 1989 the Environmental Quality Commission promulgated OAR 340-41-385 which set water quality standards within the Bear Creek subbasin and set a deadline of December 31, 1994 to meet these standards. These standards included Total Maximum Daily Load (TMDL) waste load allocations and required Boise Cascade Corporation to submit a program plan describing how and when they will modify their operations to comply with these rules.

3. On May 22, 1991, Boise Cascade Corporation submitted a program plan. In this plan, Boise Cascade Corporation proposed a modification of the WLAs and a discharge management plan which would meet the modified WLAs.
4. The program plan was not approved or rejected by the Environmental Quality Commission.
5. Boise Cascade Corporation is current operating in compliance with the proposed discharge management plan.
6. Boise's NPDES permit expired in January, 1993. The Department has not yet renewed the permit to incorporate the WLAs. Boise is operating in compliance with their existing permit limits and conditions.

ORDER

The request by the Department of Environmental Quality that Boise Cascade Corporation be allowed to continue discharges of wastewater from their log pond into Elk Creek which exceed the Waste Load Allocations (WLAs) and the standards specified in OAR 340-41-385(1) provided that:

1. Boise meets the limits and conditions in their existing permit or their renewed permit when that permit becomes effective; OR, if necessary,
2. Boise enters into a Mutual Agreement and Order (MAO) with the Department, that they meet the limits and conditions of their renewed permit as modified by the MOA, and that they comply with all provisions and schedules of the MAO;

is hereby granted.

Before the Boise NPDES permit is renewed, the Department shall review the Boise Cascade Corporation program plan (submitted in 1991) and their request to revise the WLAs, and shall provide a formal response to Boise Cascade Corporation on these items.

Dated this day of .

On behalf of the Commission

Langdon Marsh, Director
Department of Environmental Quality

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION
OF THE STATE OF OREGON

3 IN THE MATTER OF: 4 City of Ashland, 5 Permittee,)))))	MUTUAL AGREEMENT AND ORDER No. WQMW-WR-94-325 JACKSON COUNTY
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WHEREAS:

1. On March 6, 1992, the Department of Environmental Quality (Department or DEQ) issued National Pollutant Discharge Elimination System (NPDES) Permit Number 100862 (Permit) to City of Ashland (Permittee). The Permit authorizes the Permittee to construct, install, modify or operate a wastewater collection, treatment, control and disposal system and discharge to public waters adequately treated wastewaters only from the authorized discharge point or points established in Schedule A and only in conformance with the requirements, limitations and conditions set forth in the Permit. The expiration date on the permit is December 31, 1994. The Permittee has made a timely application for renewal of the Permit. Pursuant to OAR 340-45-040, the Permit shall not be deemed to expire until final action has been taken on the renewal application to issue or deny the permit.

2. Prior to the issuance of the Permit, the Environmental Quality Commission (Commission) promulgated OAR 340-41-385 which set water quality standards within the Bear Creek subbasin and set a deadline of December 31, 1994 to meet these standards. These standards included Total Maximum Daily Load (TMDL) waste load allocations. By letter dated October 11, 1991, Permittee requested the extension of this date to December 31, 1995. DEQ did not grant this extension.

3. Paragraph 2.a of Schedule C of the Permit requires that by no later than September 1, 1992, the Permittee shall submit to the Department a final facilities plan report (FPR) for providing upgraded and expanded wastewater treatment facilities as needed to meet TMDL allocations, to comply with Oregon's water quality standard for chlorine residual and

ammonia-nitrogen, and to comply with state and federal sewage sludge management requirements.

4. Stipulation and Final Order No. WQ-SWR-91-202 (SFO) was issued by the Commission to Permittee on February 7, 1992.

5. Paragraph 10A of the SFO requires that by September 1, 1992, the Permittee shall submit a complete facilities plan report for providing upgraded and expanded wastewater control as needed to:

(a) meet the TMDL for Bear Creek

(b) assure that any toxic impact of the Permittee's discharge of chlorine residual or any other toxic substance complies with OAR 340-41-965(2)(p) for toxic substances and OAR 340-41-965(4) for mixing zones; and,

(c) comply with state and federal sewage sludge management requirements.

6. On September 10, 1992, at the request of the Permittee, the Department issued SFO addendum 1 which extended the compliance date to January 1, 1993. This extension was granted to allow the Permittee time to completely evaluate the alternative of abandoning the present treatment plant and connecting to the Medford wastewater treatment plant through Bear Creek Sanitary Authority transmission facilities.

7. On December 29, 1992, again at the request of the Permittee, the Department issued SFO addendum 2 which extended the compliance date to July 1, 1993. This extension was granted to allow the Permittee time to completely evaluate the alternative of using a constructed wetland to produce an effluent that could be delivered to the Talent Irrigation District (TID) in exchange for leaving flows in Bear Creek which during summer months would otherwise be diverted to the TID canal.

8. On June 11, 1993, again at the request of the Permittee, Fred Hansen, the Director of the Department of Environmental Quality (Director) at that time, issued a letter which extended the compliance date to July 30, 1993.

1 9. On August 31, 1993, the Director sent Permittee a letter which stated "I do not
2 intend to enforce the July 31, 1993 date for submittal of a facilities plan. I do expect to
3 renegotiate the compliance schedule in the SFO at some time in the future, however."

4 10. Because of Permittee's lack of a facilities plan and a constructed facility,
5 Permittee is currently unable to comply with the Permit limitation for chlorine residual.

6 11. Also because of Permittee's lack of a facilities plan and a constructed facility,
7 Permittee will be unable to comply with the TMDL discharge limitations referred to in
8 Paragraph 2 by the December 31, 1994 deadline.

9 12. The Department and Permittee recognize that until Permittee completes the
10 actions required by this Mutual Agreement and Order (MAO), Permittee will violate the
11 Permit and Oregon law. Therefore, pursuant to ORS 183.415(5), the Department and
12 Permittee wish to settle those past violations referred to in Paragraphs 3 through 10 and to
13 limit and resolve the future violation referred to in Paragraph 11 in advance by this MAO.

14 13. This MAO is not intended to limit, in any way, the Department's right to
15 proceed against Permittee in any forum for any past or future violations not expressly settled
16 herein.

17 NOW THEREFORE, it is stipulated and agreed that:

18 14. The Environmental Quality Commission shall issue a final order which will
19 replace SFO WQ-SWR-91-202 and all addendums:

20 A. Requiring Permittee to comply with the following schedule:

21 (1) By August 1, 1995, the Permittee shall select a preferred option
22 for modifying the wastewater treatment facilities.

23 (2) By October 1, 1995, based on the selected option, the Permittee
24 shall submit for Department approval a complete facilities plan which will:

25 (a) meet the TMDL for Bear Creek;

26 (b) assure that any toxic impact of the Permittee's discharge of chlorine

1 residual or any other toxic substances complies with OAR 340-41-965(2)(p) for toxic
2 substances and OAR 340-41-965(4) for mixing zones and;

3 (c) contain a proposed schedule for completing facilities modifications
4 and/or upgrades.

5 B. Requiring Permittee to, upon Department approval, commence with the
6 agreed upon plan referred to in Paragraph 14(A)(2) above and complete construction of the
7 facilities in compliance with the agreed upon schedule referred to in Paragraph 14(A)(2)(c)
8 above.

9 C. Requiring Permittee to meet the following interim waste discharge
10 limitations for daily median chlorine residual concentration until Permittee completes
11 construction of the facilities required by this MAO:

12 The chlorine residual concentration shall not exceed a daily median of 0.5 mg/l.

13 D. Requiring Permittee, upon receipt of a written notice from the Department
14 for any violations of this MAO, to pay a civil penalty of \$100 for each day of each violation
15 of Paragraph 14.C. and \$250 for each day of each violation of the schedule of compliance set
16 forth in Paragraph 14.A. and 14.B.

17 15. If any event occurs that is beyond Permittee's reasonable control and that causes
18 or may cause a delay or deviation in performance of the requirements of this MAO,
19 Permittee shall immediately notify the Department verbally of the cause of delay or deviation
20 and its anticipated duration, the measures that have been or will be taken to prevent or
21 minimize the delay or deviation, and the timetable by which Permittee proposes to carry out
22 such measures. Permittee shall confirm in writing this information within five (5) working
23 days of the onset of the event. It is Permittee's responsibility in the written notification to
24 demonstrate to the Department's satisfaction that the delay or deviation has been or will be
25 caused by circumstances beyond the control and despite due diligence of Permittee. If
26 Permittee so demonstrates, the Department shall extend times of performance of related

activities under this MAO as appropriate. Circumstances or events beyond Permittee's control include, but are not limited to acts of nature, strikes, work stoppages or other labor difficulties experienced by the contractor, shortage or failure of supply of materials, labor, fuel, power, equipment, supplies or transportation to the contractor, fires or other casualty, explosion, riot, sabotage, or war. Increased cost of performance or consultant's failure to provide timely reports may not be considered circumstances beyond Permittee's control.

16. Regarding the violations set forth in Paragraphs 3 through 11 above, which are expressly settled herein without penalty, Permittee and the Department hereby waive any and all of their rights to any and all notices, hearing, judicial review, and to service of a copy of the final MAO herein. The Department reserves the right to enforce this MAO through appropriate administrative and judicial proceedings.

17. The terms of this MAO may be amended by the mutual agreement of the Department and Permittee.

18. This MAO shall be binding on the parties and their respective successors, agents, and assigns. The undersigned representative of each party certifies that he or she is fully authorized to execute and bind such party to this MAO. No change in ownership or corporate or partnership status relating to the facility shall in any way alter Permittee's obligations under this MAO, unless otherwise approved in writing by DEQ.

19. All reports, notices and other communications required under or relating to this MAO should be directed to Mr. Jonathan Gasik, DEQ Medford Office, 201 W. Main Street, Medford, Oregon 97501; phone number (503) 776-6010 x230. The contact person for Permittee shall be Mr. Steven M. Hall, Public Works Director, City Hall, Ashland, Oregon 97520.

20. Permittee acknowledges that it has actual notice of the contents and requirements of the MAO and that failure to fulfill any of the requirements hereof would constitute a violation of this MAO and subject Permittee to payment of civil penalties pursuant to

1 Paragraph 14.D. above.

2 21. Any stipulated civil penalty imposed pursuant to Paragraph 14.D. shall be due
3 upon written demand. Stipulated civil penalties shall be paid by check or money order made
4 payable to the "Oregon State Treasurer" and sent to: Business Office, Department of
5 Environmental Quality, 811 S.W. Sixth Avenue, Portland, Oregon 97204. Within 21 days
6 of receipt of a "Demand for Payment of Stipulated Civil Penalty" Notice from the
7 Department, Permittee may request a hearing to contest the Demand Notice. If Permittee
8 contests the Demand Notice, the stipulated civil penalties shall not be due until a Final Order
9 is issued. At any such hearing, the issue shall be limited to Permittee's compliance or non-
10 compliance with this MAO. The amount of each stipulated civil penalty for each violation
11 and/or day of violation is established in advance by this MAO and shall not be a contestable
12 issue.

3 22. Providing Permittee has paid in full all stipulated civil penalties pursuant to
14 Paragraph 21 above, this MAO shall terminate 60 days after Permittee demonstrates full
15 compliance with the requirements of the schedule set forth in Paragraph 14.A and 14.B.
16 above.

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CITY OF ASHLAND

1/30/95

S.M. Hall

Date

Steven M. Hall, P.E.
Public Works Director, City of Ashland

DEPARTMENT OF ENVIRONMENTAL QUALITY

2/6/95

Lydia Taylor

Date

Lydia Taylor, Acting Director

FINAL ORDER

IT IS SO ORDERED:

ENVIRONMENTAL QUALITY COMMISSION

2/6/95

Lydia Taylor

Date

Lydia Taylor, Acting Director
Department of Environmental Quality
Pursuant to OAR 340-11-136(1)

State of Oregon
Department of Environmental Quality

Memorandum

Date: June 5, 1995

To: Environmental Quality Commission
From: Gary Arnold Western Region - Medford, Water Quality
Subject: Presiding Officer's Report for Public Hearing

Hearing Date and Time: May 16, 1995, 7:00 pm
Hearing Location: Jackson County Auditorium, Medford

Title of Proposals: Proposed Revision of the Bear Creek Basin Nonpoint Source Management Implementation and Compliance Schedule; and Commission Authorization for Continue Discharges into Water of the Bear Creek Subbasin (Rogue River Basin) with Specified Conditions

The hearing on the above proposals was convened at 7:05 pm. People were asked to sign witness registration forms if they wished to present testimony. People were also advised that the hearing was being recorded and of the procedures to be followed.

Six people were in attendance. Three people signed up to give oral testimony and one person submitted written testimony (attached) without speaking. Additional written comment was submitted during the comment period, which is also attached.

Prior to receiving testimony, Dennis Belsky and Gary Arnold briefly explained the specific proposals, the reasons for the proposals, and responded to questions from the audience.

People were then called to testify in the order of receipt of witness registration forms and presented testimony as noted below. The hearing was closed at 8:00 pm.

None of the testimony received, either oral or written, was in opposition to the rules under consideration by the commission in this package. However, several points of possible interest to the commission are reported below.

Memo To: Environmental Quality Commission

June 5, 1995

Presiding Officer's Report on Discharges to Bear Creek, May 16, 1995 Hearing

TESTIMONY OF MR. RON ROTH.

Mr. Ron Roth is a part owner of Eagle Mill Farm near Ashland and owner of two restaurants in Ashland. Mr. Roth expressed concerns about how the Waste Load Allocations (WLAs) for phosphorus were calculated for 1) the City of Ashland's STP and 2) for agricultural practices throughout the basin. He noted that phosphorus loading would be reduced by 98% according to his calculations. He believes that the Total Maximum Daily Load (TMDL) limits on point source and nonpoint sources for phosphorus are too strict. He noted that agriculture's phosphorus limit will be held to 0.76 pounds of phosphorus per day in the lower seven miles of Bear Creek. As an example, he exhibited a five pound box of rhododendron fertilizer with 15% phosphate content, which he calculates to be equal to the allowable per day agricultural loading for phosphorus in lower Bear Creek during the irrigation season.

Mr. Roth noted that Bear Creek currently is fishable (except for Oregon Department of Fish and Wildlife restrictions) and swimmable now, and that the coliform problem came from septic tank problems that have been fixed.

Mr. Roth supports the removal of chlorine and ammonia toxicity from Ashland's municipal effluent. He also supports the construction of a pilot project for the testing of wetlands as a solution to meeting the City of Ashland's effluent limits.

Mr. Roth believes that DEQ only worries about water quality and that water quantity is not taken into consideration. He observed that 95% of the flow of Bear Creek is removed from the stream by the time it passes the Jackson Street Dam in Medford (the last of the three irrigation diversion dams on Bear Creek). He stated that Bear Creek is the most efficient irrigation canal in the valley; it is at the lowest point and that large stretches flow through bedrock which does not allow loss through leakage. Because of this, he stated that the water quality should not have to meet standards except those relating to irrigation canals. He stated that DEQ should look at Bear Creek as it is rather than how a computer model suggests it could be. Mr. Roth also expressed his interest in being shown how the DEQ applied the water quality model to set the Bear Creek WLAs.

Mr. Roth stated that perhaps DEQ should consider rethinking how TMDLs are set, rather than just playing to the regulations. He quoted a DEQ fact sheet about the TMDL process that stated that "DEQ WILL (his emphasis) modify TMDLs where appropriate".

Memo To: Environmental Quality Commission

June 5, 1995

Presiding Officer's Report on Discharges to Bear Creek, May 16, 1995 Hearing

Mr. Roth also stated throughout the testimony that his economic livelihood was directly dependant on his water right from Bear Creek and that during part of the year the flow in Bear Creek is made up almost entirely of Ashland municipal effluent.

Mr. Roth also submitted written testimony during the comment period (attached).

TESTIMONY OF MR. JOHN S. BILLINGS

Mr. Billings has farmed his land on the outskirts of Ashland for the last 70 years. The property has been owned by his family for 150 years. Mr. Billings is currently the Chair of the Jackson County Soil and Water District (JCSWD).

Mr. Billings supported Ron Roth's comment that much of the streambed of Bear Creek is bedrock.

Mr. Billings supports the option of effluent and sludge from the Ashland STP being used to grow hay and grass on this property. He stated that building a golf course on his pasture land, along with a trade of water rights between the City of Ashland and Mr. Billings, would be the very best way to provide Bear Creek with cleaner water than exists today.

As Chair of the JCSWD, Mr. Billings has supported several plans that would increase the minimum flows in Bear Creek. He stated that this additional water is important for the dilution of sewer effluent and septic tank runoff. His efforts through JCSWD are aimed at reducing irrigation runoff from fields by switching from flood irrigation to sprinkler irrigation to the maximum extent possible. Mr. Billings asked for the continued cooperation of DEQ in assisting these efforts.

Mr. Billings then addressed two comments found on page 4 of attachment B (the Status Summary document for the Nonpoint Source compliance schedule). In regards to the paragraph about the Instream Flow Study on Bear Creek he commented on the passage which reads "by far the most complete study on how agricultural irrigation practices disrupt the natural flow conditions in Bear Creek". Mr. Billings stated that perhaps that was an ill-advised statement because sometimes the natural flows are zero. His second comment was in support of the statement at the very bottom of page 4 that "Increased efficiency also equates to decreased agricultural runoff, which will further benefit water quality (in Bear Creek)."

Memo To: Environmental Quality Commission

June 5, 1995

Presiding Officer's Report on Discharges to Bear Creek, May 16, 1995 Hearing

Mr. Billing wound up his remarks with these thoughts. Public bodies, like DEQ should not hold farmers to unnatural and uneconomic rules and regulations unless 1) the farmer can be proved negligent or 2) it can be proved to Mr. Billing's satisfaction that the water quality is "harmful to body or soul". Water is owned by the farmers, and should be used, if available in this order: 1) For Humans, 2) For livestock or wildlife, 3) For the land and finally, 4) For recreation. The farming community should not be held responsible for providing water as stated in 3 and 4 above. Farmers are the original natural resource people.

Mr. Billings did not submit written remarks.

TESTIMONY OF MR. BOB MORRIS

Mr. Morris is the regional engineer for the Boise Cascade industrial facility located in Medford.

Mr. Morris supports the policy of allowing Boise Cascade to continue to discharge while DEQ regional and headquarters staff complete the review of the Boise Cascade program plan and complete the NPDES permit renewal process for the Medford facility.

Mr. Morris stated that Boise Cascade wants to continue to support DEQ's efforts to clean up Bear Creek as they have supported clean air efforts in the past.

Mr. Morris concluded his remarks by stating that Boise Cascade supports the DEQ plans presented for comment in this package.

Mr. Morris did not present written testimony.

WRITTEN TESTIMONY

Written comment (attached) was submitted by:

Mr. Glen R. Patrick, Environmental Chemist for the Boise Cascade Medford facility,

Mr. Ron Roth, Eagle Mill Farm

Mr. Mike Wolf, Oregon Department of Agriculture



Boise Cascade

Timber and Wood Products Division

Environmental and Energy Services
P.O. Box 8328
Boise, Idaho 83707-2328

May 16, 1995

Mr. Jon Gasik
Department of Environmental Quality
201 W. Main
Suite 2-D
Medford, OR 97501

**RE: COMMENTS FOR PROPOSED COMMISSION AUTHORIZATION
FOR CONTINUED DISCHARGES INTO WATERS OF THE BEAR
CREEK SUBBASIN (ROGUE RIVER BASIN) WITH SPECIFIED
CONDITIONS**

Dear Mr. Gasik

Boise Cascade's comments to the proposed actions referenced above are as follows:

- 1) Boise Cascade fully supports the Department's "Proposed Commission Authorization for Continued Discharges into waters of the Bear Creek subbasin (Rogue River Basin) with Specified Conditions."
- 2) The program plan submitted to the Department by Boise Cascade on May 22, 1991, requested an increase of the waste load allocation (WLA) for our Plywood facility on North Pacific Highway. In that plan, we noted that the Department proposed WLA was too restrictive because it was based on invalid data. We continue to believe that the information and arguments presented in the program plan are reasonable and valid.
- 3) The TMDL currently proposed for Industry is based on log pond discharges from three mills, Boise Cascade, Medco, and Kogap. Boise Cascade is the only remaining mill that discharges to through an NPDES outfall. We request that the WLA for Boise Cascade be increased as appropriate to account for the reduced WLA from these other sources.

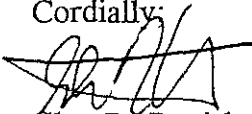
Boise Cascade welcomes the opportunity to comment on the above referenced action by the Department and the Commission. We believe that it is important that rules like

Jon Gasik
May 16, 1995
Page 2

the total maximum daily load (TMDL) must be developed as a result of constructive and cooperative efforts between industry and public interest groups. We also believe it is very important that the Department recognize that solutions to difficult technical issues (such as water quality in the Bear Creek) must provide for reasonable and achievable requirements for Industry.

If you have questions, please call me at (208) 384-6454.

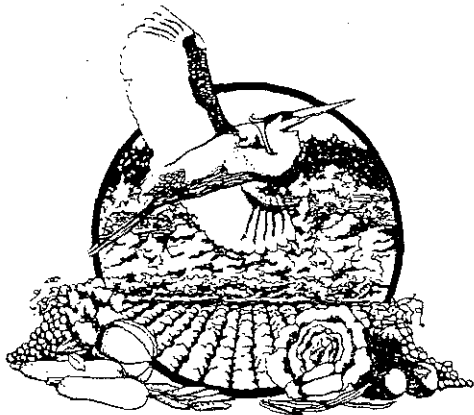
Cordially,



Glen R. Patrick
Environmental Chemist

GRP/hre

cc: Garrett Andrew
Bob Morris



Eagle Mill Farm

Organic Produce

100 Eagle Mill Rd., Ashland, Oregon 97520

May 19, 1995


Dear DEQ,

The purpose of this letter is to follow up my oral testimony given at the public hearing in Medford on Tuesday May 16, 1995.

I have several concerns about the TMDL process as applied to the Bear Creek Basin.

1. The DEQ does not consider water quantity, only water quality. Even though more than 95% of the water in Bear Creek was removed by irrigators last summer, DEQ maintains what seems like a very hard line about return flows. More than one DEQ employee has told me that Bear Creek would be better off with no flow than with treated effluent from the Ashland WWTP or return flow from irrigation canals.
2. Bear Creek is an irrigation canal. It is the most efficient irrigation canal in the basin. Please refer to testimony given by John Billings at last Tuesday's hearing.
3. What is Bear Creek's "natural" flow? As Mr. Billings pointed out in his testimony, Bear Creek historically went dry in the summer before Valley irrigators built the current reservoir and canal system. The Bear Creek flow is controlled and unnatural.
4. What is Bear Creek's "natural" background phosphate level? It is my understanding that testing was done by Gary Arnold of DEQ and other parties after irrigation was shut off last fall. What were the results of these tests?
5. The idea of using effluent treated to Class 4 level from Medford's WWTP has my support. The problem is, what happens at the end of the canal? I have heard and read conflicting DEQ responses to this question. I've heard "It's the irrigator's problem." I've heard "I don't know." "Maybe they'll put in a wetlands." I've heard or possibly even read that EQC might grant an exception. I don't see how DEQ can expect the City of Ashland to make an informed choice on our options until we know the answer to the question "What happens at the end of the canal?" My personal suggestion is that both the City of Ashland treated effluent and irrigation return flows be subject to similar reasonable nutrient/pollutant levels and that the water remain in Bear Creek.

Sincerely,


Ronald E. Roth
General Manager, Eagle Mill Farm

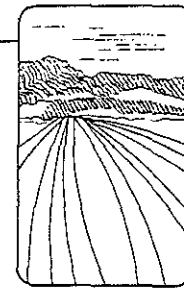
May 18, 1995

RECEIVED

MAY 22 1995

Gary Arnold
DEQ Medford Office
201 W Main St, Suite 2-D
Medford, OR 97501

Dept. Environmental Quality
MEDFORD



Oregon
Department
of Agriculture

Dear Gary:

Following is our response to your solicitation for written comments on proposed revisions to the Bear Creek Basin Nonpoint Source Management Implementation and Compliance Schedule for Designated Management Agencies. It is our understanding that the comment period closes on May 19, 1995.

First, some general comments:

- 1) We recommend that language be clarified which asserts completion of specific tasks as originally posed, and inclusion of any specific additional tasks which are needed to address outstanding issues. It seems awkward to revise/update a completion date by stating that the task is complete, and then changing the original task language. This occurs in a number of areas for DMA tasks as well as agricultural tasks.
- 2) In several areas of the Implementation and Compliance Schedule, tasks are listed as ongoing tasks. We recommend that there not be open-ended dates in the schedule, but rather, there be a date identified through which this Implementation and Compliance Schedule will be effective.

Specific comment:

- 1) Under "TASKS FOR AGRICULTURE DMAs, AGRICULTURAL WATER QUALITY MANAGEMENT PLAN", we suggest the following change to reflect language authorizing our department to develop such a plan:

"Develop an Agricultural Water Quality Management Plan for the Bear Creek basin to prevent and control water pollution from agricultural activities and soil erosion and to achieve the water quality goals and standards necessary to protect designated beneficial uses related to water quality in Bear Creek and its tributaries (ORS 568.900-933, OAR Chapter 603, Div. 90). The plan shall include a schedule for implementation. The plan shall address non-permitted CAFOs and other agricultural activities identified as causing or contributing to beneficial use impairment of Bear Creek or its tributaries."

We appreciate the opportunity to comment on the proposed changes in the schedule, and look forward to working with you and the other Designated Management Agencies in conducting water quality improvement activities in the Bear Creek basin.

Sincerely,

Michael J. Wolf
Project Coordinator
Natural Resources Division
503-986-4711 / 503-986-4730 FAX

John A. Kitzhaber
Governor



cc: John Billings, Jackson Soil and Water Conservation District
Debra Sturdevant, DEQ Portland Office

635 Capitol Street NE
Salem, OR 97310-0110

**OREGON ADMINISTRATIVE RULES
CHAPTER 340, DIVISION 41 — DEPARTMENT OF ENVIRONMENTAL QUALITY**

(d) Industrial cooling waters containing significant heat loads shall be subjected to offstream cooling or heat recovery prior to discharge to public waters;

(e) Positive protection shall be provided to prevent bypassing of raw or inadequately treated industrial wastes to any public waters;

(f) Facilities shall be provided to prevent and contain spills of potentially toxic or hazardous materials and a positive program for containment and cleanup of such spills should they occur shall be developed and maintained.

Stat. Auth.: ORS Ch. 468

Hist.: DEQ 128, f. & ef. 1-21-77

Special Policies and Guidelines

340-41-385 In order to improve water quality within the Bear Creek subbasin to meet existing water quality standards for dissolved oxygen and pH, the following special rules for total maximum daily loads, waste load allocations, load allocations, and program plans are established.

(1) After the completion of wastewater control facilities and program plans approved by the Commission under this rule and no later than December 31, 1994, unless otherwise modified by program plans no activities shall be allowed and no wastewater shall be discharged to Bear Creek or its tributaries without the authorization of the Commission that cause the following parameters to be exceeded in Bear Creek:

Low-Flow Season

Approximately

May 1 through November 30*

Ammonia Nitrogen Nitrogen as N (mg/l)	Instream Five-Day Biochemical Oxygen Demand (mg/l) ¹	Total Phosphorus as P (mg/l)
0.25	3.0	0.08

High Flow Season

Approximately

December 1 through April 30*

Ammonia Nitrogen Nitrogen as N (mg/l)	Instream Five-Day Biochemical Oxygen Demand (mg/l) ²
1.0	2.5

¹As measured at the Valley View Road Sampling Site. For the purposes of waste load allocations, the biochemical oxygen demand is calculated as the ammonia concentration multiplied by 4.35 and added to the measured effluent biochemical oxygen demand.

²Median value as measured at the Kirtland Road sampling site.

*Precise dates for complying with this rule may be conditioned on physical conditions, such as flow and temperature, of the receiving stream and shall be specified in individual permits or memorandums of understanding issued by the Department.

(2) The Department shall before September 30, 1990 distribute initial waste load and load allocations to point and nonpoint sources in the basin. These loads are interim and may be redistributed upon conclusion of the approved program plans;

(3) Before October 21, 1989, the City of Ashland shall submit to the Department a program plan and time schedule describing how and when they will modify their sewerage facility to comply with this rule and all other applicable rules regulating waste discharges;

(4) Before May 25, 1991, the industries permitted for log pond discharge, Boise Cascade Corporation, Kogap Manufacturing Company, and Medford Corporation shall submit program plans to the Department describing how and when they will modify their operations to comply with this rule and all other applicable rules regulating waste discharge;

(5) Before June 1, 1992, Jackson County and the incorporated cities within the Bear Creek subbasin shall submit to the Department a program plan for controlling urban runoff within their respective jurisdictions to comply with these rules;

(6) Before June 1, 1992, the Departments of Forestry and Agriculture shall submit to the Department program plans for achieving specified load allocations of state and private forest lands and agricultural lands respectively;

(7) Program plans shall be reviewed and approved by the Commission. All proposed final program plans shall be subject to public comment and hearing prior to consideration for approval by the Commission.

Stat. Auth.: ORS 468.710 & 468.735

Hist.: DEQ 17-1989, f. & cert. ef. 7-31-89; DEQ 40-1990, f. & cert. ef. 11-15-90

Willamette Basin

Beneficial Water Uses to be Protected

340-41-442 Water quality in the Willamette River Basin (see Figures 1 and 7) shall be managed to protect the recognized beneficial uses as indicated in Table 6.

Stat. Auth.: ORS Ch. 468

Hist.: DEQ 128, f. & ef. 1-21-77

Water Quality Standards Not to be Exceeded (To be Adopted Pursuant to ORS 468.735 and Enforceable Pursuant to ORS 468.720, 468.990, and 468.992)

340-41-445 (1) Notwithstanding the water quality standards contained below, the highest and best practicable treatment and/or control of wastes, activities, and flows shall in every case be provided so as to maintain dissolved oxygen and overall water quality at the highest possible levels and water temperatures, coliform bacteria concentrations, dissolved chemical substances, toxic materials, radioactivity, turbidities, color, odor, and other deleterious factors at the lowest possible levels.

(2) No wastes shall be discharged and no activities shall be conducted which either alone or in combination with other wastes or activities will cause violation of the following standards in the waters of the Willamette River Basin:

(a) Dissolved oxygen (DO):

(A) Multnomah Channel and main stem

Environmental Quality Commission

- Rule Adoption Item
- Action Item
- Information Item

Agenda Item F
July 7, 1995, Meeting

Title:

Proposed adoption of a temporary rule to continue the existing fecal coliform water quality bacterial standard.

Summary:


The Department proposes that the Environmental Quality Commission adopt a temporary rule to continue the use of fecal coliform as the indicator species for the state's bacteria standard. OAR 340-41-(basin)(2)(e) provides for the use of fecal coliform through June 30, 1995. At that time the bacteria standard changes to a standard that uses *Enterococcus* as the indicator species.

An interim rule was adopted by the Commission in July 1992 to provide the Department more time to identify an appropriate indicator species for the detection of human pathogens in sewage. At the time the interim rule was adopted, it was anticipated that the current Triennial Water Quality Standards Review, which includes analysis of the bacteria standard, would have been completed.

Technical and policy advisory committees have formulated recommendations for a bacteria standard, but these will not be available for rulemaking until November 1995. The Department believes that allowing the interim rule to expire, and the *Enterococcus* bacteria standard to take effect for a short period would impose undue burdens on dischargers of domestic waste effluent with no human health benefits. This proposal continues the existing bacteria standard, it does not entail a relaxation of the standard.

Department Recommendation:

The Department recommends that the Commission adopt the temporary rule regarding the water quality bacteria standard as presented in Attachment A, and the findings justifying adoption of the temporary rule contained in Attachment B.


Report Author


Division Administrator


Director

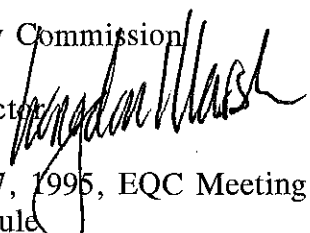
June 14, 1995
SA\WC13\WC13521

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

State of Oregon
Department of Environmental Quality

Memorandum[†]

Date: June 7, 1995

To: Environmental Quality Commission
From: Langdon Marsh, Director 
Subject: Agenda Item F, July 7, 1995, EQC Meeting
Temporary Bacteria Rule

Statement of the Issue

On June 30, 1995 the bacteria standard in OAR 340-41-(basin)(2)(e) changes to *Enterococcus* as the indicator species for human pathogens in domestic wastewater discharges. The current Triennial Water Quality Standards Review will be available for rulemaking in November 1995. Because that review is in the middle of the public process, no firm Departmental recommendation is available yet. It is, however, unlikely that the Department will recommend adoption of *Enterococcus* as the indicator species unless new evidence comes to light during public hearings.

The current indicator species are fecal coliform bacteria, which have been the indicator species for the state's bacteria standard for many years.

Unless the Commission intervenes to adopt a temporary rule, we could potentially face two successive bacteria standards over the next five months, fecal coliform until June 30, 1995, *Enterococcus* from July 1, 1995 until rule adoption by the Commission for the new standard in November 1995, and then the new standard (presently proposed to be *E. Coli*).

Adoption of the proposed temporary rule does not entail a lowering of the state's bacteria standard. It will continue the standard that has been in place for many years.

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

Background

In July 1992, following difficulties implementing the new *Enterococcus* standard, the Commission adopted an interim rule specifying the use of the old fecal coliform water quality standard. The interim rule remained in force until June 30, 1995, by which time the Department's triennial water quality standards review, which includes analysis of the bacteria standard, should have been completed. The Triennial Review has undergone a comprehensive policy and technical process, and is expected to be available for rulemaking by the Commission at its November meeting.

If the current interim rule is allowed to expire on June 30, 1995, the state's water quality standard for bacteria will change to *Enterococcus* as the indicator species. This species is not considered to be achievable by either municipal wastewater dischargers or by the triennial review policy and technical committees. The Department believes that changing to *Enterococcus* for a five month period until the findings of the current triennial review is available for rulemaking places an undue burden on dischargers, who would have to redesign their bioassay procedures. The Department is also concerned that the *Enterococcus* standard has never been used for freshwaters in Oregon.

Authority to Address the Issue

The Commission has authority to adopt rules under ORS 468.020. Adoption of a temporary rule for a period of 180 days without prior public notice is provided for under ORS 183.335 and is subject to findings. These are contained in Attachment B.

Alternatives and Evaluation

As an alternative to adopting a temporary rule to continue the current fecal coliform standard, the Commission could elect to allow the standard to change to the *Enterococcus* standard. The Department believes that the same difficulties that made this standard unworkable last time would persist this time, and the Department foresees a permanent change in the bacteria standard in November 1995.

As a part of the public exposure of the bacteria triennial review issue paper, the Department has assured municipalities and other wastewater dischargers that the current, fecal coliform standard will be continued. Dischargers support this course of action.

Memo To: Environmental Quality Commission
Agenda Item F
July 7, 1995, Meeting
Page 3

Summary of Any Prior Public Input Opportunity

The interim rule, which is proposed for extension, resulted from public dissatisfaction with the *Enterococcus* standard. Since that time an extensive review of the bacteria standard has taken place through policy and technical advisory committees. The fruits of their deliberations are currently out for public review, and will be presented to the Commission at its November meeting for final rulemaking.

Conclusions

The Department concludes that it would be more efficient, both administratively, and for discharge operations, to adopt the proposed temporary rule which would extend the current fecal coliform bacteria standard.

Proposed Findings

In adopting temporary rules, ORS 183.335 requires the Commission to make specific findings that failure to act promptly will result in serious prejudice to the public interest or the interests of the parties concerned. These findings are contained in Attachment B, along with written certification by the Attorney General's Office.

Recommendation for Commission Action

It is recommended that the Commission adopt the temporary rule amendment to OAR 340-41-(basin)(2)(e), as presented in Attachment A of this staff report, together with the supporting findings and statement of need contained in Attachments B and C .

Attachments

- A. Proposed Action
- B. Supporting Findings
- C. Triennial Standards Review Timetable

Memo To: Environmental Quality Commission
Agenda Item F
July 7, 1995, Meeting
Page 4

Reference Documents (available upon request)

1. Triennial Standards Review bacteria issues paper
2. July 1992 staff report that resulted in adoption of the interim rule.

Approved:

Section: _____

Division: _____

Report Prepared By: Russell Harding

Phone: 229-5284

Date Prepared: June 14, 1995

RH:crw
SA\WC13\WC13522

**Proposed Amendments to
OAR 340-41-[Basin](2)(e)**

NOTE:

The underlined portions of text represent proposed additions made to the rules.

The ~~bracketed~~ portions of text represent proposed deletions made to the rules.

(e) Bacteria Standards:

- (A) Effective ~~upon filing~~ from July 1, 1995 and through ~~June 30, 1995~~ December 31, 1995. Organisms of the coliform group where associated with fecal sources (MPN or equivalent MF using a representative number of samples):
- (i) Freshwaters: A log mean of 200 fecal coliform per 100 milliliters based on a minimum of five samples in a 30-day period with no more than ten percent of the samples in the 30-day period exceeding 400 per 100 ml;
 - (ii) Marine waters and estuarine shellfish growing waters: A fecal coliform median concentration of 14 organisms per 100 milliliters, with not more than ten percent of the samples exceeding 43 organisms per 100 ml;
 - (iii) Estuarine waters other than shellfish growing waters: A log mean of 200 fecal coliform per 100 milliliters based on a minimum of five samples in a 30-day period with no more than ten percent of the samples in the 30-day period exceeding 400 per 100 ml.
- (B) Effective ~~July 1, 1995~~ January 1, 1996. Bacteria of the coliform group associated with fecal sources and bacteria of the enterococci group (MPN or equivalent membrane filtration using a representative number of samples) shall not exceed the criteria values described in subparagraphs (2)(e)(B)(i) through (iii) of this rule. However, the Department may

designate site-specific bacteria criteria on a case-by-case basis to protect beneficial uses. Site specific values shall be described in and included as part of a water quality management plan:

- (i) Freshwaters: A geometric mean of 33 enterococci per 100 milliliters based on no fewer than five samples, representative of seasonal conditions, collected over a period of at least 30 days. No single sample should exceed 61 enterococci per 100 ml;
- (ii) Marine waters and estuarine shellfish growing waters: A fecal coliform median concentration of 14 organisms per 100 milliliters, with not more than ten percent of the samples exceeding 43 organisms per 100 ml;
- (iii) Estuarine waters other than shellfish growing waters: A geometric mean of 35 enterococci per 100 milliliters based on no fewer than five samples, representative of seasonal conditions, collected over a period of at least 30 days. No single sample should exceed 104 enterococci per 100 ml.

Statement of Findings of Serious Prejudice

and

Attorney General Approval of Temporary Rule Justification

Agency: Environmental Quality Commission

Temporary Rule: OAR 340-41-[basin](2)(e) relating to bacteria water quality standard.

1. The Environmental Quality Commission (Commission) finds that its failure to take this rulemaking action promptly will result in serious prejudice to parties that have an interest in the bacteria standard in the State of Oregon.
2. This finding of serious prejudice is based upon the following specific consequences that would flow from the Commission's failure to adopt this temporary rule:
 - a) The Department of Environmental Quality (Department) is nearing final rulemaking for the bacteria standard through the state's triennial review of its water quality standards. Final rulemaking will occur in November 1995;
 - b) If the Commission fails to adopt this temporary rule, the bacteria standard will change to the *Enterococcus* indicator species;
 - c) This indicator species is not the recommended species for final rulemaking from either the technical or policy committees that have assisted the Department in its triennial standards review. Unless unexpected public testimony is forthcoming at the final rulemaking stage, *Enterococcus* will not be the permanent indicator bacteria species;
 - d) Failure to adopt the temporary rule will result in an interim bacteria standard being adopted for five months only, at which time it will be superseded by final rulemaking;

- e) The effect of this would be to require dischargers of domestic wastewater, principally municipalities, to review all of their bioassay tests for a brief period. The municipalities have already indicated that meeting an *Enterococcus* standard would require a level of chlorination that in turn would require expensive dechlorination. Solids removal could also be required. Another, equally valid indicator species is available that would not require such costly operation modifications. That species is contained in the current Oregon Administrative Rules.
3. The Department concludes that permanent rulemaking, or non-adoption of the proposed temporary rule, is not appropriate at this time because:
- a) Permanent rulemaking would preempt review of the bacteria standard which is currently before the public for comment through the Department's triennial standards review. Final rulemaking will follow this process incorporating public comment and technical and policy committee recommendations;
- b) Failure to adopt this temporary rule will lead to confusion, and inconvenience through wastewater dischargers having to adapt to two bacteria standards over five months. The temporary rule continues the existing standard until final rulemaking later this year.

ON BEHALF OF THE COMMISSION

6/15/95
Date

Langdon Marsh
Langdon Marsh, Director

I have reviewed this temporary rule as required by Oregon Laws 1993, Chapter 729, Section 6, and find that the above statement of findings is legally sufficient. I therefore approve this rule as required by, and for the purposes of, Oregon Laws 1993, Chapter 729, Section 6.

6/14/95
Date

Michael B. Houston
Assistant Attorney General

ENVIRONMENTAL QUALITY COMMISSION
OF THE STATE OF OREGON

In the Matter of Amendment)	STATEMENT OF NEED
of Rule 340-41-[basin](2)(e))	AND JUSTIFICATION OF
Relating to the Bacteria Water)	TEMPORARY RULE
Quality Standard)	

TO: ALL INTERESTED PERSONS

1. Effective July 1, 1995, the Environmental Quality Commission (Commission) is adopting a temporary amendment to rule 340-41-[basin](2)(e) relating to the bacteria water quality standard.
2. Statutory Authority: The Commission has authority to adopt rules under ORS 468.020. The Commission also has authority to adopt bacteria standards for water under ORS 468B.048(1)(c). This temporary affects OAR 340-41-[basin](2)(e).
3. Two primary documents were relied upon in formulating this temporary rule:
 - i) The triennial standards review bacteria issue paper, available from the Department; and
 - ii) The Departmental staff report to the Commission dated July 23, 1992 in which the bacterial standard that it is proposed to continue through this action was established. This report is available through the Department.

Documents are available for public review during regular business hours, 8:00 a.m. to 5:00 p.m., Monday to Friday at the offices of the Department of Environmental Quality, 811 S.W. Sixth Avenue, Portland, Oregon 97204.

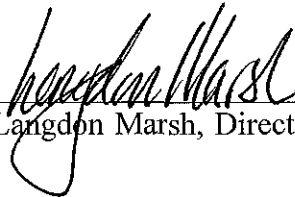
Accessibility Information Note: These documents are available in alternate formats (e.g. large print, Braille) upon request. Please contact the Department's Public Affairs office at (503) 229-5677. Persons with hearing impairments can call DEQ's TTY at (503) 229-6993.

4. Need for Rule: In July 1992 the Commission adopted an interim bacteria rule that expires on June 30, 1995. In the absence of the proposed action, the bacteria standard changes to using *Enterococcus* as the indicator species for the detection of human health pathogens in sewage. Municipalities, which are the main dischargers of domestic wastewater, are unable to meet this standard. This is what gave rise to the interim rule in 1992.

5. Justification of Temporary Rule: The Commission's finding of serious prejudice and temporary rule justification are attached.

ON BEHALF OF THE COMMISSION

6/15/95
Date

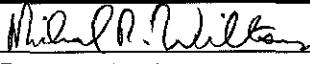

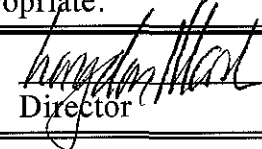
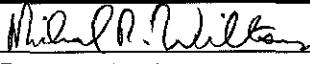

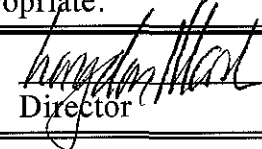
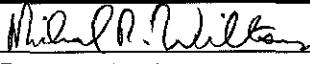

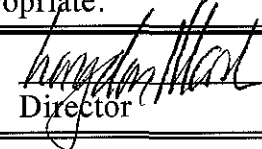

Langdon Marsh, Director

SA\WC13\WC13525

Environmental Quality Commission

- Rule Adoption Item
- Action Item
- Information Item

Agenda Item G
July 6-7, 1995 Meeting

Title: Progress on Review of the Tualatin Basin Total Maximum Daily Loads			
Summary: The Department has begun the process of reviewing the Tualatin Basin Total Maximum Daily Loads (TMDLs). This process includes the formation of technical and policy advisory committees. There is the potential that the TMDL review process will not be complete prior to the December 31, 1995 expiration date of EQC Subbasin Nonpoint Source Management Implementation/Compliance Order (EQC Order). The Department may need to request that the EQC extend the EQC Order until such time as the Department completes the TMDL review.			
Department Recommendation: The Department recommends that the Commission accept this report, discuss the matter, and provide advice and guidance to the Department as appropriate.			
<table style="width: 100%; border: none;"><tr><td style="text-align: center; width: 33%;"> Report Author</td><td style="text-align: center; width: 33%;"> Division Administrator</td><td style="text-align: center; width: 33%;"> Director</td></tr></table>	 Report Author	 Division Administrator	 Director
 Report Author	 Division Administrator	 Director	


June 15, 1995

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

State of Oregon
Department of Environmental Quality

Memorandum[†]

Date: June 21, 1995

To: Environmental Quality Commission
From: Langdon Marsh, Director 
Subject: Agenda Item G, July 6-7, EQC Meeting

Progress on Review of the Tualatin Basin Total Maximum Daily Loads

Statement of Purpose

The purpose of this informational item is to advise the Environmental Quality Commission (EQC) on the Department's review of the Tualatin Basin Total Maximum Daily Loads (TMDLs) and the probable need for an extension of the EQC Nonpoint Source Management Implementation/Compliance Schedule and Order (EQC Order).

A Tualatin Basin Technical Advisory Committee (TBTAC) has been formed by the Department to review the Tualatin Basin Total Maximum Daily Load (TMDL) and develop a waterbody assessment. A Tualatin Basin Policy Advisory Committee (TBPAC) will be formed at a future date to assess the information provided by the TBTAC and to make recommendations to the Department on the refinement of the Tualatin Basin TMDL implementation strategies and schedules.

It is likely that the TBTAC and TBPAC reviews will not be complete by the time EQC Order expires on December 31, 1995. The DMAs want to assure future actions are based on the Department's assessment of scientific information and review of the TMDL. However, the DMAs and the Department want to avoid being out of compliance with the EQC order. If it appears that the TMDL review will not be completed by December 31, 1995, the Department will propose to request an extension of the EQC Order as necessary to complete the review process.

Background

In 1988, the EQC promulgated rules to limit discharges of ammonia and total phosphorus to the Tualatin River in accordance with Section 303 of the Clean Water Act and 40 CFR, part 130.7. This action amended Oregon Administrative Rules (OAR) 340-41-470

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

Memo To: Environmental Quality Commission
Agenda Item G
July 6-7, 1995 Meeting
Page 2

by establishing target concentrations for both total phosphorus and ammonia-nitrogen at various locations on the main stem of the Tualatin River and at the mouths of certain tributaries.

The EQC Order for the DMAs was established by the EQC on July 21, 1993. The EQC Order requires specific tasks and responsibilities of a number of government entities. The DMAs include Unified Sewerage Agency, Clackamas County, Multnomah County, Washington County, City of Portland, City of Lake Oswego, City of West Linn, the Oregon Department of Agriculture, and the Oregon Department of Forestry.

The compliance schedule in the EQC Order lists tasks and responsibilities of the DMAs in controlling nonpoint source water pollution in the Tualatin River Watershed. The primary intent of the EQC Order is to improve water quality and to achieve all applicable water quality standards by December 31, 1995. A second goal is to promote ongoing communication among the jurisdictions in the basin. A third major consideration is to encourage and promote the involvement of interest groups of all kinds in the implementation of the EQC Order.

Authority of the Commission with Respect to the Issue

The 1988 rules promulgated by the EQC amended Oregon Administrative Rules (OAR) 340-41-470 by establishing instream criteria (TMDLs) for both total phosphorus and ammonia-nitrogen at various locations on the main stem of the Tualatin River and at the mouths of certain tributaries.

Establishment of TMDLs is in accordance with Section 303 of the Clean Water Act and 40 CFR, part 130.7.

Alternatives and Evaluation

There are two options:

- 1) Do not extend the EQC Order deadline
- 2) Extend the EQC Order deadline

An extension of the existing Tualatin Basin EQC Order may become necessary to provide consistent time periods for a thorough review of TMDLs and completion of the EQC requirements. If necessary, the Department could speed up the review process in

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order to present a refinement of the Tualatin Basin TMDLs and implementation strategies and schedules to the EQC prior to the expiration of the existing EQC Order. Not spending adequate time on the TMDL review would result in decisions being made without a full assessment of available science.

Summary of Public Input Opportunity

The DMAs meet routinely to discuss water quality activities taking place in the Tualatin Basin. The meetings are open to public participation.

The TBTAC is currently performing a waterbody assessment of the Tualatin Basin. The committee includes DMAs, university professors, private consultants and environmental group representatives. The meetings are open to the public.

Conclusions

No formal action is proposed. The purpose of this information item is for the Department to advise the EQC on the review of the Tualatin Basin TMDLs and the potential need of a time extension of the EQC Order.

Intended Future Actions

Action must be taken on the EQC Order prior to the December 31, 1995, expiration date.

Department Recommendation

The Department recommends that the Commission accept this report, discuss the matter, and provide advice and guidance to the Department as appropriate.

Attachments

N/A

Memo To: Environmental Quality Commission
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July 6-7, 1995 Meeting
Page 4

Reference Documents (available upon request)

Agenda Item F, July 23, 1993, EQC Meeting - Report on the Tualatin River Watershed
Nonpoint Source Management Implementation/Compliance Schedule and Order

Approved:

Section:

Robert P Baumgartner

Division:

Sam Bishop

Report Prepared By: Michael R. Wiltsey

Phone: 229-5325

Date Prepared: June 15, 1995

MRW:mrw
e:\wp51\tac\eqcinfo.doc
June 15, 1995

WASTEWATER DECISIONS

A BACKGROUND PAPER FOR INTERESTED CITIZENS

BACKGROUND

The nation's Clean Water Act requires that all streams, rivers, and lakes in the United States must be made fishable and swimmable. In 1977 a study of Bear Creek determined that the creek contained a number of pollutants that were harmful to fish and must be cleaned up. That study identified the Ashland sewage treatment plant as a major source of those pollutants and recommended that the treatment process be improved. At that time the Oregon Department of Environmental Quality (D.E.Q.), which is responsible for enforcing the Clean Water Act in our state, said it was the Department's policy that "upgrading to more stringent requirements will be deferred until it is necessary to expand or otherwise modify or replace the existing treatment facilities."

A few years later a private environmental organization sued the D.E.Q., claiming that it was not enforcing the federal law requiring timely cleanup of Bear Creek and several other streams around the state. The judge agreed and ordered the D.E.Q. to require the appropriate polluters to begin reducing their pollutants. Ashland was notified that it would have to reduce pollutants from sewage treatment to certain specified levels (see Table 1), and should immediately determine how it could do so. The city hired an engineering firm, which offered several alternatives for reaching those levels. Unfortunately, because the flow of water in Bear Creek is so low during parts of the year, there is little water to dilute the polluted water coming from the treatment plant, so the levels of pollutants that were allowed for Ashland were among the lowest anywhere in the nation. Consequently, the alternatives presented by the engineering firm were very costly. The Council was also concerned because all but one extremely expensive and still experimental alternative required that the effluent from the treatment plant be completely removed from Bear Creek during part of the year. The Council pointed out that the water left in the creek at those times would be so low that fish could not survive. It presented a real dilemma: polluted water or no water either solution was bad for fish.

Ashland asked that the state fish and wildlife experts be consulted to see if effluent that was not quite as clean as D.E.Q. required would be better than little or no water at all. In the meantime, a number of Ashland-area people became interested in wetlands--ponds of water with plants that would naturally remove pollutants--and wondered if they could meet the D.E.Q. standards. The group did some initial research indicating that wetlands at least had a possibility of working, so the city council requested an extension of time from the D.E.Q. to hire more experts to determine if wetlands would work.

The result of that study was that wetlands by themselves were too "iffy" in meeting such strict pollutant requirements, but, if combined with treatment plant modifications they might be helpful with other alternatives.

In the meantime, it had been determined that the removal of water from Bear Creek probably could be offset by purchasing rights to other water that could be used to replace Ashland's treatment plant effluent. The cost of the various alternatives would run from \$19 million to \$33 million for construction, and the total cost for both construction and operation over the first twenty years would run from \$29 million to \$38 million.

Additionally, the recent droughts have made local people more aware of the importance of water as a resource. If the drought continues for a number of years, or after a few more decades of growth, Ashland will need more water, and the best source may be treated sewage effluent. Alternatively, the City of Medford is considering reusing the Medford plant effluent by returning it to the regional irrigation system, which would permit additional water to be released from Emigrant Lake to increase flows in Bear Creek.

Faced with fines up to \$10,000 a day for further delay, the city has signed an agreement with the D.E.Q. to provide them with a preferred alternative by August 1, 1995 and a facilities plan by October 1, 1995. The Council must, therefore, make some decisions immediately.

DECISION NO. 1

The first decision facing the council is whether to abandon our existing plant altogether by constructing a pipeline to carry sewage to the Medford Wastewater Treatment Plant - the "Medford Alternative" - or to upgrade the Ashland Wastewater Treatment Plant and buy rights to replacement water for Bear Creek. The big issue is whether the advantage of retaining control of our sewage treatment effluent for possible future needs outweighs the possible lower costs and operational simplicity of the Medford alternative.

DECISION NO. 2

If Ashland chooses to hold on to its effluent water, it must chose between two proven alternatives - the Talent Irrigation District (T.I.D.) Alternative and the Land Application Alternative - and a third less certain alternative - the Earth Filtration Alternative. This last alternative would require a pilot study to confirm its feasibility. All three alternatives would require the same changes in the treatment plant to remove all pollutants except phosphorous. The T.I.D. Alternative would further require treating the water and discharging it to the T.I.D. canal for use as irrigation water. The Land Application Alternative would require somewhat less additional treatment and would then use the water to irrigate land purchased by the city. The earth filtration alternative would require ponds from which the effluent would be filtered through the earth in a controlled manner to remove the phosphorous and then discharged back into Bear Creek. The first two alternatives would require replacement water for Bear Creek; earth filtration would not. These alternatives all require major improvements to the Ashland treatment plant and would continue to involve the city in the sewage treatment business.

SUMMARY OF ADVANTAGES AND DISADVANTAGES

1. Medford Alternative. (Construction cost \$19 million to \$22 million; 20-year cost \$29 million to \$31 million.) The advantages of this alternative are its low cost, no more involvement of Ashland in the sewage treatment business, an economy of scale in participating in the regional system, and no more chance of sewage treatment-related odor. The disadvantage is that any future local use of the effluent would be lost, though it might be reused on a regional basis. Consideration of the Medford Alternative would be contingent on Ashland becoming a member of the Regional Rate Committee, which determines all rates and fees for the regional facility. The standards for the Medford plant may also be raised in the near future. While an estimate of the costs of upgrading the regional facility have been included in our cost estimates, these figures remain uncertain.

2. T.I.D. Alternative. (Construction cost \$27 million; 20-year cost \$38 million.) The advantages of this alternative are a relatively certain cost, all the D.E.Q. standards would be met, and Ashland would retain the effluent water for future uses. T.I.D. would trade water in its reservoirs for the water it received, so there would be replacement water for Bear Creek. The disadvantages are that it requires sensitive negotiations with T.I.D. and the U.S. Bureau of Reclamation, the outcome of which are not guaranteed, and it costs more than other alternatives.

3. Land Application Alternative. (Construction cost \$25 million; 20-year cost \$36 million.) The advantages of this alternative are a relatively certain cost, all the D.E.Q. standards would be met, and Ashland would retain the effluent water for future uses. A prerequisite of this alternative would be that the land purchased for irrigation with the effluent would have water rights that could be used for replacement water for Bear Creek. The disadvantages are that the outcome of negotiations to allow the water rights to be used as replacement water are not guaranteed, and the cost would be greater than other alternatives.

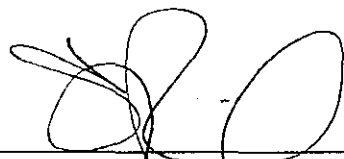
4. Earth Filtration Alternative. (Construction cost \$19 million; 20-year cost \$33 million.) The advantages of this alternative are that the effluent water would return directly to Bear creek and no replacement water would have to be acquired, the water would be available for possible future uses, and it is the next to cheapest. The disadvantages are that the pilot study will cost money and may show the method will not work, and the exact cost of earth filtration is much less certain than the other alternatives.

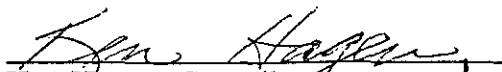
YOUR OPINION WOULD BE APPRECIATED

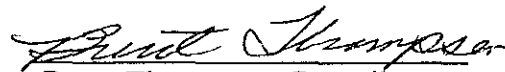
The Council must make its decision soon. If you have an opinion, write, call or talk to us. Two public information meetings will be held on Monday, May 15, 1995 and Thursday, May 18, 1995 between 4:00 p.m. and 8:00 p.m. The Council will hold a public hearing on Tuesday, June 20, 1995 at 7:00 p.m. This is not an easy problem, and there are no obviously correct answers. We have already chosen not to fight the federal law itself or the standards established by the D.E.Q., so the help we need is about what option is best to meet this mandate.

THE ASHLAND CITY COUNCIL


Cathy Golden, Mayor


Susan Reid, Councilor


Ken Hagen, Councilor


Brent Thompson, Councilor


Steve Hauck, Councilor


Rob Winthrop, Councilor


Don Laws, Councilor

TABLE 1

SELECTED WATER POLLUTANT LEVELS¹

EXISTING AND NEW LIMITS

POLLUTANT	PREVIOUS LEVEL (Before 9/25/90)	INTERIM LEVEL (As of 9/25/90)	REQUIRED LEVEL (For new plant)
Total Phosphorous May 1 - October 31 November 1 - April 30	No limit No limit	100 pounds per day No limit	2 pounds per day No limit
CBOD ² + NBOD ³ Time for Limits ----- Flow in Bear Creek: Less than 30 cfs ⁴	No limit	November 1 - April 30 150 pounds per day	During "Wet weather" 220 pounds per day
CBOD ² Time for Limits ----- Flow in Bear Creek: less than 10 cfs	No limit	May 1 - November 15 188 pounds per day	May 1 - November 15 59 pounds per day
NH ₃ -N ⁵ Time for Limits ----- Flow in Bear Creek: less than 10 cfs	No limit	May 1 - November 15 161 pounds per day	May 1 - November 15 11 pounds per day
Residual Chlorine Time for Limits ----- Flow in Bear Creek: less than 10 cfs	All year 6.8 pounds per day	All year 6.8 pounds per day	All Year 0.3 pounds per day
Suspended Solids & BOD ⁶ June 1 - October 31 November 1 - May 31	1,034 pounds per day 1,552 pounds per day	1,034 pounds per day 1,552 pounds per day	517 pounds per day 517 pounds per day
Temperature	No limit	Being developed by the D.E.Q. ⁷	Being developed by the D.E.Q. ⁷

1 Not all standards are listed. Those standards listed that are based on the amount of water flowing in Bear Creek are for the lowest flow standard. The amount of pollutant either remains the same or increases with increased flow in Bear Creek.

2 CBOD is Carbonaceous Biochemical Oxygen Demand

3 NBOD is Nitrogenous Biochemical Oxygen Demand

4 cfs is cubic feet per second

5 NH₃-N is the amount of nitrogen present in the form of ammonia

6 BOD is Biochemical Oxygen Demand

7 D.E.Q. is currently studying options. One potential is a maximum of 64° Fahrenheit when ambient stream temperature is above 64° Fahrenheit.

TABLE 2
COMPARATIVE COSTS OF REMAINING ALTERNATIVES

OPTION	CONSTRUCTION COST *	ANNUAL OPERATING COST **	20 YEAR COST ***	ADVANTAGES	DISADVANTAGES
Medford Alternative	\$21,782,000	\$815,000	\$31,508,000	<ol style="list-style-type: none"> 1. Lowest cost option 2. No odor problems 3. No future upgrades to Ashland's Plant 	<ol style="list-style-type: none"> 1. Removal of effluent from Ashland-no future reuse 2. Rates and costs established through a multi-agency committee 3. Costs based on estimated future improvements to Medford's Plant
T.I.D. Alternative	\$27,006,000	\$1,033,000	\$38,623,000	<ol style="list-style-type: none"> 1. Retains effluent for future use 2. Replacement water for Bear Creek would be via a trade with T.I.D. 	<ol style="list-style-type: none"> 1. Requires sensitive negotiations with TID and U.S. Bureau of Reclamation with unknown results 2. Higher cost than all other alternatives
Land Application Alternative	\$24,509,000	\$1,039,000	\$36,323,000	<ol style="list-style-type: none"> 1. Cost is relatively certain 2. Retains effluent for other future use 3. Land purchased would have water rights that could be used to replace effluent in Bear Creek 	<ol style="list-style-type: none"> 1. Negotiations with TID and U.S. Bureau of Reclamation for reuse of water rights on purchased property may produce unanticipated results increasing total cost
Earth Filtration Alternative	\$25,286,000	\$1,090,000	\$38,017,000	<ol style="list-style-type: none"> 1. Effluent would return to Bear Creek on a year around basis and replacement water would not be required 2. Retains effluent for other future use 	<ol style="list-style-type: none"> 1. Cost of pilot studies for soil filtration and wetlands 2. Soil filtration is a new and less proven technology and may not produce required results

* Based on costs prorated to November 1998 using Engineering News Record's construction cost index.

** Current annual operating cost for the treatment plant is about \$600,000. Estimated cost for replacement water varies between \$163,000 and \$219,000.

*** Net Worth of construction and operating costs over a 20 year period at a discount rate of 4%.

CITY OF ASHLAND
CITY HALL
20 EAST MAIN
ASHLAND, OR 97520

BULK RATE
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PERMIT NO. 16

Agenda Item Public Forum ✓

Oregon Environmental Quality Commission

Request to Present Information

Terry Klinker
 Name (Please Print Clearly)
Box 1666 Jacksonville OR 97530
 Address
Neighbors Opposed To Aggregate Growth
 Affiliation
N.O.A.O.

Please limit comments to five minutes.

Agenda Item Public Forum ✓
General comment of air quality

Oregon Environmental Quality Commission

Request to Present Information

Dan Kellogg
 Name (Please Print Clearly)
2132 Sardine Creek Rd, Gold Hill, OR
 Address
Sierra Club
 Affiliation

Please limit comments to five minutes.

Oregon Environmental Quality Commission

Request to Present Information

Michele Klinker

Name (Please Print Clearly)

Box 1616, Jacksonville, OR 97530

Address

Neighbors Opposed To Aggregate Growth

Affiliation

N.O.A.G.

Please limit comments to five minutes.

Oregon Environmental Quality Commission

AIR QUALITY
FOLLOWING
GARY GRIMES

Request to Present Information

Paula C Brown

Name (Please Print Clearly)

Address

ROGUE VALLEY COUNCIL OF GOVERNMENTS

Affiliation

Please limit comments to five minutes.

MEDFORD REGIONAL WASTEWATER TREATMENT

WASTEWATER TREATMENT AT MEDFORD \$21,782

EFFLUENT TO MEDFORD
Year Round
(Sheet 4)

CAP \$21,782
PW \$31,058

EFFLUENT TO TID
During Summer
(Sheet 2)

CONSTRUCT WETLANDS \$6,328

PROVIDE LEVEL IV FILTRATION \$4,768

CAP \$27,006
PW \$38,623

IRRIGATE CITY OWNED LAND
During Summer
(Sheet 2)

PURCHASE LAND, IRRIGATION EQUIPMENT, CONSTRUCT PUMP STATION, PIPELINES \$8,599

CAP \$24,509
PW \$36,323

ASHLAND LOCAL WASTEWATER TREATMENT

ASHLAND WWTP IMPROVEMENTS \$15,910

CONSTRUCT ADVANCED WWTP \$17,065

CAP \$33,055
PW \$48,147

SOIL FILTRATION
Year Round Discharge
(Sheet 3)

PERFORM SOIL FILTER PILOT STUDY \$40 - 80

SMALL SCALE WETLANDS EVALUATION \$555

CONSTRUCT WETLANDS AND SOIL FILTER \$8,742

CAP \$25,287
PW \$38,017

CONSTRUCT SOIL FILTER \$2,414

CAP \$18,958
PW \$33,422

SHEET INDEX	
ALTERNATIVE DECISION PROCESS	1.
CITY OF ASHLAND AND TALENT IRRIGATION DISTRICT EFFLUENT REUSE ALTERNATIVES	2.
SOIL FILTRATION TREATMENT ALTERNATIVE	3.
MEDFORD TREATMENT ALTERNATIVE	4.
DETAILED COST ESTIMATES	5.

NOTE: All capital costs shown are in \$1000 escalated to midpoint of construction

CAP = Capital Cost
PW = 20 year lifecycle / present worth cost
WWTP = Wastewater Treatment Plant
TID = Talent Irrigation District

ALTERNATIVE DECISION PROCESS

ASHLAND WASTEWATER FACILITIES PLAN

CITY OF ASHLAND, OREGON FEBRUARY 13, 1995

McG CAMERON McCARTHY GILBERT LANDSCAPE ARCHITECTS
160 East Broadway, Eugene Oregon 97401
Phone: 503-485.7385 Fax: 503-485.7389

BROWN & CALDWELL

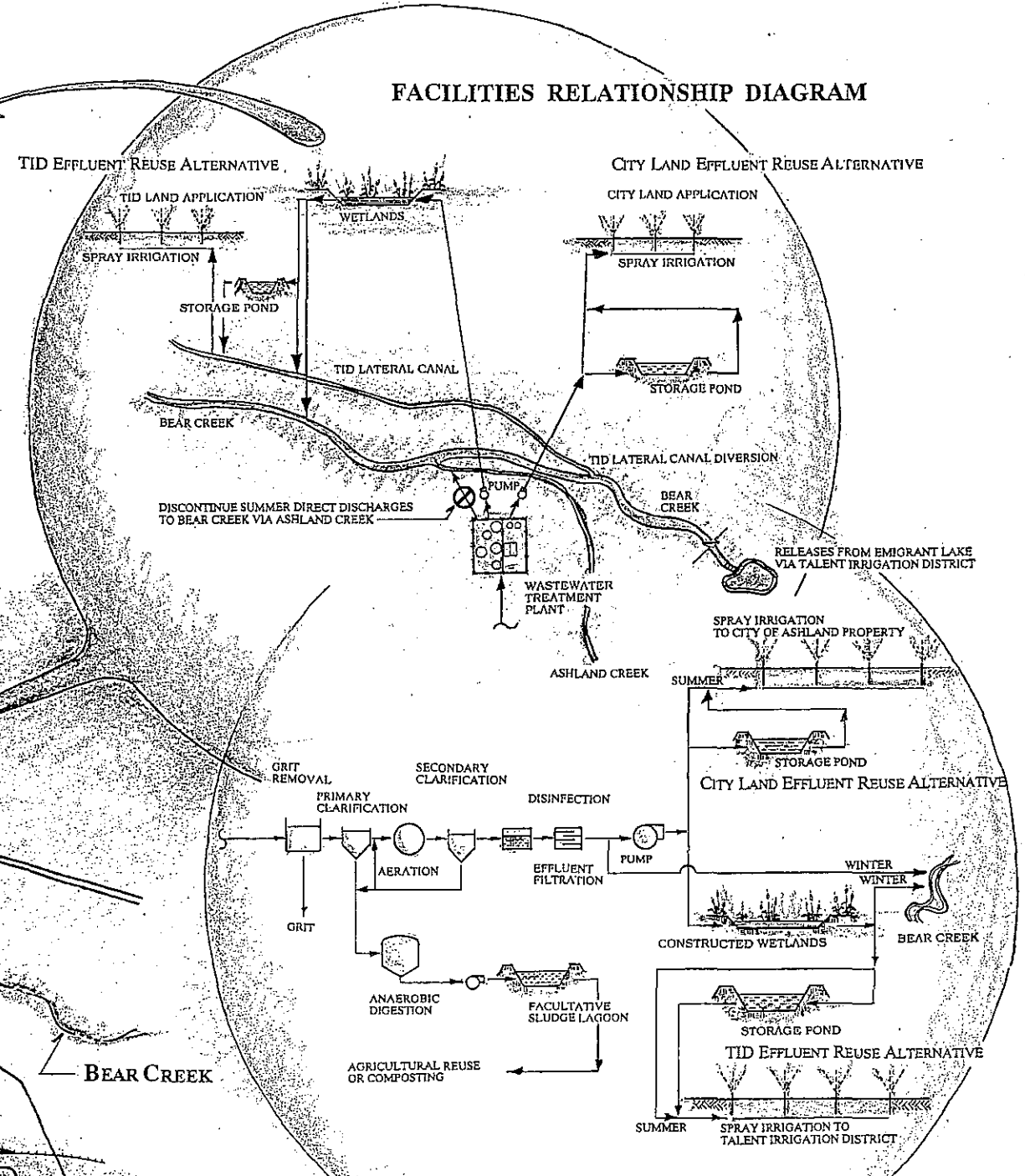
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ORCHARD & AGRICULTURAL APPLICATIONS

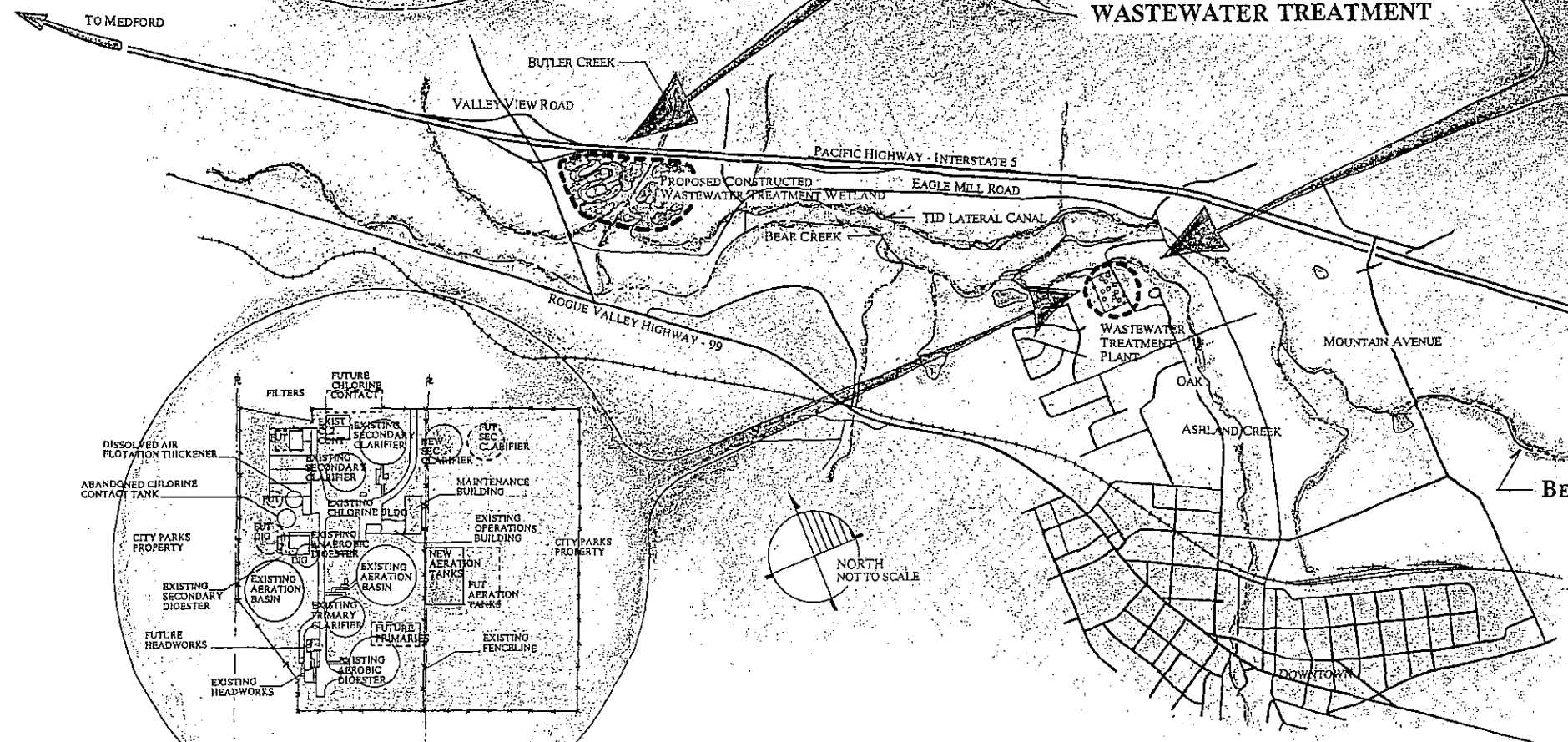


CONSTRUCTED WETLAND WASTEWATER TREATMENT

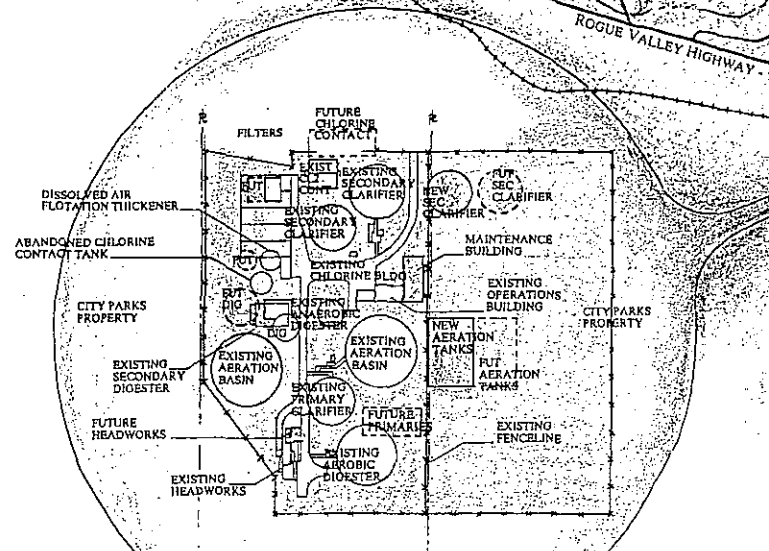


FACILITIES RELATIONSHIP DIAGRAM

PROCESS / FLOW DIAGRAM



CITY OF ASHLAND

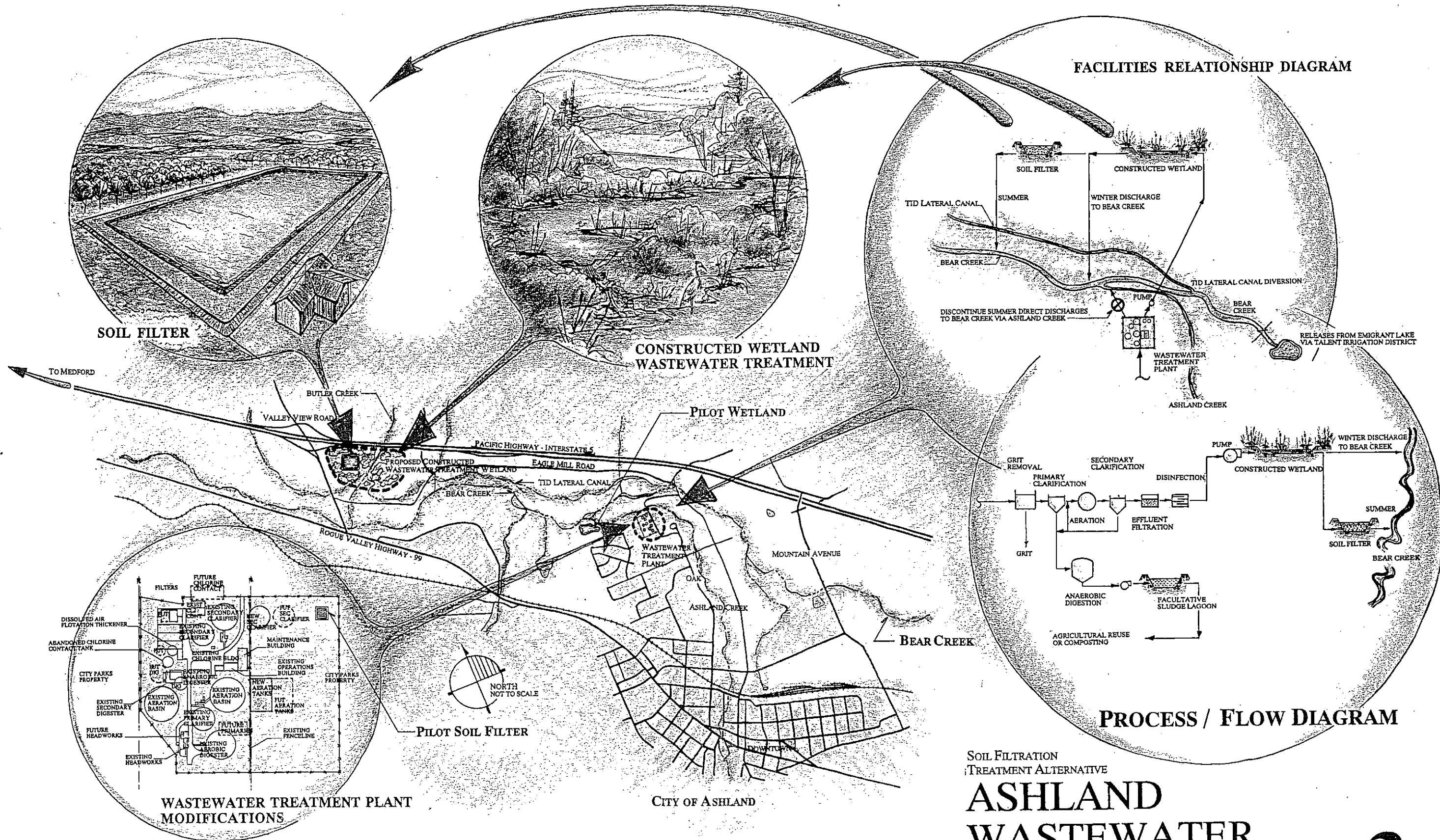



WASTEWATER TREATMENT PLANT MODIFICATIONS

CITY OF ASHLAND AND TALENT IRRIGATION DISTRICT EFFLUENT REUSE ALTERNATIVES

ASHLAND WASTEWATER FACILITIES PLAN

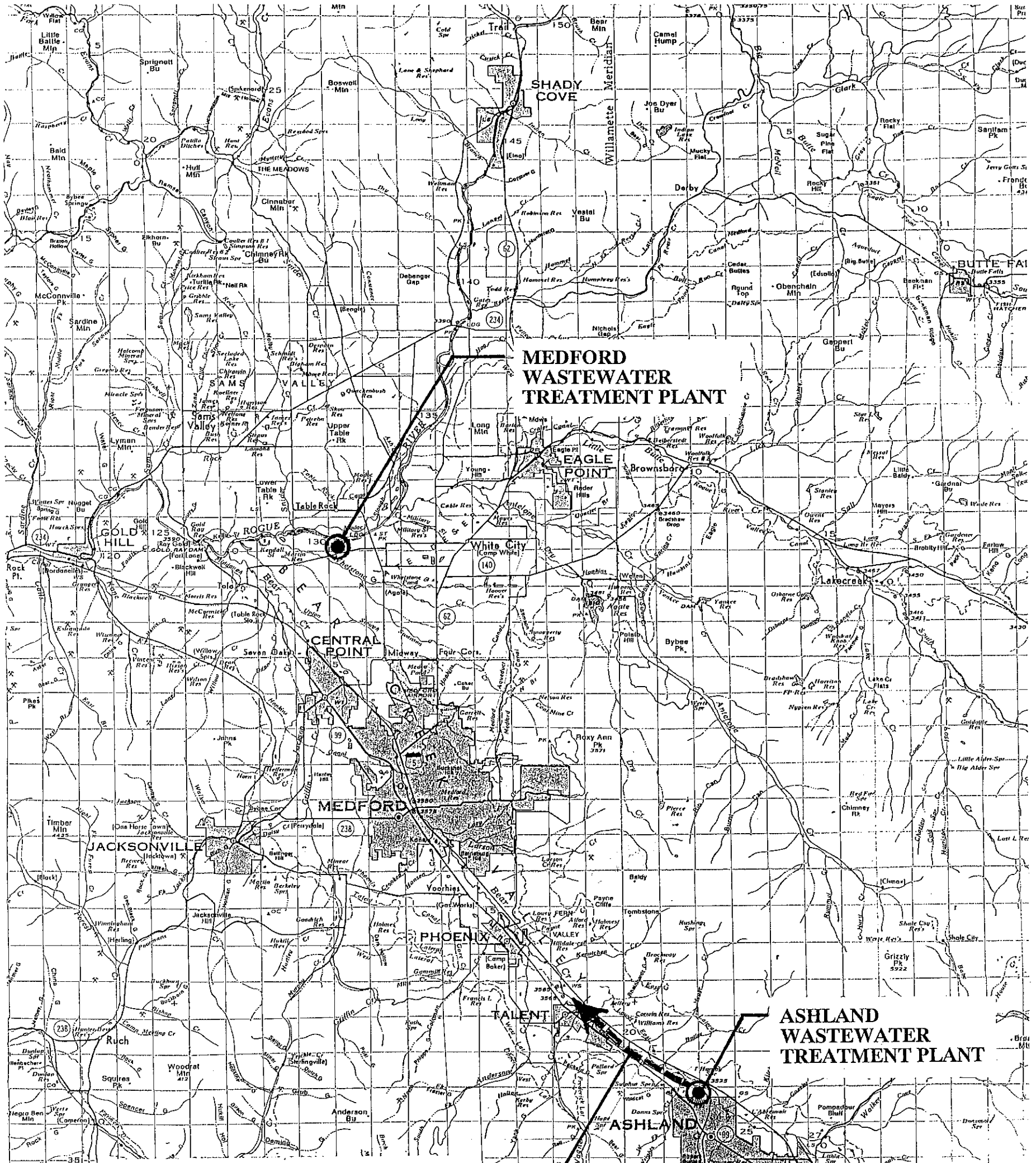
CITY OF ASHLAND, OREGON ••• JANUARY 17, 1995




 CAMERON
 McCARTHY
 GILBERT
 LANDSCAPE ARCHITECTS
 160 East Broadway Eugene, Oregon 97401
 Phone: 503-485-7384 Fax: 503-485-7389

BROWN & CALDWELL

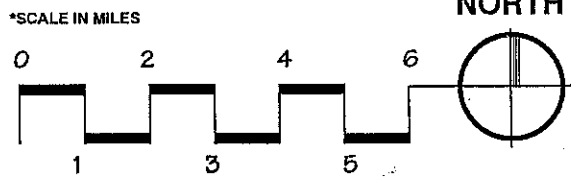
SOIL FILTRATION
 TREATMENT ALTERNATIVE
**ASHLAND
 WASTEWATER
 FACILITIES PLAN**
 CITY OF ASHLAND, OREGON ••• FEBRUARY 13, 1995



42" PIPELINE TO BEAR CREEK VALLEY SANITARY AUTHORITY COLLECTION SYSTEM.

MEDFORD TREATMENT ALTERNATIVE
ASHLAND WASTEWATER FACILITIES PLAN

CITY OF ASHLAND, OREGON ••• JANUARY 17, 1995



JACKSON CO. SISKIYOU CO.

Medford Treatment Alternative Costs
1/13/95

Item	Cost (a), \$1,000
Demolish existing plant	240
Conveyance to Medford	5,790
Medford WWTP SDC (b)	5,540
BCVSA SDC	4,939
Subtotal	18,510
Contractor indirects (g)	784
Subtotal	17,294
Contingency (c)	2,227
Subtotal	19,521
Engineering, administration (d)	2,260
Total capital cost	21,782
Annual operating costs (b,h)	815
Present worth of operating costs (e)	11,078
Salvage value (f)	(3,944)
Present worth of salvage (e)	(1,800)
Total present worth	31,058

Notes:

- (a) Costs based on an Engineering News-Record construction cost index of 6100, expected to occur at midpoint of construction, 11/98.
- (b) Costs based on information received from City of Medford on 1/11/95.
- (c) Calculated at 25% of construction costs and 5% of SDC costs.
- (d) Calculated at 25% of construction costs and contingency.
- (e) Present worth calculated assuming a discount rate of 4% and a 20-year study period.
- (f) Assumes linear depreciation.
- (g) Estimated at 13% of construction costs.
- (h) Includes cost for replacement water for Bear Creek per TID.

Talent Irrigation District Alternative Costs
1/13/95

Item	Cost (a), 1,000
Grit removal	15
Primary clarifier	71
Aeration basins, existing	256
Aeration basins, new	956
Blowers (including building)	549
Secondary clarifier No. 1	195
Secondary clarifier No. 2	12
Secondary clarifier No. 3	566
Disinfection	256
Chlorine scrubbing	183
Chemical feed/flocculation	354
Tertiary filter	519
Effluent storage (d)	1,460
Anaerobic digester No. 2	592
Digester control building	842
Demolish secondary digester	146
Sludge thickener	275
Facultative sludge lagoon (b)	1,073
Sludge transport	320
Subtotal	8,650
Electrical/instrumentation (h)	1,730
Yard piping (h)	1,730
Contractor indirect costs (i)	1,124
Subtotal	13,234
Wetlands (c)	3,941
Subtotal	17,175
Contingency at 25%	4,294
Subtotal	21,468
Engineering/administration at 25%	5,387
Subtotal	26,835
Land (e)	171
Total capital cost	27,006
Annual operating costs (j)	1,033
Present worth of operating costs (f)	14,039
Salvage value (g)	(5,308)
Present worth of salvage (f)	(2,422)
Total present worth	38,623

Notes:

- (a) Costs based on an Engineering News-Record construction cost index of 6100, expected to occur at midpoint of construction, 11/98.
- (b) Includes sludge force main and pumping station.
- (c) Cost taken from Woodward-Clyde Facilities Plan Addendum.
- (d) Pond would provide 30 day's worth of effluent storage.
- (e) Assumes purchase of Butler Creek site.
- (f) Present worth calculated assuming a discount rate of 4% and a 20-year study period.
- (g) Assumes linear depreciation.
- (h) Estimated at 20% of subtotal.
- (i) Estimated at 13% of subtotal.
- (j) Includes cost for replacement water for Bear Creek per TID.

City Land Effluent Reuse Alternative Costs
1/13/95

Item	Cost (a), 1,000
Grit removal	15
Primary clarifier	71
Aeration basins, existing	256
Aeration basins, new	956
Blowers (including building)	549
Secondary clarifier No. 1	195
Secondary clarifier No. 2	12
Secondary clarifier No. 3	566
Disinfection	256
Chlorine scrubbing	183
Tertiary filter	348
Irrigation pumping stations	288
Effluent storage/irrigation system (d)	2,618
Anaerobic digester No. 2	592
Digester control building	842
Demolish secondary digester	146
Sludge thickener	275
Facultative sludge lagoon (b)	1,073
Sludge transport	320
Subtotal	9,561
Electrical/instrumentation (h)	1,912
Yard piping (h)	1,912
Contractor indirect costs (i)	1,243
Subtotal	14,628
Wetlands (c)	355
Subtotal	14,983
Contingency at 25%	3,746
Subtotal	18,729
Engineering/administration at 25%	4,682
Subtotal	23,411
Land (e)	1,098
Total capital cost	24,509
Annual operating costs (j)	1,039
Present worth of operating costs (f)	14,120
Salvage value (g)	(5,054)
Present worth of salvage (f)	(2,307)
Total present worth	36,323

Notes:

- (a) Costs based on an Engineering News-Record construction cost index of 6100, expected to occur at midpoint of construction, 11/98.
- (b) Includes sludge force main and pumping station.
- (c) Cost taken from Woodward-Clyde Facilities Plan Addendum.
- (d) Pond would provide 30 day's worth of effluent storage.
- (e) Assumes purchase of 700 acres for irrigation.
- (f) Present worth calculated assuming a discount rate of 4% and a 20-year study period.
- (g) Assumes linear depreciation.
- (h) Estimated at 20% of subtotal.
- (i) Estimated at 13% of subtotal.
- (j) Includes cost for replacement water for Bear Creek per TID.

Advanced Wastewater Treatment Costs
2/2/95

Item	Cost (a), \$1,000
Grit removal	15
Bar screens, headworks	260
Primary clarifier, existing	71
Primary clarifier, new	327
Alum mixing and feed	196
Aeration tanks, existing	256
Aeration tanks, new	956
Recycle pumping	100
Blowers (including building)	549
Secondary clarifier no. 1	317
Secondary clarifier no. 2	733
Tertiary clarifiers	3,599
Tertiary filter	521
Disinfection	349
Chlorine scrubbing	183
Chlorine contact	37
Anaerobic digester 2	599
Digester control building	910
Demolish secondary digester	146
Gravity thickeners	625
Sludge thickener	1,103
Facultative sludge lagoon (b)	1,148
Sludge transport	320
Operations building	473
Subtotal	13,793
Electrical/instrumentation (e)	2,759
Yard piping (e)	2,759
Contractor indirects/mobilization (f)	1,793
Subtotal	21,104
Contingency at 25%	5,276
Subtotal	26,380
Engineering, administration at 25%	6,595
Soil filter pilot study	80
Total capital cost	33,055
Annual operating costs	1,231
Present worth of operating costs (c)	16,729
Salvage value (d)	(3,587)
Present worth of salvage (c)	(1,637)
Total present worth	48,147

Notes:

- (a) Costs based on an Engineering News-Record construction cost index of 6100, expected to occur at midpoint of construction, 11/98.
- (b) Includes sludge force main and pumping station.
- (c) Present worth calculated assuming a discount rate of 4% and a 20-year study period.
- (d) Assumes linear depreciation.
- (e) Estimated at 20% of subtotal.
- (f) Estimated at 13% of subtotal.

Soil Filter with Wetlands Alternative Costs
2/7/95

Item	Cost (a), 1,000
Grit removal	15
Primary clarifier	71
Aeration basins, existing	256
Aeration basins, new	956
Blowers (including building)	549
Secondary clarifier No. 1	195
Secondary clarifier No. 2	12
Secondary clarifier No. 3	566
Disinfection	256
Chlorine scrubbing	183
Tertiary filter	348
Anaerobic digester No. 2	592
Digester control building	842
Demolish secondary digester	146
Sludge thickener	275
Facultative sludge lagoon (b)	1,073
Sludge transport	320
Subtotal	6,655
Electrical/instrumentation (g)	1,331
Yard piping (g)	1,331
Contractor indirect costs (h)	865
Subtotal	10,182
Soil filter	1,513
Experimental wetlands	355
Wetlands (c)	3,941
Subtotal	15,990
Contingency at 25%	3,998
Subtotal	19,988
Engineering/administration at 25%	4,997
Subtotal	24,985
Land (d)	221
Soil filter pilot study	80
Total capital cost	25,286
Annual operating costs (c)	1,090
Present worth of operating costs (e)	14,819
Salvage value (f)	(4,563)
Present worth of salvage (e)	(2,082)
Total present worth	38,017

Notes:

- (a) Costs based on an Engineering News-Record construction cost index of 6100, expected to occur at midpoint of construction, 11/98.
- (b) Includes sludge force main and pumping station.
- (c) Cost based on Woodward-Clyde Facilities Plan Addendum. Assumes 6-acre soil filter and \$300,000/year soil replacement cost.
- (d) Assumes purchase of 10 acres.
- (e) Present worth calculated assuming a discount rate of 4% and a 20-year study period.
- (f) Assumes linear depreciation.
- (g) Estimated at 20% of subtotal.
- (h) Estimated at 13% of subtotal.

Soil Filter Alternative Costs
2/7/95

Item	Cost (a), 1,000
Grit removal	15
Primary clarifier	71
Aeration basins, existing	256
Aeration basins, new	956
Blowers (including building)	549
Secondary clarifier No. 1	195
Secondary clarifier No. 2	12
Secondary clarifier No. 3	566
Disinfection	256
Chlorine scrubbing	183
Tertiary filter	348
Anaerobic digester No. 2	592
Digester control building	842
Demolish secondary digester	146
Sludge thickener	275
Facultative sludge lagoon (b)	1,073
Sludge transport	320
Subtotal	6,655
Electrical/instrumentation (g)	1,331
Yard piping (g)	1,331
Contractor indirect costs (h)	865
Subtotal	10,182
Soil filter (c)	1,513
Wetlands	355
Subtotal	12,050
Contingency at 25%	3,012
Subtotal	15,062
Engineering/administration at 25%	3,766
Subtotal	18,828
Land (d)	50
Soil filter pilot study	80
Total capital cost	18,958
Annual operating costs (c)	1,160
Present worth of operating costs (e)	15,765
Salvage value (f)	(2,850)
Present worth of salvage (e)	(1,301)
Total present worth	33,422

Notes:

- (a) Costs based on an Engineering News-Record construction cost index of 6100, expected to occur at midpoint of construction, 11/98.
- (b) Includes sludge force main and pumping station.
- (c) Cost based on Woodward-Clyde Facilities Plan Addendum. Assumes 6-acre soil filter and \$300,000/year soil replacement cost.
- (d) Assumes purchase of 10 acres.
- (e) Present worth calculated assuming a discount rate of 4% and a 20-year study period.
- (f) Assumes linear depreciation.
- (g) Estimated at 20% of subtotal.
- (h) Estimated at 13% of subtotal.

DETAILED COST ESTIMATES

ASHLAND WASTEWATER FACILITIES PLAN

CITY OF ASHLAND, OREGON FEBRUARY 13, 1995



CAMERON
McCARTY
GILBERT
LANDSCAPE ARCHITECTS
160 East Broadway Eugene Oregon 97401
Phone: 503.485.7385 Fax: 503.485.7389

BROWN & CALDWELL

5.

CLEAN AIR...

IT'S A COMMITMENT

ROGUE VALLEY

AIR QUALITY

DISPLAY

Clean Air: It's a Commitment

Citizens, industry, government, groups make visible strides in the continuing journey to clean the Rogue Valley's air.

Introduction

The Rogue Valley on Dec. 31, 1994, marked three consecutive years of meeting federal clean-air standards for particulate matter, thereby removing itself from the list of the country's most polluted regions - a milestone in a years-long journey that has touched the lives of virtually everyone in Jackson County. The trip has been neither easy nor inexpensive. Industry has paid millions of dollars to clean its emissions; orchardists have dramatically altered how they protect trees from frost and destroy clippings; citizens have changed wood-burning equipment and habits, stopped outdoor burning and paid for vehicle emissions testing and cleaner-burning oxygenated gasoline; and governments have devoted countless hours and expense to meetings, ordinances and monitoring.

The dividends, however, are clear: a cleaner, healthier environment for everyone. Mother Nature also has helped by scouring the air with wind, but she's fields. To have clean air all the time and ensure that we don't return to the U.S. Environmental Protection Agency's "bad" list takes cooperation by citizens, business, community groups and government. Maintaining clean air will be a challenge as the Rogue Valley grows, but we've proved that by working together, we can make a visible difference.

What kind of air pollution are we talking about?

Particulate matter comprised of smoke and dust is the most visible and predominant pollution in the Rogue Valley. It comes from things like industrial smokestacks, residential chimneys, open burning of leaves and other waste, forestry slash burning, and dust from dirt roads, agriculture and industry.

Other pollution that has plagued the Rogue Valley in the past is carbon monoxide, produced mostly by vehicles. Though there were no violations from 1991 through 1994, the valley technically remains in noncompliance with federal carbon monoxide standards.

Why should we be concerned?

Particles like that found in smoke are so small that they can elude the body's natural filtering systems and lodge in the lungs, where they can lead to cancer. They also can irritate eyes and throats, and reduce resistance to infection. These particles measure 10 microns or smaller and are known as PM-10. The federal government has set a minimum standard for a safe level of PM-10 of 150 micrograms per cubic meter on a peak day, a threshold the Medford area routinely violated before 1991.

Other pollution like carbon monoxide from vehicle emissions can rob the body of oxygen - clearly a problem.

Because we live in a valley susceptible to temperature inversions and calm winds, these conditions can act like a lid that traps pollutants close to the ground where we breathe. Inversions are most common in winter, and so is smoke pollution. Hence the annual color-coded wood-burning advisory in Medford, Ashland, Central Point and parts of unincorporated Jackson County between Nov. 1 and Feb. 28. Residents can learn the day's wood-burning advisory by calling, 776-9000. The code is:

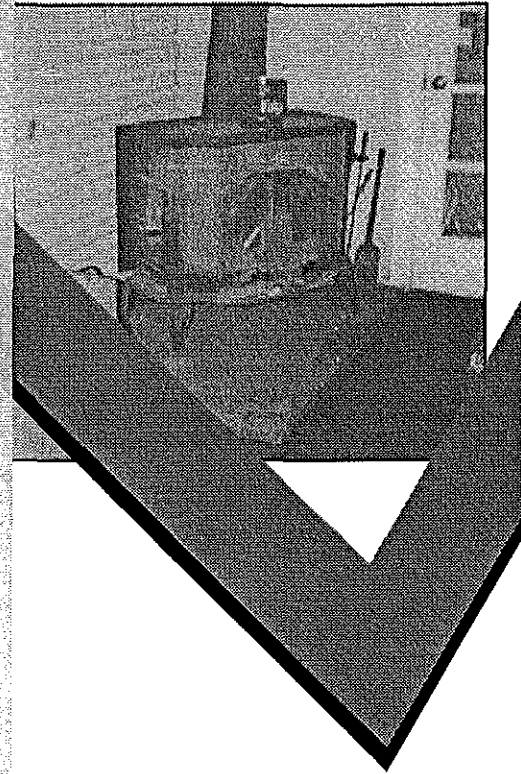
- Green: Residents in the affected areas can burn without restrictions.
- Yellow: Burning is allowed only in government-certified clean-burning stoves.
- Red: Wood-burning is prohibited in most areas.

Avoid from threatening our bodies, pollution smells and looks bad. It ruins views and impressions, neither of which is desirable in an area renowned for its natural beauty. It also can negatively influence industries that may be considering relocation to the Rogue Valley - meaning lost jobs and lost revenue.

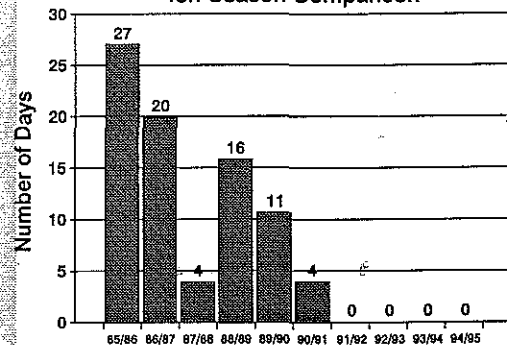
Pollution costs in other ways, too. Violating EPA air-pollution standards could have jeopardized federal highway and other funds for Oregon. Continued violation also might have resulted in expanding the wood-burning curtailment area and forcing more citizens to replace inefficient woodstoves or fireplace inserts; required industry to install more costly emissions controls; and forced orchardists, foresters and citizens to reduce or ban open burning.

Fortunately, we're proving that by working together, we can avoid stricter regulations and still clean up our environment. Follow the time line and see how far we've traveled.

Non-certified woodstoves like this are major sources of particulate pollution. Fortunately, programs are in place that have reduced the numbers of these stoves being used. Also, dealers now are selling only certified models. Photo courtesy of Housing Authority of Jackson County.



NUMBER OF DAYS OF PM-10 OVER 150 MICROGRAMS PER CUBIC METER
Ten-Season Comparison



Wood-Burning Season - Nov. 1 - Feb. 28
Source: Jackson County

Improving the Rogue Valley's air involved the efforts of more than those identified below, but the list represents what it took to get this far and what it will take to continue making progress: cooperation and commitment.

ACCESS, Inc.

- Has weatherized more than 5,000 low-income homes in southern Oregon since 1979 using a combination of private and federal funds. Weatherization helped to lower fuel use significantly in those homes that used wood as a primary or secondary heating source.
- Assisted many clients with eliminating wood as a heating source.
- Screened clients to allow wood burning by those who qualify due to economic need.

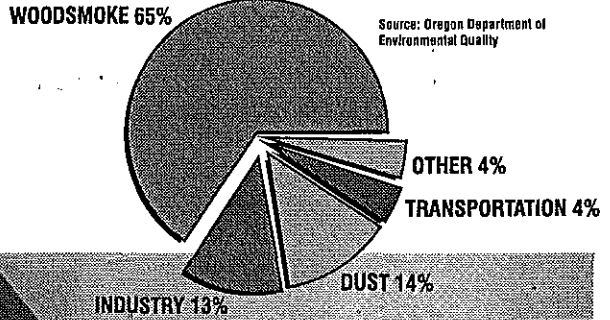
Ashland, City of

- The city since 1989 has passed three air-quality ordinances requiring that only certified woodstoves may be installed in homes, only seasoned wood may be burned, and smoke no greater than 40 percent in thickness (opacity) may be emitted from chimneys.
- Implemented a woodstove replacement program known as SOLVE - Save Our Livability, View and Environment - which consists of a loan placed as a lien on the property for an alternative heating system and weatherization, or a \$100 rebate for removal of an existing woodstove. There have been 104 rebates and 35 loans since the program began.

The Rogue Valley's Air Quality Journey From Hazardous to Healthy

Jan. 7, 1959: Medford City Council authorizes joint study with the Oregon State Sanitary Authority to investigate air conditions in Medford.
 February 1960: Oregon Sanitary Authority issues report entitled, "The Air Pollution Problem in Medford, Oregon." It confirms that: "Medford has severe air pollution during certain periods." It cites orchard smudge pots; cinders from mills; automobiles; burning of oil, wood and sawdust for heating homes and buildings; open burning of refuse; and weather conditions as pollution factors. It issues broad recommendations for improvement that eventually are incorporated into air-quality strategies.
 1969: Oregon Department of Forestry voluntarily implements Oregon Smoke Management Plan to reduce smoke from slash burning and other forest-preservation practices.
 1970s: Rogue Valley air problems attributed mostly to the wood-products industry, but gains are being made. Unfortunately, the international oil embargo has increased oil and energy prices, and more Rogue Valley residents turn to abundant and cheap wood to heat their homes. Woodsmoke pollution increases and begins to offset pollution reductions being made by industry. Vehicle emissions also are recognized as a large problem.

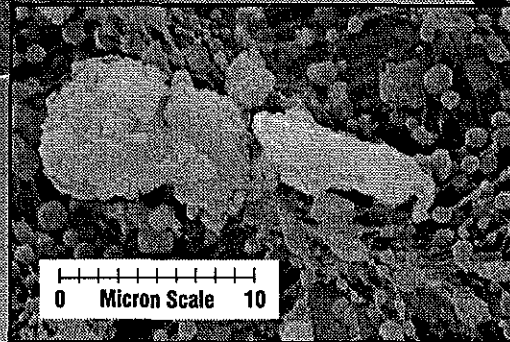
**MEDFORD-ASHLAND AQMA EMISSION INVENTORY
 PM-10 Emissions During 1984-86
 (Worst Day Scenario)**



A woman wears a mask to protect herself from filthy air during a walk in downtown Medford in the 1970s. Smoke particulates tend to increase the density of fog because the particles act as nuclei around which the moisture in the air huddles.



This electron microscope photograph is a more than 6,000 times magnification of a mirrored sample of PM-10 collected in a Department of Environmental Quality air sample at the Medford courthouse in February 1989. Enlargement courtesy of Southern Oregon State College.



Central Point, City of

- Passed ordinances in 1989 to ban open burning in the city and to regulate woodstove and fireplace use. The woodstove and fireplace ordinance was repealed by voters in 1990, but reinstated in 1991.

Citizens

- Burned only on allowable days, used seasoned wood, converted to cleaner-burning woodstoves or pellet stoves and, in some cases, eliminated wood-burning altogether.
- Replaced woodstoves with cleaner heating systems such as natural gas or electricity.
- Paid for regular emissions testing on their vehicles since 1986.
- Paid for cleaner-burning oxygenated gasoline each year from Nov. 1 - Feb. 28.
- Eliminated backyard burning of leaves and other yard waste.
- Increased use of carpools or alternative forms of transportation such as mass transit, walking or bicycling.

Coalition to Improve Air Quality

- Formed in 1987 with members from the American Lung Association of Oregon, Rogue Group Sierra Club, League of Women Voters, Headwaters, Rogue Valley Audubon, Better Breathers, Friends of the Greensprings, R.A.C.T., Oregon Environmental Council and interested citizens.
- Vigorously supported Jackson County Woodstove ordinances to control wood-burning.

1972: An extremely cold spring results in 31 nights of orchard heating by fruit growers trying to protect their crops. Pollution from the heating, primarily by oil-burning smudge pots, results in growers forming an anti-pollution committee to address frost-control measures. The first large wind machine is tested in the Minear Orchard near Jacksonville.

Sept. 30, 1976: Oregon DEQ issues one of what would be many air pollution alerts in Medford, and urges less driving to lower smog emissions.

1977: Pacific Power begins offering weatherization services for electric heating customers.

March 1977: Jackson County and Oregon Department of Environmental Quality (DEQ) appoint Medford-Ashland Air Quality Maintenance Area Advisory Committee to identify sources of air pollution and develop strategies for improvement.

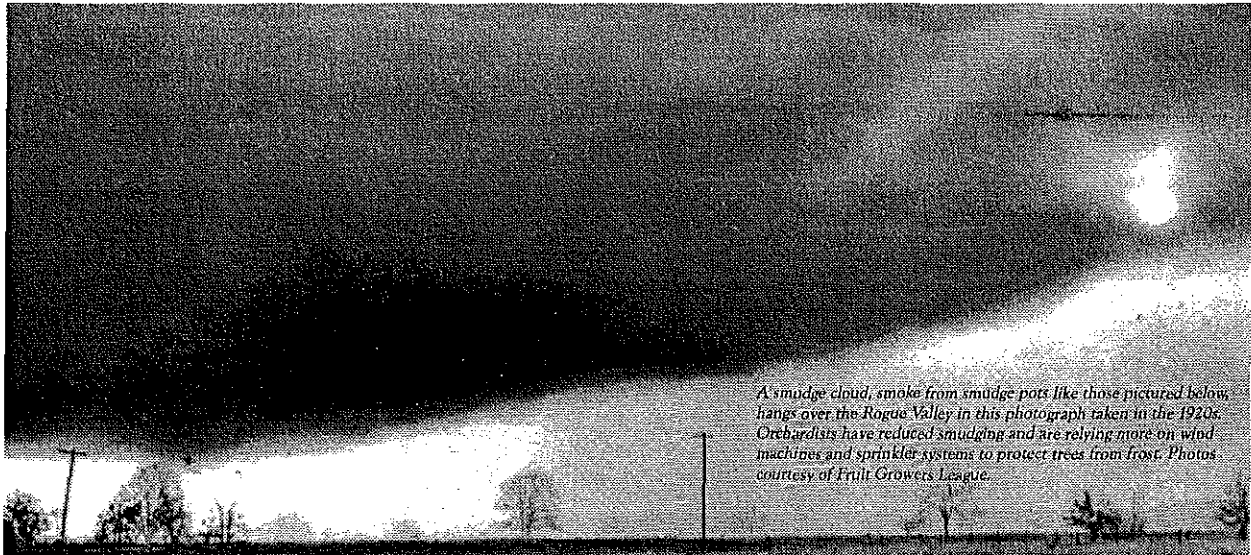
July 19, 1977: Air pollution information line (773-SMOG) begins offering readings on carbon monoxide, smog and particulates. The line eventually includes tips on reducing emissions. The number later changes to 776-9000.

July 1977: DEQ identifies the Rogue Valley's highest-polluting industries, with one plant spewing an estimated 821 tons of particulates each year. Slash burning in or near the Rogue Valley is identified as producing the most particulate matter, an estimated 2,213 tons of smoke and dust a year.

August 1977: EPA passes the Clean Air Act. States must report how high-pollution regions like the Medford-Ashland Air Quality Maintenance Area will attain compliance for carbon monoxide and smog by December 1987 and PM-10 by December 1984.

1979: ACCESS Inc., using a combination of private and federal funds, begins weatherizing homes of low-income people in southern Oregon and assisting in their conversion to alternative, cleaner-burning heating systems. The predecessor of WP Natural Gas begins offering weatherization services for gas-heating customers.

1979: Environmental Quality Commission implements emissions control measures for all pollution industries in the Rogue Valley.



A smudge cloud, smoke from smudge pots like those pictured below, hangs over the Rogue Valley in this photograph taken in the 1920s. Orchardists have reduced smudging and are relying more on wind machines and sprinkler systems to protect trees from frost. Photos courtesy of Fruit Growers League.



- Started a newsletter explaining hearings on industrial emissions and what positions the group should consider. Before the coalition's involvement, such hearings were sparsely attended by citizens.
 - Testified at various committees that were called to draft air-quality laws at local, state and national levels, and represented on local and state advisory boards.
 - Involved in meetings and decisions regarding backyard, commercial, field and orchard-pruning burning, as well as forestry slash burning.
- "When the question comes up if a small group can make a difference, the coalition is the group I point to. They made a huge difference." - Jeff Golden, former Jackson County commissioner, in a Jan. 26, 1992, article in the Medford Mail Tribune.

Department of Environmental Quality (DEQ)

- Has overseen and implemented air-improvement efforts throughout the valley, including particulate matter programs, and acted as the state regulatory agency between federal mandates and local implementation. Also provides general technical assistance to groups, governments and industries.
- Oversees operation of the Vehicle Inspection/Maintenance Station.
- Regulates industrial pollution controls.
- Implemented Woodstove Certification Program.
- Operates air-monitoring network.

Dec. 15, 1980: Total suspended particulates from smoke (including particles greater than 10 microns) measure 449 micrograms per cubic meter, the highest in the Rogue Valley since measurements began in 1976. The record still stands.

Dec. 17, 1980: The highest PM-10 reading ever recorded in the valley occurs - 370 micrograms per cubic meter, more than double the EPA's minimum current standard.

August 1982: Jackson County adopts voluntary wood-burning ordinance, effective July 1984, to prohibit residential wood-burning during high air stagnation periods. Medford also enacts a ban on open burning within the city limits during December and January.

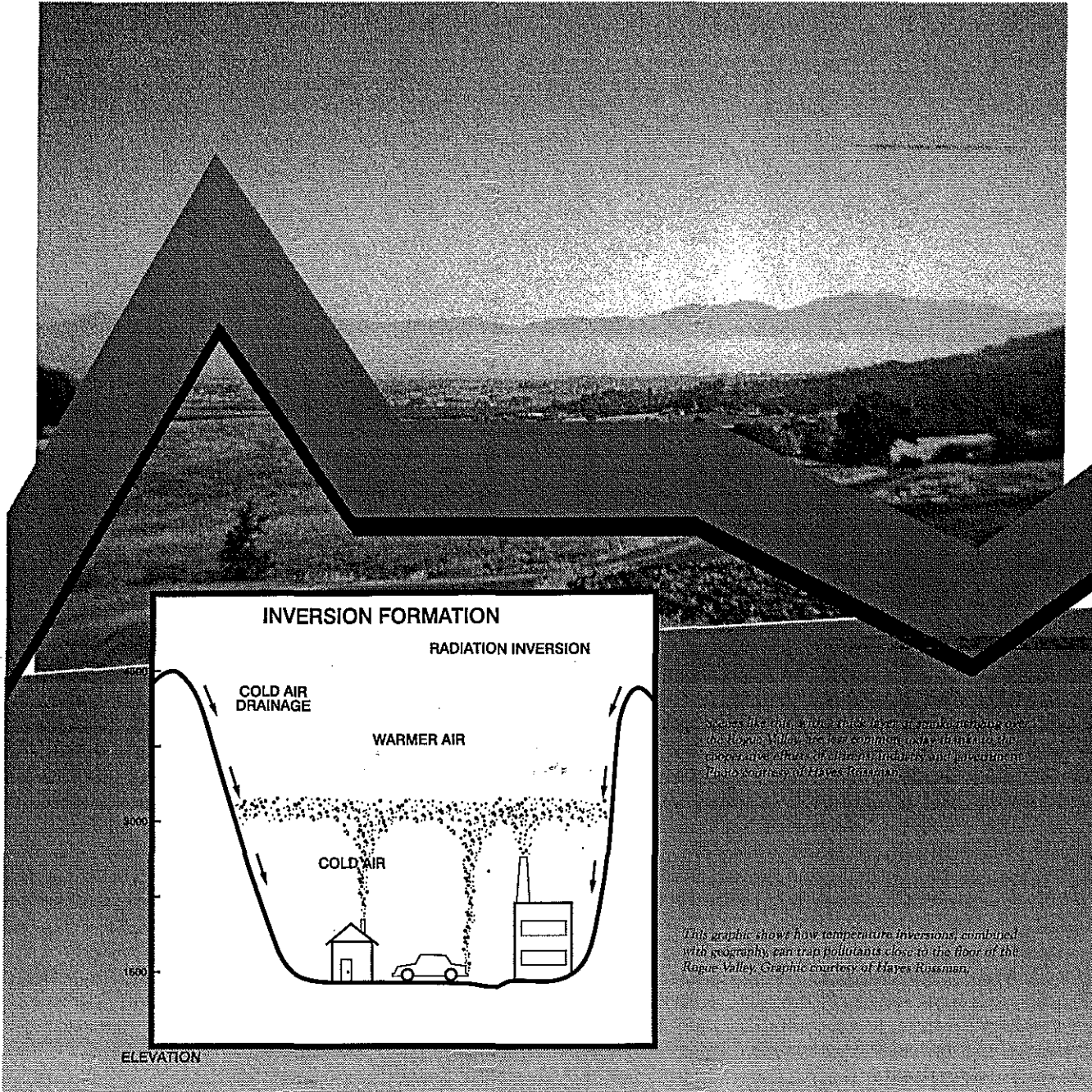
1983: Orchardists are heating 2,022 fewer acres with oil than they were in 1977. Acreage protected by wind machines and overhead sprinklers (used to coat trees with an insulating layer of ice) has increased from 17 to 4,260.

April 1983: Particulate control strategy proposed for Medford-Ashland Air Quality Maintenance Area is adopted by the Environmental Quality Commission. It is later approved by the EPA in August 1984.

March 1984: Jackson County submits to voters an ordinance requiring vehicle emissions testing. It fails.

1985: PM-10 concentrations in the Rogue Valley hit highest levels since December 1980. In January and December, most days violate air quality health standards in Medford.

November 1985: Medford participates in Voluntary Wood-burning Advisory Program with Jackson County and DEQ. "Green, yellow, red" wood-burning advisory begins and runs Nov. 1 to Feb. 28 each year.



Fruit Growers League

- Reduced oil-based, high-pollution heating of pear orchards. Overhead sprinklers and an estimated 400 wind machines now protect about 6,500 of the 8,500 acres of orchards - voluntarily imposed improvements on which county pear growers have spent about \$9.75 million.
- Limited burning of brush and chippings.

Housing Authority of Jackson County

- Involved in Woodstove Replacement Program to remove obsolete woodstoves from homes of low-income people and replace them with new, cleaner-burning heating systems.
- Replaced obsolete woodstoves with new heating sources in 583 homes since 1988 using about \$1.9 million in grants. Roughly 70% of the households chose natural gas heat, with the remainder choosing electric, oil or pellet. Most of the homes were weatherized by the program or referred to ACCESS, Inc., for insulation.

Industry

Biomass One

- A wood waste-fired cogeneration plant that burns 355,000 tons of wood waste a year in boilers that produce steam for drying lumber and electricity that is sold to Pacific Power. Biomass One spent \$5 million in 1989 to become one of the cleanest wood-burning plants in America. In 1990 it built a \$2 million wood processing plant and opened its urban

January 1986: DEQ opens Rogue Valley Inspection/Maintenance station and begins state-mandated vehicle emissions testing.

July 1, 1986: All new woodstoves or fireplace inserts sold in Oregon must be certified clean burning, emitting no more than 15 grams of particulates per hour.

July 4, 1986: McAndrews Road overpass opens, freeing vehicles from having to stop for trains and improving traffic flow along the road, thereby reducing carbon monoxide emissions that escalate during idling.

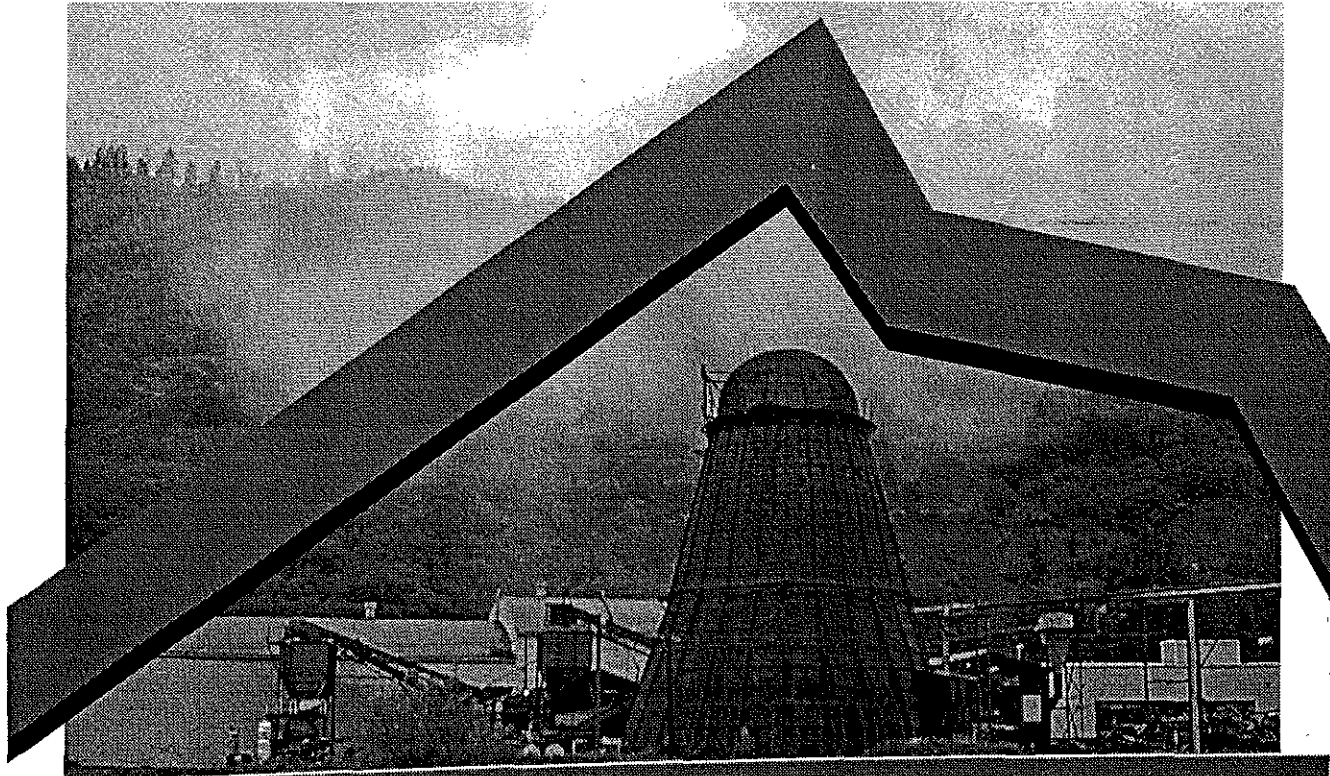
November 1986: Wood-burning advisory program starts for second year after surveys in December 1985 and January 1986 show insufficient reductions in wood-burning to meet particulate goals.

March 1987: EPA designates Medford area as a nonattainment region for carbon monoxide and PM-10.

Summer 1987: Coalition to Improve Air Quality forms to coordinate citizen efforts against all forms of air pollution.

July 1987: EPA adopts rules concerning PM-10 and requires compliance by 1991.

December 1987: Jackson County Wood-burning Task Force recommends public education, financial incentives, clean-air utility rates, ban on installation of noncertified woodstoves and mandatory curtailment of wood-burning during periods of poor air.



Thick smoke boils from a residential chimney. Woodsmoke is a major source of particulate pollution.

wood waste disposal site. It currently collects 55,500 tons of wood waste that was previously dumped in landfills or openly burned.

- Purchased mobile operations equipment in 1993-94 to process large amounts of logging and land-clearing debris that traditionally was openly burned. About 41,000 tons were collected in 1994.

- Utilizing wood waste in its boilers reduces by about 500 times the particulates from open burning by citizens.

Boise Cascade

- Spent an estimated \$7.5 million in air-quality controls from 1989-1994.

- Particulate emissions for all operations in the area in 1978 was 354 tons. Current permitted particulate emissions are about 223 tons. Estimated actual particulate emissions in 1994 was 69 tons.

- The Medford operation in 1978 had particulate emissions of 256 tons. It's currently permitted to release 170 tons, but in 1994 emitted just 37 tons.

Burrill Lumber Co.

- Spent \$175,000 in air-quality controls since 1989, and reduced particulate emissions from 47 tons in 1978 to 22 tons in 1994.

Croman Corp.

- Spent \$250,000 on emissions controls since 1989, reducing particulate emissions by 32 tons a year.

March 1988: Jackson County gets Community Development Block grant of \$485,000 for replacement of noncertified woodstoves in low-income homes (CLEAR program, administered by Housing Authority of Jackson County), and 152 woodstoves are replaced in the area. ACCESS provides an additional \$30,000 for weatherizing these homes. These programs were partially funded by WP Natural Gas and Pacific Power.

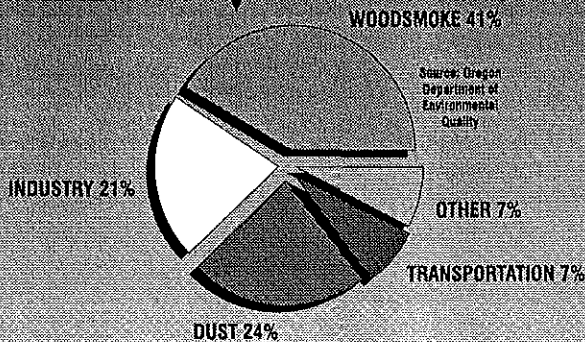
November 1988: Jackson County, Medford and Central Point adopt a plan for voluntary air-quality improvement in the Medford-Ashland Air Quality Maintenance Area and submit it to DEQ.

December 1988: Jackson County and local fire protection districts implement voluntary fuelwood moisture testing program to encourage burning of seasoned wood, which burns hotter and produces less pollution than "green" wood.

1988: Medford and Jackson County begin voluntary "Cordwood Heating Curtailment" program.

Field burning is limited to crop disease control from Nov. 1 - Feb. 28. All other field burning is regulated because of its adverse effect on air quality.

**MEDFORD-ASHLAND AQMA EMISSION INVENTORY
PM-10 Emissions During 1984-86
(On an Annual Basis)**



Dust from dirt roads adds to particulate pollution. Photo courtesy of Hayes Rossman.

Royal Oak

- Spent more than \$3 million toward pollution control since 1978, reducing particulate emissions by about 50 tons per year.
- Discontinued the use of its hogged fuel boiler on Oct. 1, 1994.

Stone Forest Industries

- Spent \$287,000 on emissions controls since 1989 at its White City plant and decreased particulate matter by 421 tons per year.

Timber Products Co.

- Spent \$1.67 million in air-emissions equipment in the last five years to meet clean-air standards. Particulate emissions have decreased 25 tons from 1978 to current permitted particulate levels. The company is emitting fewer particulates than permitted due to use of a natural gas boiler instead of its wood waste boiler.

Jackson County

- Has been at the center of numerous air-quality issues since the 1970s, eventually passing a woodsmoke ordinance in 1990 that included public education, compliance surveying, open-burning enforcement and woodstove enforcement monitoring.
- The sponsoring agency for the federal clean cities designation the Rogue Valley received in 1994, joining Portland as the only other such area in the Pacific Northwest.

1989: Statewide studies begin showing that clean-burning woodstoves produce 1/10th to 1/100th of the smoke of older-generation stoves.

1989: Medford enacts year-round ban on outdoor burning.

Sept. 30, 1989: Oregon Environmental Council sponsors Clean Air Fair, "A Celebration of Life and Breath," in Jacksonville, which includes information and demonstrations on cleaner-burning heating systems, weatherization and more.

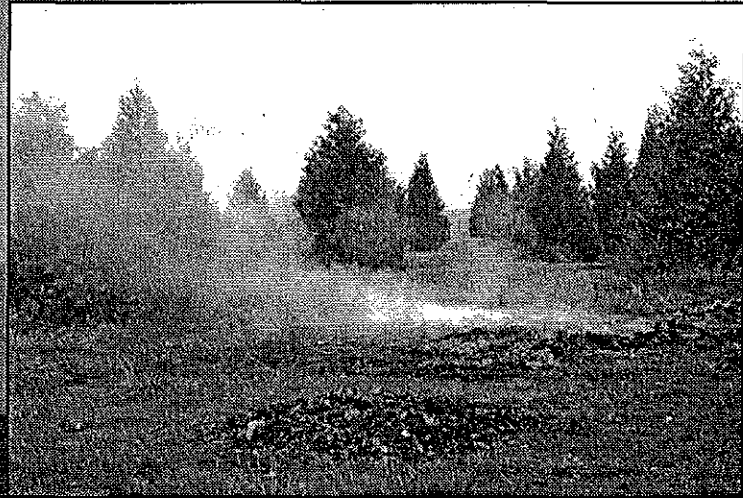
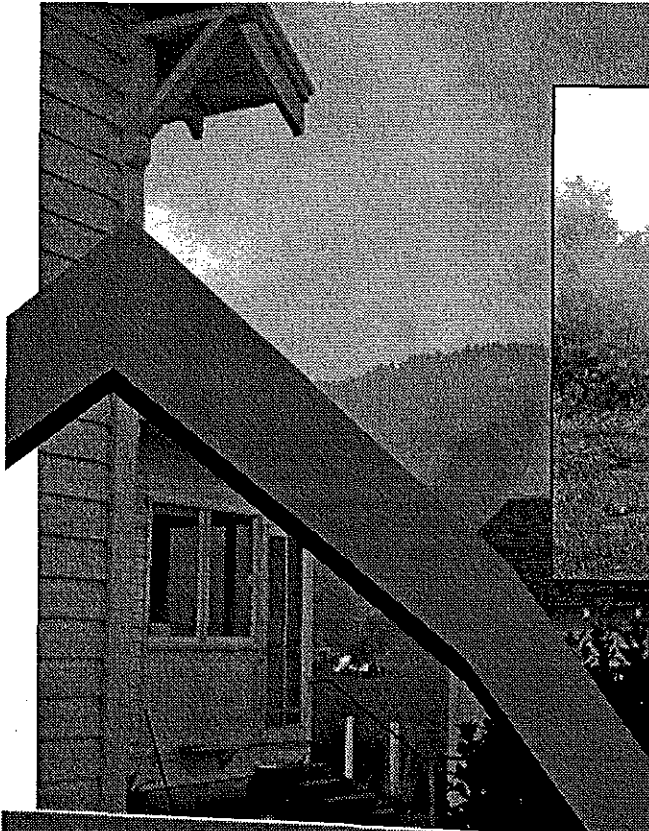
October 1989: Central Point adopts ordinance banning open burning.

November 1989: Medford adopts ordinance prohibiting the use of non-certified woodstoves and fireplaces on high-pollution days.

Winter of 1989-90: The most stagnant since 1985, but there was about a 50% reduction in particulate matter, attributed largely to woodsmoke curtailment efforts.

1989: Ashland begins incentive program (SOLVE) for homeowners to replace old woodstoves with alternative heating systems and to weatherize.

December 1989: Health-hazard emergency is declared in Central Point. The City Council passes an ordinance restricting woodstove and fireplace use, despite opposition from many residents.



Open and barrel burning of leaves, household garbage and other waste material remains a problem in the Rogue Valley. Open and barrel burning in the Air Quality Maintenance Area is banned Nov. 1 - Feb. 28 each year because of poor air circulation during those months.



The Vehicle Inspection/Maintenance Station in Medford has helped to reduce emissions pollution from vehicles in the Rogue Valley.

- Provides the countywide "red, yellow, green" wood-burning advisory.
- Operates the county wood-burning and open-burning curtailment programs.
- Coordinates the valley wood-heating and open-burning public education programs.

Jackson County Medical Society

- Sponsored talks on the health effects of woodsmoke in an effort to educate the public.

Medford, City of

- Enacted a ban on open burning in the city limits in 1982 during December and January, expanding the ban to year-round in 1989.
- Passed an ordinance in 1989 that prohibited the use of non-certified woodstoves and fireplaces on high pollution days. One year later, it banned the installation of non-certified woodstoves.
- Has been active in smoke-monitoring efforts and public education, including a successful program of classroom education.
- Has contributed about \$380,000 to Woodstove Replacement Program.

Medford-Jackson County Chamber of Commerce

- Ran campaign for bond issue to build the McAndrews Road overpass, thereby improving traffic flow and reducing carbon monoxide emissions along the busy road.

1990: U.S. Clean Air Act amended to strengthen environmental air-quality regulations.

1990: Second phase of Oregon law regulating woodstove emissions takes effect, putting the emissions threshold at 9 grams of particulate per hour.

1990: Grants totaling \$814,900 pay for replacement of woodstoves in 250 low-income homes and the installation of cleaner-burning heating systems.

1990: Jackson County implements Ordinance 90-4, which limits wood-burning on high pollution days within the Woodsmoke Curtalement Boundary which includes most of the valley floor, but not before months of sometimes acrimonious public hearings debating the issue.

August 1990: Medford bans installation of non-certified woodstoves.

Sept. 15, 1990: Second Clean Air Fair, "A Celebration of Life and Breath," culminates Clean Air Week, which encourages downtown Medford employees to ride their bike, walk or take a bus to work, and encourages all others in the county to work toward maintaining and improving air quality.

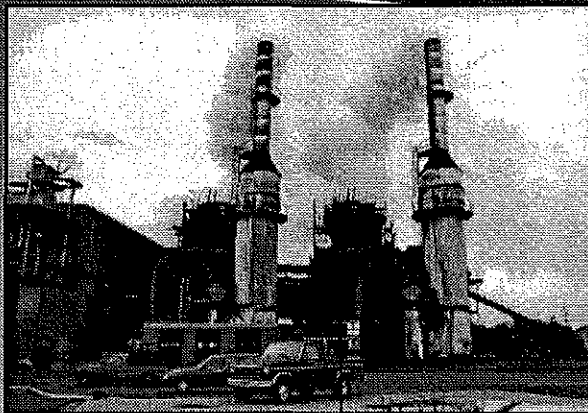
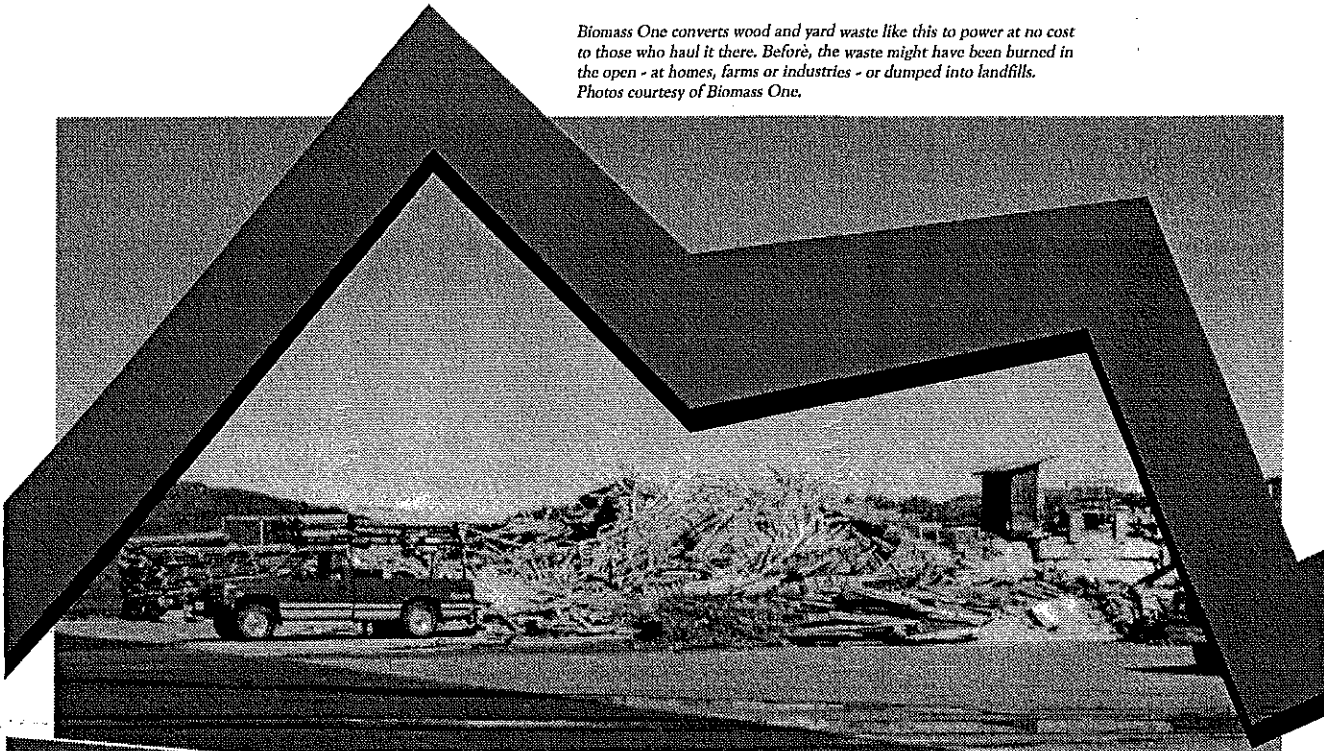
November 1990: Measure 15-1 is on the ballot asking, "Should Jackson County Ordinance 90-4, which limits wood-burning on high air pollution days, be repealed?" The measure is defeated and the Jackson County Woodsmoke Ordinance goes into effect. It includes public education, compliance surveying, open-burning enforcement and woodstove enforcement monitoring.

November 1990: Central Point, by 16 votes, repeals the city ordinance passed in 1989 which restricted woodstove and fireplace use.

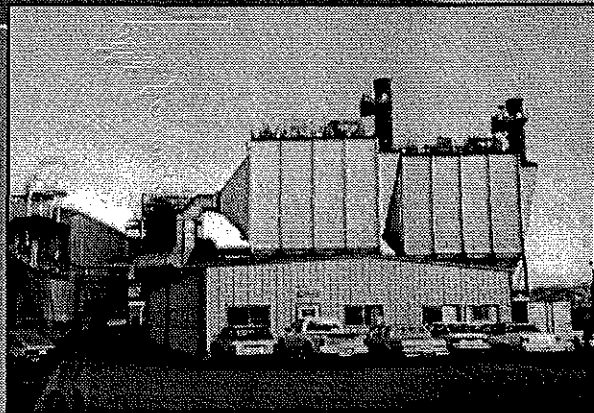
November 1990: Jackson County Interagency Air Quality Team - comprised of public interest groups, government agencies, and business representatives - forms to focus on reducing particulate pollution by offering the public alternatives to wood-heating.

1990: Ashland approves a rule requiring that chimney smoke be no more than 40% in thickness or "opacity."

Biomass One converts wood and yard waste like this to power at no cost to those who haul it there. Before, the waste might have been burned in the open - at homes, farms or industries - or dumped into landfills. Photos courtesy of Biomass One.



Before: Biomass One smokestacks are seen before the company spent \$5 million in air cleaning electrostatic precipitators.



After: The same Biomass One smokestacks are significantly cleaner after installation of electrostatic precipitators in 1989.

- Supported mandatory vehicle emission inspections, wood- and open-burning restrictions and woodstove regulations.

Oregon Department of Forestry/Rogue River National Forest/Bureau of Land Management

- Administer Oregon Smoke Management Plan.

Oregon Hearth Products Association

- Has sponsored the "Great Stove Changeout" since 1991, where authorized woodstove dealers offer discounts on certified clean-burning woodstoves when an old stove is turned in for recycling.

Oregon State University Extension Service

- Developed and conducted seminars for the public to learn cleaner, more efficient and safer wood-heating practices.
- Trained woodstove dealers, chimney sweeps and firewood vendors, and building, fire and other personnel in Jackson County, Medford, Ashland and Central Point on responsible wood-heating that they could pass to constituents.
- Developed programs to encourage seasoning of firewood before burning; built and demonstrated a model of a solar wood dryer; helped the county design a program to offer wood-moisture testing at fire stations; and assisted the Rogue River National Forest in establishing a firewood harvest policy that facilitates seasoning.
- Produced and distributed education materials to encourage communication of air-quality concerns and responsible wood-heating practices between neighbors.

1991: Wood Burning Advisory begins airing daily on radio in three-year program sponsored by Pacific Power.

1991: Oregon Legislature bans the sale and installation of noncertified woodstoves.

1991: A second Community Development Block Grant from HUD, this one for \$252,000, funds replacement of woodstoves in 59 low-income homes and the installation of cleaner-burning heating systems.

1991: First "Great Stove Changeout" pilot program run in Medford as part of a statewide effort to begin replacing the 300,000 older, inefficient stoves in Oregon with cleaner-burning, certified models. In the Changeout, which continues today, woodstove dealers offer cash for old stoves when a new certified stove is purchased. Old stoves are recycled for their metal. Statewide, the goal is to reduce woodsmoke pollution by 90 percent.

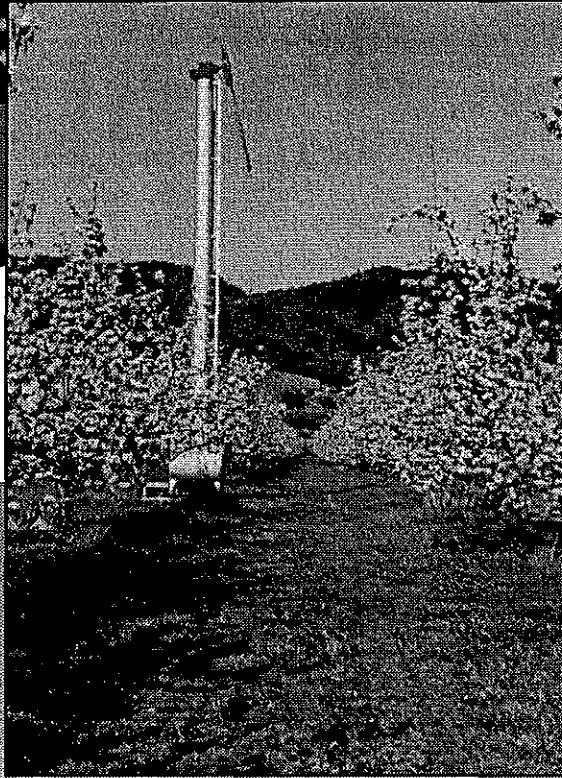
January 1991: Jackson County Agricultural Open-burning Task Force proposes restrictions on when and why agricultural burning can occur, and studies alternative methods of agricultural waste disposal.

February 1991: Jackson County approves an order allowing agriculturists to burn during February when the wood-burning advisory is "green" and the ventilation index is more than 200. Subsequent board orders allow this through 1996.

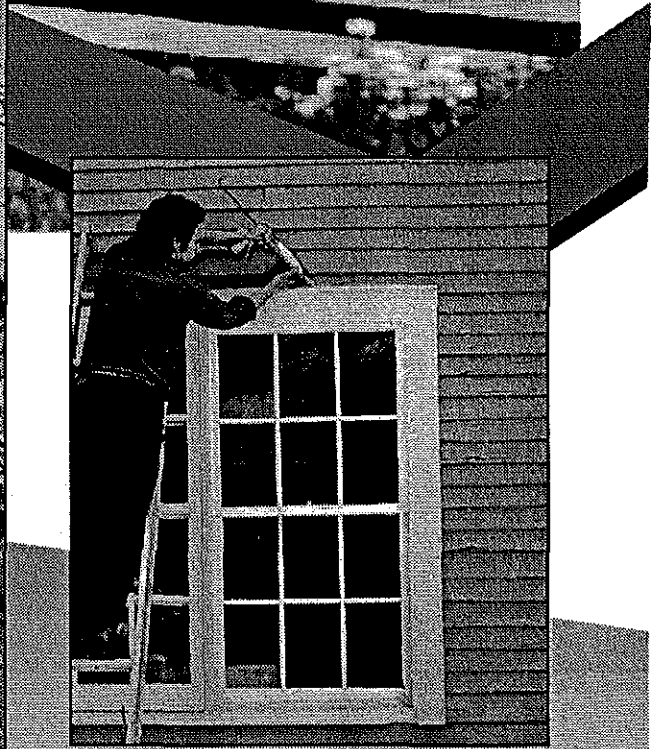
August 1991: Central Point passes ordinance restricting woodstove and fireplace use, and agrees to put it on the November ballot.

November 1991: Central Point voters pass ordinance restricting woodstove and fireplace use under a threat from DEQ that it will set air-quality controls if the city does not.

Natural gas-powered buses like this one are a dramatic improvement over diesel-powered buses. The Rogue Valley Transportation district has 10 of these clean air buses and is in the process of converting its entire fleet. Photo Courtesy of Rogue Valley Transportation District.



Orchardists are relying more on non-polluting wind machines like this to protect their trees from frost. Photo courtesy of Fruit Growers League.



Caulking around windows or weatherstripping around doors can keep more heat in, thus reducing the burning of wood or other fuels used to heat homes. Photo courtesy of OSU Extension Service.

- Regularly included articles on responsible wood-heating in its newsletter and served as a resource for media to encourage clean burning practices.

Pacific Power

- Sponsored the Wood Burning Advisory each morning for three years - radio programs which began in 1991 and provided wood-burning tips. Customers also received tips with their power bills.
- Conducted more than 15,000 free energy audits and assisted in weatherizing more than 4,500 homes in Jackson County since 1977. About \$6.1 million has been invested into the program, which continues to offer loans and cash rebates for homeowners and landlords.
- Worked with ACCESS Inc. since 1985 to weatherize homes of low-income individuals and has worked with ACCESS on Pacific Power's ECONS program providing free weatherization for more than 600 homes of low-income customers to date, with a participation level for both programs of \$700,000.
- Participates with the Housing Authority of Jackson County in its Woodstove Replacement Program, offering incentives to weatherize and replace woodstoves with zero emissions electric heat.

Rogue Valley Fire Chiefs Open Burning Advisory Committee

- Unified open-burning regulations and permitting throughout the Rogue Valley. Also assists in enforcement.

Dec. 31, 1992: Marks the first year since 1985 that Rogue Valley doesn't violate PM-10 standard set by the EPA in the Clean Air Act of 1977. 1992: Second year of Great Stove Changeout.

June 1992: Renew America recognizes Jackson County Interagency Air Quality Team -- Medford, Ashland, Central Point, DEQ, Housing Authority of Jackson County, Jackson County Air Quality, Coalition to Improve Air Quality, ACCESS, Pacific Power, WP Natural Gas and others -- for efforts to clean Rogue Valley air.

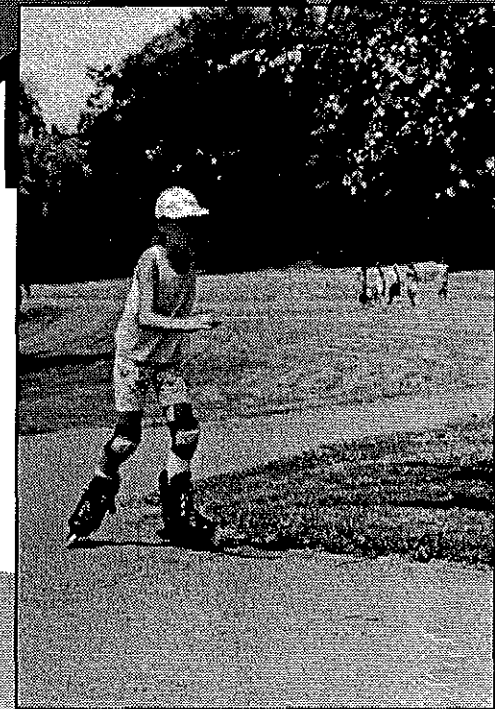
November 1993: State requires cleaner-burning oxygenated gasoline to be sold at gas pumps, an annual requirement that coincides with the Nov. 1-Feb. 28 wood-burning season.

Dec. 31, 1993: Marks second consecutive year that Rogue Valley doesn't violate federal particulate matter standards.

November 1994: Renew America again recognizes Jackson County Interagency Air Quality Team for air-quality efforts.

Dec. 31, 1994: Rogue Valley accomplishes three consecutive years of clean air attainment for particulate matter -- removing itself from the list of areas that don't meet federal Clean Air Act limits for PM-10.

Citizens have played a major role in cleaning up the air in the Rogue Valley and making scenes like this possible. With continued cooperation among citizens, industry, groups and governments, the Rogue Valley can continue to be a healthy place to work and live. Photo courtesy of Mike Burdill Sr.



Clean air means a healthier future for everyone. Photo courtesy of Medford Urban Renewal Agency.

Today and beyond:

Air quality efforts continue through numerous programs, including better and more efficient wood-burning, bans on open burning, public education, industrial and auto emissions controls, less-polluting frost-protection methods by orchardists, and reductions in agricultural field burning.

"Our community has the right to be proud of how far we have come. We also need to realize that more can be done. Just what a tolerable level of pollution is, healthwise, is open to debate and further scientific research. Our challenge is to maintain a healthful environment while we undergo the rapid growth we are experiencing." -- From a guest opinion by Vera Morrell, who has chaired the Coalition to Improve Air Quality and Wally Skyman, a patient representative with the local American Lung Association of Oregon board, Jan. 8, 1995, Medford Mall Tribune.

Rogue Valley Transit District

- Spent more than \$2.5 million for a compressed natural gas fueling station and 10 clean-air, natural gas-powered buses, and five natural gas-powered shuttle vans. The equipment resulted in an 80 percent reduction in PM-10 compared to the old diesel buses.

WP Natural Gas

- Has invested more than \$24 million since 1989 in the natural gas distribution system that brings clean, low-cost energy to homes and businesses in Oregon, where more than 18,000 customers have added the fuel. Natural gas has played a key role in reducing PM-10 as homes and businesses convert to it.
- Has conducted free energy audits for 12,000 Oregon customers to determine if homes and businesses can improve operating efficiency.
- Cooperated in the weatherization of 4,868 homes, representing \$5.8 million in weatherization. Of those homes, 558 received free weatherization through community agencies. WPNG paid cash incentives on these projects totaling more than \$1.55 million.
- Continues to assist customers who wish to invest in energy efficiency, budgeting about \$970,000 in 1995 for WPNG "Efficiency Partners" programs in Oregon.
- Has helped leverage grant applications for the county's Woodstove Replacement Program.
- Has issued "clean-air" rebates totaling \$38,525 to 487 households since 1989.
- Committed more than \$24,000 toward establishing the Rogue Valley Transit District with a fleet of clean-air natural gas buses and vans.
- Continues to convert company vehicles in Medford to natural gas.

Legislative Report
1995 Regular Session

DRAFT

Department of Environmental Quality
811 S.W. Sixth Ave.
Portland, OR 97215

Prepared by Carolyn Young

Legislative Report

1995 Regular Session

Background

The 1995 Legislative Session marked the first time in several years that the Republican Party controlled both the Senate and the House. The Republican leadership set out to have a short session. They met their goal.

The Department did not introduce any major new environmental initiatives. The Department sponsored only one bill which allows Indian Tribal governments to apply for revolving loan funds for sewage treatment works. The Department supported several other pieces of legislation and actively worked on many bills. One of the most significant is HB 3352, a major revision of Oregon environmental cleanup law. This bill was negotiated between DEQ, Associated Oregon Industries, local governments and environmental organizations.

DEQ's budget and recent fee increases received significant attention throughout the session. The legislature did roll back an increase in the industrial waste discharge permit fee, but replaced the shortfall with money from the General Fund. The budget bill was one of the last bills passed.

Several bills were introduced to change the way government works. Most of the efforts failed. However, SJR 12 which requires legislative review of administrative rules was passed as a referral to the voters.

General

Bills That Passed

HB 2255 **Pollution Control Tax Credits**

This bill is a comprehensive tax credit measure that extends sunset dates for several tax credits including pollution, plastics and recycling.

The sunset for the existing pollution control tax credits was extended from December 31, 1995 to December 31, 2001. The sunset for filing application extends to December 31, 2003.

The bill establishes a new, optional, precertification provision before completion of the facility. The application for precertification shall contain a statement of the purpose the application and a description of the materials, machinery and equipment. The application does not need to include the actual cost of the facility or the cost properly allocable to pollution control. The Environmental Quality Commission makes the determination of precertification. An appeal process is provided.

The bill simplifies allocation of costs to pollution control for facilities costing up to \$50,000. It allows co-ops subject to income tax the option of taking an income tax credit for eligible pollution control facilities (currently they are required to take a property tax exemption instead)

Pollution Prevention HB 2255 creates a new pollution prevention tax credit for certain businesses that eliminate or reduce hazardous air pollutants. The new tax credit is a four year pilot program that is designed to encourage businesses to utilize technologies and processes that prevent the creation of pollutants. It allows a credit for 50% of the costs associated with adopting technologies or processes that eliminate the use of certain toxic compounds. The program would target small to mid-sized businesses subject to regulation under the federal Clean Air Act. The program would include drycleaners, chrome platers, and shops using certain cleaning processes. There is a \$75,000 cap for each facility. The credit is taken over a five year period (10% of costs for each of five years) and a three-year carry forward is allowed. The credit starts January 1, 1996 and sunsets December 31, 1999. The bill limits total certifications over the four-year life of the program to \$5.2 million.

HB 2764 Purchasing and printing

The bill allows agencies to elect to make direct purchases in accordance with statutory requirements. It allows a state agency to give the Department of Administrative Services prior written notice of its intent to use other printing services, if the agency can demonstrate that these other printing services provide better value in the form of lower prices or better responsive than those services provided by the State Printer.

HB 3222 Unfunded Mandates

The bill requires the state to allocate money to local government to pay usual and reasonable costs of performing an activity when the legislature or a state agency requires the local government to provide a new service or increase services.

The bill establishes conditions under which local governments may refuse to comply with state law or administrative rule requiring expenditures for a new program. In lieu of appropriating and allocating funds, the legislature may identify and direct the imposition of a fee to be used by a local government to recover the usual and reasonable costs of the program.

It establishes the standard of proof that local government must meet to show that legislative appropriated moneys are insufficient to reimburse local government for usual and reasonable costs of programs.

HJM 2 Sound, verifiable science

Memorializes Congress to base environmental legislation on “sound, verifiable science” rather than “best available science.”

SB 333 State Agency Fees

This bill was directed at some frustration that certain legislators expressed over agencies adopting fee increases without specific approval from the legislature. The bill directs that all new fees or fee increases adopted after July 1 of any odd numbered years are not effective unless approved by the Governor or Director of the Department of Administrative Services.

The new fee or increase must be reported by the agency to DAS within 10 days of their adoption and are rescinded on July 1 of the next following odd-numbered year, or on adjournment of the regular session of the legislature, which ever is later, less authorized by enabling legislation. DAS is required to provide the legislature with a report setting forth in detail all fees charged by each state agency, the purpose for the fee,

persons affected, amounts collected and any changes recommended in the Governor's recommended budget.

SB 600

Ecotaking

SB 600 prohibits a state agency or local government from enacting "ecotake," except as specified. Some exemptions are provided. It creates an "ecotake credit. It applies to legislative and administrative enactments that have an effective date later than March 31, 1995.

Ecotake is defined as an enactment that causes or results in a restriction on or an affirmative obligation pertaining to the use of private real property that has the substantial effect of protecting, providing for or preserving any eco resource. Actions taken primarily to comply with land use planning goals are exempt.

The Governor has said he will veto this bill.

HB 2971

Lead-based paint

This bill responds to the federal Residential Lead-based Paint Hazard Reduction Act of 1992. The Act requires that states establish training, licensing and registration programs for persons who engage in lead-based paint activities. The bill requires the construction Contractors Board to establish a system to license persons engaged in lead-based paint disciplines. The Health Division is required to develop accreditation programs for training providers in areas such as blood screening, hazard identification and public education. The bill requires landlords and sellers of residential housing constructed before 1978 to notify buyers and tenants of known lead-based paint hazards.

SJR 12

Legislative review of administrative rules

This bill in a referral to the voters. A similar bill received a negative review from the Governor. A referral to the voters was selected by the supporters of the bill partially because a joint resolution cannot be vetoed.

This bill specifies that Administrative rules will have no effect after the next legislative session adjourns unless the legislature adopts a joint resolution approving the rule. State agencies are required to file new administrative rules with a joint legislative committee. The committee may review any rule and take public testimony on the rule. The agency is required to provide the joint committee with the record on which the agency relied to develop and adopt the rule, including any testimony received at public hearings.

SJR 37 Appointments

This bill deals with appointments made by the Governor, such as appointments to the Environmental Quality Commission. This bill must be approved by the voters before it could become law. The bill provides that persons appointed by the Governor and subject to Senate Confirmation hold office until successors are appointed and confirmed or 90 days from the end of the term, whichever comes first.

Bills That Failed

HB 2118 Stringency - Vetoed by Governor

The bill declares that it is state policy that agencies not adopt rules, standards, or procedures that differ from corresponding federal laws unless there is statutory direction to the agency, special conditions exist that justify a differing rule, the state rule clarifies the federal rules, or the state rule achieves the goals of the federal law with the least impact on public and private resources. The bill sets out questions for agency to respond to before adopting any rule that differs from federal requirements. It also requires certain agencies to review and identify rules that are more stringent than federal rules.

HB 2489 Environmental Lab Certification

Would have established a state certification program for environmental laboratories.

HB 3046 Environmental Protection Economic Impact Statement

Would have required an "environmental protection economic impact" statement for each new measure introduced in the Legislative Assembly and for Proposed agency rules. The statement would describe the effect of the proposal on increasing or decreasing environmental regulation and the economic impact on public and private sectors.

SB 983 Environmental Crimes

Would have places severe restrictions on the state's ability to investigate potential environmental crimes. The bill would have required the department to issue at least two written notices , and delay any investigation until the potential violator has received technical assistance to the person under investigation.

Air Quality

Bills That Passed

HB 2675A I/M for Governments Vehicles

The bill excludes government fleets with less than 50 vehicles from the requirement for annual emission testing. The vehicles would still be tested on the same schedule as privately owned vehicles - biannual for cars and annual for trucks.

HB 3044 Field Burning Program Transfer

The bill directs the Environmental Quality Commission to enter in a Memorandum of Understanding with the Department of Agriculture that provides for the Department of Agriculture to operate all of the field burning smoke management program. The bill also grants the Department of Agriculture the authority to impose civil penalties, take enforcement actions and enter to inspect private property.

HB 3133 Transit Oriented Development

This bill deals with transit supportive multiple-unit housing in light rail station areas and transit oriented areas to maximize Oregon's investment in transit. It provided that local governments can grant a property tax exemption for multiple-unit rental housing in light rail station areas and transit oriented areas. The bill applies to construction, addition or conversion completed in calendar years beginning on or after 1996 and to tax years beginning on or after July 1, 1997.

HB 3448 Portland Area Air Quality Maintenance Plan

This bill relates to the Portland area Air Quality Maintenance Plan required by the federal Clean Air Act. The bill limits the expansion of the boundary for the vehicle inspection program to only counties that have an identified nonattainment area for ozone. The effect is to eliminate Yamhill, Columbia and Marion Counties from the expanded boundary. The bill also limits parking ratio program to voluntary. It expands the employer commute option requirements but also directs that certain additional maintenance plan credits in the future be used to offset those requirements. It directs the Department to seek new credits for gasoline lawn mower replacement program and education program.

SB 626 Toll Roads

This bill authorizes the Department of Transportation to enter into agreements with private parties to build toll roads. Requires legislative approval except for a Newberg-Dundee bypass and a Tualatin-Sherwood highway linking I-5 and Route 99W.

Bills That Failed

HB 2008 Motor Vehicle Emissions Fee

Would have established a variable automobile registration fee based on miles traveled and vehicle emissions and noise rating.

HB 2895 Vehicle Inspection Boundary - Vetoed

The bill specifies that the boundary used for the vehicle inspection program cannot be expanded into a county that does not already have a testing program, unless that county has a designated ozone nonattainment area. The effect of the bill would have been to exclude Yamhill, Columbia and Marion Counties from vehicle testing requirements.

HB 3233 Transportation Task Force

Would have established a Transportation Task Force to study and make recommendations regarding public transportation system and nonmotorized vehicle transportation system needs and development.

HB 3242 Privatization of Motor Vehicle Testing

Would have required DEQ to contract with private entities for motor vehicle emissions inspections.

HB 3390 Amnesty for Title V Applicants with VOC Violations

HB 3390 would have prohibited the Department from any enforcement action while a Title V permit application is pending and require the department to offer an order to protect the person from a third party law suit until the permit is approved.

The Department staff worked successfully with the bill sponsors outside of the legislative process and reached agreement on areas of concern. After these concerns were addressed in a letter from the Department, the sponsor and the National Federation of Independent Business asked that the bill not proceed.

Waste Management and Cleanup

Bills That Passed

HB 2009 Waste disposal fees on source separated material

The bill relates to waste disposal fees charged at solid waste landfills. The bill intends to encourage the use of alternative cover materials other than virgin material for daily cover. It specifies that the only fee that may be charged for the disposal of substitute material used for daily cover is the permit fee.

HB 3352 Revisions to Environmental Cleanup law

This bill makes major changes to the framework of Oregon's Environmental Cleanup law. It requires new rulemaking in several areas: acceptable risk level, risk assessment, remedy selection and hot spots. Until new rules are developed, it requires DEQ to interpret and apply existing law and rules consistent with the purpose and intent of HB 3352 within the bounds of existing rules.

It directs the DEQ Director to select remedial actions to protect human health and the environment based on: the acceptable risk level for exposures and a risk assessment.

It also directs the Director of the Economic Development Department to establish and chair a task force to explore funding strategies and financial incentives to facilitate voluntary recycling and productive use of contaminated industrial and commercial property within urban growth boundaries and report to the Sixty-ninth Legislative Assembly.

HB 3378 Deadline for recycled glass content

This bill relates to requirements for recycled content of glass containers. It suspends enforcement of recycled content requirement until January 1, 1998. The bill requires the Recycling Markets Development Council to report to the Sixty-ninth Legislative Assembly on: reliance on secondary markets as an additional strategy for diverting post-consumer glass from disposal sites, options to address over and under supply of certain colors of post-consumer glass, post-consumer glass quality and contamination issues, and transportation of post-consumer glass to primary and secondary markets.

HB 3216 Dry Cleaner Environmental Response Account

Establishes a Dry Cleaner Environmental Response Account funded by annual fees on dry cleaning facilities and a \$12 fee on each gallon of dry cleaning solvent. If the fee does not generate \$1 million or more during the preceding 12- month period, the bill provides for an increased fee.

Monies from the account are appropriated to DEQ for remedial action costs incurred by the department as a result of a release from a dry cleaning facility, preapproved remedial action costs incurred by a person performing removal or remedial action under a department order or agreement.

The bill exempts dry cleaner owners and operators from any administrative actions to compel cleanup or to recover costs of a cleanup and exempts owners and operators from liability, except where the release of dry cleanup solvent was caused by the failure of the owner or operator to exercise due care. The exemptions do not apply if the release was caused by gross negligence, a violation of federal or state laws in effect at the time of release, if the owner or operator has willfully concealed a release or denied access or hinders remedial actions, or if the operator has failed to pay fees established by the Act.

The bill establishes waste minimization measures in addition to federal or state regulation. The measures include a requirement that all wastes be managed as hazardous regardless of quantity and that operators report on their compliance with the waste minimization measures.

The Department must set priorities for spending money in the account. The criteria to be used are risk to public health and the environment, the need for removal or remedial action at the facility relative to account availability and the need for remedial action at other facilities.

The Department must establish an Advisory Committee to review methods and standards for removal and remedial actions at dry cleaning facilities, the use of the response account, the adequacy of revenue generated by fees.

HB 3460 Hazardous Waste Management Fee

HB 3460 lowers the state hazardous waste disposal fee until December 31, 1997 for a subset of the hazardous waste received at the state's only hazardous waste disposal site near Arlington.. A significant lowering of state disposal fees in Idaho necessitated this bill.

The bill was proposed by Chemical Waste Management , owner of the Arlington hazardous waste site. Lower state fees in Idaho would likely result in disposal tonnages (and state revenues) at the Arlington site dropping significantly unless Oregon's state fees are similarly lowered. The fees change July 1, 1995.

The bill also directs DEQ to work with other states on state disposal fee levels.

SB 279 Rigid plastic food containers exemptions

SB 279 exempts certain food containers from the rigid plastic recycling requirements. Defines food container and specifies that a container for drinkable liquid is not considered to contain food under this bill. Defines rigid plastic bottle as meaning a container that has a mouth narrower than its base.

SB 949 Rigid Plastic Container Record keeping

This bill prohibits DEQ from enforcing the current plastics recycling law until January 1, 1998 and also during the first year after the overall plastics recycling rate drops below the 25% compliance rate. The requires the DEQ to study non-regulatory alternatives to the present law and report to the 1997 Legislature, to report to the Legislature if the rate drops below 25% and to compute the annual recycling rate for compliance purposes and any related plastic resin rates. This bill is not necessary since all manufacturers are in compliance and expected to remain in compliance

SB 950 Rigid Plastic Containers

SB 950 exempts about 10 percent of rigid plastic containers now covered by the plastics recycling law. Exempted containers would be those containing products regulated by the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). Many of the containers which would be exempted contain household cleaners, disinfectants, bleaches, pet products and home and garden products that appear no "different" to the public and are now recycled with other plastic containers.

The Governor has said he will veto this bill.

SB 1089 Solid Waste Recovery Rates

Existing law requires out-of-state communities to have essentially the same recycling programs as Oregon communities. SB 1989 modifies, but does not significantly weaken this requirements.

Current law requires each Oregon county to meet an overall recycling rate and if it does not, it must implement additional recycling programs. This bill extends by 18 months the date by which a county much implement additional recycling programs. Requires disposal site operators to provide specified notice before accepting solid waste from outside the state. Allows two years for disposal site to demonstrate how the area outside the state in which the disposal site is located complies with the recycling requirements.

Bills That Failed

HB 2648 Hazardous Substance Possession Fees

Would have eliminated hazardous substance possession fee assessments for funding Department of Environmental Quality programs under the Toxic Use Reduction and Hazardous Waste Reduction Act and Orphan Site Account.

HB 3055 Flow Control

Would have prohibited local governments from instituting flow control authority over material that may be recycled or reused.

SB 137 Used Oil Recycling

Would have established standards for use oil collection and requirements for public oil collection programs; imposed a penalty for oil depot contamination, established lubricating oil and oil filter fees.

SB 1119 Non-Municipal Waste

Would have replaced existing permitting program for non-municipal solid waste disposal facilities with new program for non-municipal waste.

SB 137

Used Oil Recycling Act

Would have established standards for used oil collection, requirements for public oil collection programs, penalties for oil depot contamination,, imposes lubricating oil and oil filter fees, allows revenue bonds for initial funding of used oil recovery and recycling.

Water Quality

Bills That Passed

HB 2375 Reclaimed Water from Industrial Sources

The bill requires the Department of Environmental Quality, the Department of Water Resources and the Department of Agriculture to review the use of reclaimed water and submit a report to the Legislative Assembly by December 15, 1996. The report must identify current and potential uses of reclaimed water and include policy recommendations that can be used to develop proposed legislation for the use of reclaimed water.

HB 2471 Conservation funding/Instream flow

The bill deals with the Water Resources Commission's responsibility to allocate conserved water. The bill allows a public body funding a water conservation measure and an applicant for a water right to agree on the percentage of conserved water to be returned to the state. It requires that no less than 25 percent be returned to the state to support in-stream flow.

HB 2707 Wetland Regulation

This bill deals with DEQ's ability to comment to the Corps of Engineers and the Division of State Lands (DSL) regarding fill and removal activities. It requires DEQ to provide consistent comments to both agencies unless there is good cause. DEQ is directed to comment to the Division of State lands within 75 days after receiving notice. It also directs that subsequent comments to the Corps shall not differ without good cause and without providing notice to the Division of State Lands.

The provisions of the bill are essentially the same as the procedures that have been established by a Memorandum of Agreement with DSL.

The Division of State Lands is directed to adopt standards for use by cities and counties to inventory and identify wetlands and to determine when a wetland is a significant wetland.

HB 2754 In-stream Flow

The bill defines "in-stream flow" for in-stream water right purposes. It limits the quantity of in-stream flow for recreational use, requiring that flow for recreational purposes not exceed the flow in the same waterway certified to the Department of Fish and Wildlife for fish and wildlife

purposes. The bill gives conflicting provisions of interstate compacts existing at filing date precedence over the statutory determination of a water right date.

HB 3043 Filling artificially created wetlands

The bill prohibits state or local government from restricting the alteration or fill of wetland areas up to one acre in size that have been artificially created from upland for the purpose of controlling, storing or maintaining storm water.

HB 3091 Groundwater Applications

The bill relates to groundwater applications to the Water Resources Commission. It defines substantial "interference" to mean a groundwater appropriation that the Water Resources Department determines will result in a measurable reduction of surface water flow as the result of a hydraulic connection between the ground water and surface water as demonstrated by generally accepted and verifiable hydrogeological scientific methods.

The bill requires the Water Resources Commission to find wasteful or undue interference with an existing right, rather than a probability of waste or undue interference before the commission may impose conditions on a permit.

HB 3092 Revolving Loan Fund

The bill amends the enabling legislation for the State Revolving Fund to allow Indian Tribal Governments to receive low cost financing for wastewater treatment projects through the fund.

HB 3183 Aquifer Storage

The bill defines aquifer storage and recovery as the storage of water from a separate source that meets drinking water standards in a suitable aquifer for later recovery and not having as one of its primary purposes the restoration of an aquifer.

The bill specifies that injection into aquifers of water that complies with drinking water standards shall not be considered a waste, contaminant or pollutant, and shall be exempt from the requirement to obtain a discharge permit from DEQ. The concentration limits for water to be injected cannot be in excess of standards set by the Health Division or the maximum measurable levels established by the Environmental Quality Commission, whichever are more stringent.

The bill directs the Water Resources Commission to establish rules for permitting and administration of aquifer storage and recovery projects. It requires the Water Resources Commission to establish a procedure for issuing a limited license for aquifer storage and recovery purposes.

HB 3225 Water right permit transfers

This bill specifies circumstance under which an application for a change in use of water right is not required. It applies to irrigation and other agricultural uses

HB 3441 Watershed Enhancement

This bill transfers watershed enhancement functions from the Strategic Water Management Group to the Governor's Watershed Enhancement Board and changes the composition of Board. It directs the board to initiative a watershed management program that relies on the establishment of voluntary local watershed councils.

SB 49 Sanitarians Registration Board

This bill was originally filed at the request of the Sanitarians Registration Board to transfer to the Health Division the responsibility for providing administrative support to the Board. The Department proposed an amendment to the bill to address a concern about how the Board was interpreting the definition of sanitarian and the type of environmental work that should be conducted by a registered sanitarian.

The current definition of a sanitarian is extremely broad. To assist the Sanitarians Registration Board define clearly the universe of workers they expect to require to be registered, SB 49 sets up an advisory board to be appointed by the Department of Administrative Services and made up of representatives of natural resource agencies, the board, consultants and local governments. The bill also provides a moratorium on requiring the registration of other than on-site waste water sanitarians in the Department. The board will return to the 1997 Legislature with the recommendations of the advisory group and the moratorium would end.

In addition, SB 49 addresses an issue related to private contractors. The current law does not adequately address the issue of whether a soil scientist who is evaluating a site for placement of a septic system must be a registered sanitarian. SB 49 creates a specialty waste water sanitarian classification under the Sanitarian Registration Board for persons whose work is limited to on-site sewage disposal and treatment. These new waste water sanitarians will be tested on their specific knowledge of waste water treatment and disposal.

SB 502**SWMG transfer to DEQ/AG**

SB 502 abolishes the Strategic Water Management Group (SWMG). The bill transfers the duties and functions pertaining to ground water management to the Department of Environmental Quality. Any lawfully adopted rules of SWMG remain in effect until superseded or repealed by rules of the DEQ.

The bill requires The Department of Agriculture and DEQ to work together on the development of rules that regulate farm practices and groundwater management in farm use zones.

The State Department of Agriculture is designated as the lead agency responsible for developing and implementing any program or rules that regulate farm practices and ground water management applicable to areas designated as exclusive farm use zones under ORS 215.203. Any rules adopted by the department of Agriculture shall be in conformity with DEQ regulations for water quality standards. All inter-agency coordination and consultation for meetings and public notices are the responsibilities of DEQ staff.

The Strategic Water Management Group evolved from the 1989 Oregon Groundwater Protection Act. During 1993-1995 biennium, SWMG was an oversight body for the watershed health management program. These duties transfer to the Governor's Watershed Enhancement Board.

SB 829**Chemical Process Mining**

This bill was submitted on behalf on a proposed heap-leach mine in Eastern Oregon. Although the company is not mentioned specifically in the bill, there is only one applicant, the Newmont operation at Grassy Mountain, that would be covered by the bill. The bill requires consolidated application for chemical process mining operation to be processed according to statutes and rules in effect at time the application is filed.

SB 889**CAFO Complaints**

The bill establishes a procedure that the State Department of Agriculture must follow before investigating confined animal feeding operations on the basis of a complaint. Prior to investigating a complaint, DOA must require the person making the complaint to put it in writing. If, after the investigation the Department of Agriculture finds that there was no violation, it shall require any additional complaint filed by the same person in the same calendar be accompanied by a security deposit of \$250. If the investigation determines that a violation has not occurred, the deposit is forfeited.

SB 944 Oil Spill Response

SB 944 allows the discharge of excess water containing oil during an oil spill recovery operation. It establishes a limited exemption for certain vessels from the oil spill prevention and emergency response plan requirement. It modifies certain provisions relating to contingency plan for a facility or covered vessel.

SB 948 Pollution Prevention Moneys

This bill allows the state departments of Agriculture and Forestry to receive money for preventing or controlling air or water pollution for agriculture or silvicultural activities.

The departments of Agriculture and Forestry are partners with DEQ in ensuring that practices under their jurisdiction do not have significant adverse impacts on Oregon's air and water. DEQ currently passes through federal grant Monies to support these programs. The bill would allow the other agencies to seek additional resources on their own.

Bills That Failed

HB 3100 In-stream water rights

Would have repealed provisions for establishing in-stream water rights or minimum perennial stream flows.

HB 3293 Withdrawal of Waster Quality Limited Streams From Appropriation

Would have withdrawn all water quality limited bodies of water from further appropriation until water quality supports beneficial uses and is no longer water quality limited. Would have provided exemption for Willamette River and Columbia River.

HB 3427 Kinross Copper Wastewater Permit

Would have directed DEQ to issue a wastewater discharge permit to Kinross Copper Mine if certain conditions were met. See also SB 791.

SB 791A Kinross Copper Mine

The bill was a super-siting bill that supersedes the Three Basin Rule established by the Environmental Quality Commission to protect drinking water. It would have prohibited the department from refusing to issue a permit for Kinross Copper for a mining operation on the Cedar Creek sub-basin of Little North Santiam River.

EQC EVENING INFORMATIONAL SESSION
THURSDAY - JULY 6, 1995

Jackson County Public Works Auditorium,
200 Antelope Road, White City.

GENERAL BASIN OVERVIEW

Gary Arnold: DEQ Nonpoint Source Specialist

A short history of Total Maximum Daily Loads (TMDL)

Al Cook: Oregon Water Resources - Southwest Regional Manager

Bruce Sund: Oregon Water Resources - Watermaster, District 14

Artificial nature of Bear Creek, water rights issues

Eric Dittmer: Southern Oregon State College/Rogue Valley Council
of Governments

Bear Creek water reclamation plan

QUESTIONS FROM THE COMMISSION

POINT SOURCE DISCUSSION

Ken Hagen: Ashland City Council

Ashland wastewater treatment options

Jon Gasik: Medford Office Senior Engineer, DEQ

Update on log pond discharges to Bear Creek

QUESTIONS FROM THE COMMISSION

NONPOINT SOURCE DISCUSSION

- Mike Wolf: Oregon Department of Agriculture
Senate Bill 1010, CAFO inspections, PL566
- Jim Hill: City of Medford, Water Reclamation Division
Stormwater issues, urban perspective.
- Dave
Degenhardt: Oregon Department of Forestry
Forestry Perspective
- Marc Prevost: Rogue Valley Council of Governments
Update on basin monitoring, public
awareness/education plan, stream inventories

QUESTIONS FROM THE COMMISSION

Handouts:

- 1) "Bear Creek Water Resource Needs and Activities" - Rogue Valley Council of Governments
- 2) "Water Quality Protection Guide" - Oregon Department of Agriculture
- 3) "Reclaimed Water as a Water Resource Option" - Eric Dittmer

State of Oregon
Department of Environmental Quality

Memorandum

Date: July 7, 1995

To: Environmental Quality Commission
From: Langdon Marsh
Subject: Director's Report

DEQ Budget and Legislative Outcomes

The DEQ budget for the 1995-97 biennium was approved much as reported to you in May. There were no cuts to the base budget. Of 84 new positions requested, 50 were approved and we have authority to go to the Emergency Board for 12 more if workload demands them. In addition, 8 positions were approved as part of specific legislation.

The final lottery allocation ("Christmas Tree bill") included \$87,000 for Phase III of the Willamette River Study. Senator Yih is seeking additional funding from the affected counties.

Important substantive outcomes, described more fully in the Legislative Report, included:

HB 2255 - Pollution and Pollution Prevention Tax Credits
Continues several tax credits (pollution control, plastics, and recycling), and creates a new pollution prevention tax credit for reduction of hazardous air pollutants.

SB 333 - Fees
State agency fee increases will not be effective unless approved by the Governor or Dept. of Administrative Services, and will automatically expire unless approved by the legislature in the following session.

SJR 12 - Legislative Review of Administrative Rules
Referral to voters.

HB 3448 - Portland Air Quality Maintenance Plan
Governor has not yet decided whether to sign. Would eliminate Yamhill, Columbia and Marion Counties from the expanded boundary. Makes parking ratio program voluntary, and adjusts other strategies.

HB 3044 - Field Burning Program to Dept. of Agriculture

HB 3352 - Environmental Cleanup
Major revisions will require rulemaking.

SB 502 - Strategic Water Management Group Abolished
All SWMG groundwater functions are transferred to DEQ.

SB 829 - Chemical Process Mining
Consolidated application must be processed under statutes and rules in effect at time application is filed. Governor signed on July 5.

Memo To: Environmental Quality Commission
July 7, 1995
Page 2

Columbia River Voluntary Spill Program

Spill for salmon on the Columbia River continues at all hydroelectric projects. Two major concerns have arisen since the Commission's last review of the program:

1. Army Corps of Engineers (Corps) physical monitoring has been unreliable;
2. Routine violation of the Commission's TDG standard, resulting in a Notice of Noncompliance.

DEQ vigorously and regularly expressed its concerns about the physical monitoring problems to the Corps and the fishery agencies, until at this time only minor equipment problems appear to remain. Hourly data upon which twelve hour averages are calculated are more complete.

Because of standard violations, DEQ issued a Notice of Noncompliance to the Corps and the National Marine Fisheries Service (NMFS) on May 26, 1995. At a meeting with the Corps, NMFS and the Washington Dept. of Ecology on June 2nd, DEQ underlined the importance of remaining within the TDG waiver standards. Since that time, with occasional small overages, the Corps has managed to remain within the standard at the Oregon dams.

In discussions with the Corps we have emphasized our interest in working toward a long term solution. DEQ will attend a presentation on the Corps' gas abatement study later this month and will continue meeting with the Corps and other agencies. Early indications are that the Corps supports establishment of a timetable for modifying the dams to achieve the required spills and remain within the state's normal TDG criteria.

Hyundai Plant in Eugene

Announcement of a \$1.3 billion Hyundai computer chip factory to be located in Eugene has led to 2 community meetings re possible impacts (including environmental) to the community. There is significant concern about the types of chemicals to be used in the process, their handling and storage, and possible releases to the environment. The site is located in a wetland area and will require a fill permit. The Eugene office was represented at both community forums and has been active in responding to questions.

Clean Air Action Day Program

DEQ's advisory day program to reduce summer ozone pollution has been given a boost by a name change and free transit this year. The program was launched in 1991 as "Clean Air Weather Watch." The name switch to "Clean Air Action Day" puts less emphasis on the weather and underscores that people can take voluntary action to help keep the air from becoming unhealthy to breathe. For the first time, Tri-Met will offer free rides on all buses and MAX trains on a Clean Air Action Day. We expect C-Tran in Clark County to follow suit, pending approval by its board on July 11.

Another initiative this season is to urge CEO's of the region's largest employers to encourage and support employees driving less on advisory days. DEQ is designing kits with information and suggestions for ideas companies can implement.

EPA Region X is very impressed with our revitalized program and will encourage other states to implement similar programs.

AFSCME Negotiations

The current contract is extended through July 31st. The State and AFSCME continue mediation. With reversal of Measure 8, budgeted funds for salary increases will not even cover the reinstatement of the 6% PERS state "pickup."

Hearing Authorizations

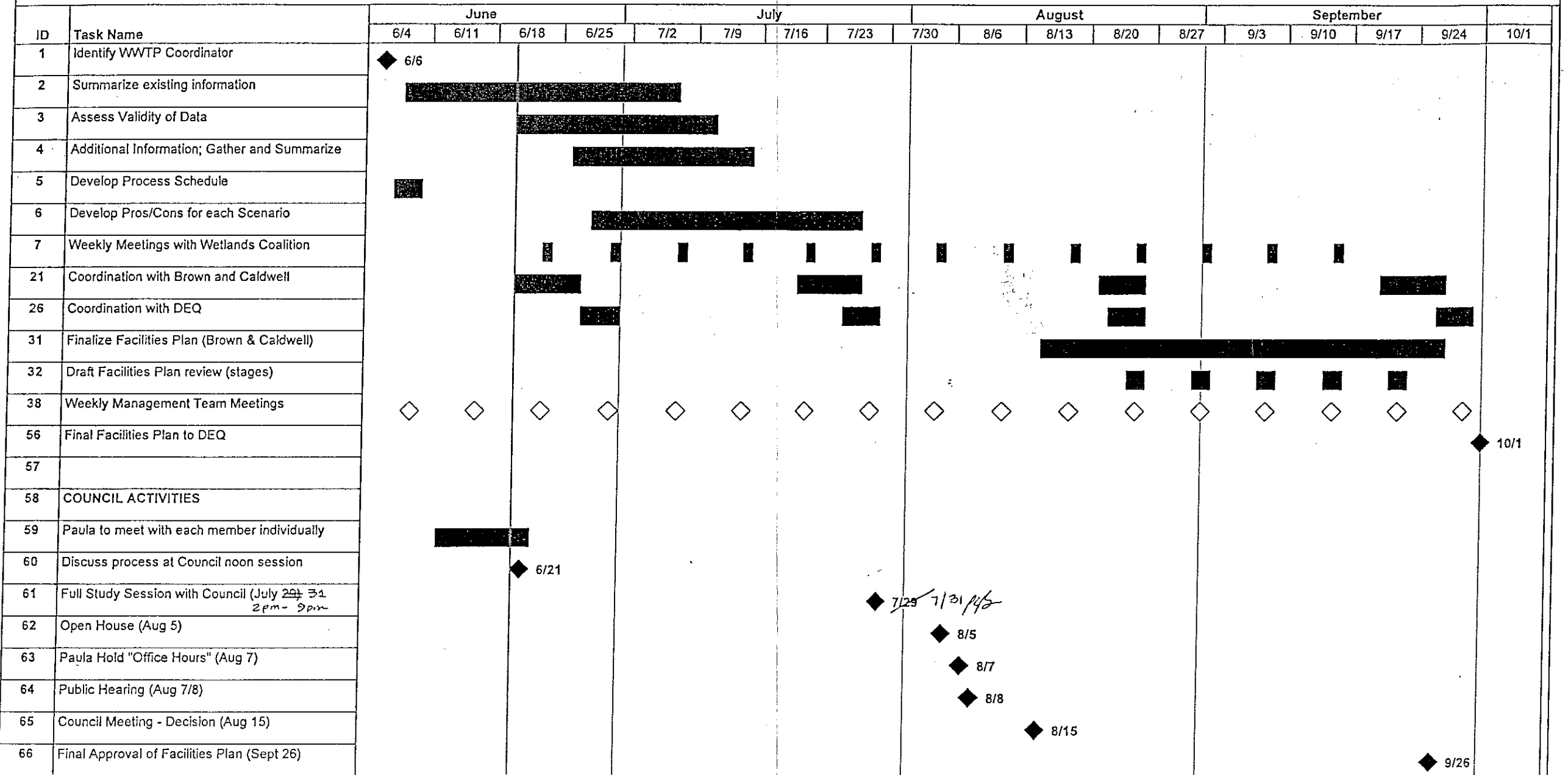
1. Air Quality. Deferral of Title V Operating Permit Requirements for Certain Sources.

This rule would defer permitting requirements for sources with low actual emissions. Under Title V all sources with potential to emit at major source levels must be permitted or have other enforceable limits on that potential. Deferring permit requirements will allow the Department time to develop less costly non-permit means to comply, for those sources with low actual emissions.

2. Solid Waste. Conform DEQ Deadline for Solid Waste Landfills to Meet Financial Assurance Requirements with Federal Deadline.

This proposes permanent adoption of a temporary rule adopted by the Commission in April.

ASHLAND WASTE WATER TREATMENT PLANT FINAL FACILITIES PLAN PROCESS SCHEDULE



Project:
Date: 6/20/95

Task Milestone
Progress Summary

Rolled Up Task Rolled Up Progress
Rolled Up Milestone



Working with more than 70 community wastewater treatment agencies to protect Oregon's water

7150 SW Hampton Suite 130
Tigard, Oregon 97223
(503) 603-0217 FAX (503) 598-0298

5 July 95

Bill Wessinger, Chair
Environmental Quality Commission
811 SW Sixth Avenue
Portland, OR 97204

re: Agenda Item F - Proposed Temporary Rule to Continue the Existing Fecal Coliform Water Quality Bacteria Standard

Chairman Wessinger and Commissioners:

The Oregon Association of Clean Water Agencies (ACWA) supports the temporary rule being forwarded by the Department's Water Quality Division to continue the existing fecal coliform water quality bacteria standard.

As the Commission is aware, the state's current bacteria standard has undergone substantial scientific and public health review as part of the state's Triennial Review of water quality standards. A revised water quality standard for bacteria is proposed as a result of this process, and those revised water quality standards should be returned to the EQC for action in November.

ACWA members have been very involved in this process, and believe the current bacteria standard based on the fecal coliform standard is the best policy until the Commission takes final action on the bacteria standard as part of the Triennial Review process.

We support the DEQ staff recommendation to adopt the proposed temporary rule to continue the existing fecal coliform bacterial standard.

Very truly yours,

A handwritten signature in cursive script that reads "Cathryn Collis".

Cathryn Collis
Executive Chair

cc: DEQ - Langdon Marsh, Mike Downs, Russell Harding

STATE OF OREGON
DEPARTMENT OF ENVIRONMENTAL QUALITY
RECEIVED
JUL 5 1995

OFFICE OF THE DIRECTOR

Cathryn Collis, Chair
823-7115

John Greeley, Vice Chair
648-8875

Tom Imdieke, Secretary/Treasurer
693-4548

ITINERARY

Environmental Quality Commission Meeting

*July 6 and 7, 1995
White City, Oregon*

Thursday, July 6

- 8:00a Load up at the turnaround (Yamhill and Sixth)
8:20a Pick up Bill Wessinger at the corner of Second and Salmon
•
•
•
11:00a Pick up Carol Whipple in Sutherlin at the Dairy Queen
•
•
•
2:30p Arrive Medford (approximately); check into the motel (rooms are not pre-paid)
Knights Inn
500 N. Riverside, Medford, 773-3676
3:00p Walk to tour of Bear Creek
•
•
•
(Dinner is on your own.)
6:30p Leave for Informational Meeting at White City
7:00p Informational Meeting

Three panels:

1. Overview of Bear Creek: progress since last meeting in fall 1993.

Presenters:

Gary Arnold, DEQ, Medford
Al Cook, Department of Water Resources
Eric Dittmer, Rogue Valley Council of Government

2. Ashland Sewage Treatment Plant: progress since the last meeting and a discussion of the options they are considering.

Presenters:

John Gasik, DEQ, Medford
Ken Hagen, Ashland City Council

3. **Non-point Sources: progress on the TMDL.**
Presenters:
Mike Wolff, Department of Agriculture
Jim Hill, City of Medford
Dave Dagenheart, Department of Forestry
Marc Prevost, Rogue Valley Council of Government

Friday, July 7

8:00a Breakfast at the Holiday Inn
2300 Crater Lake Highway\

(Will provide a list of participants Thursday night.)

9:30a Leave for White City
10:00a EQC meeting

Note: A representative from Jackson County will make a short presentation during the Public Forum, discussing the success story of the Medford area air quality standards attainment.

-
-
-

Leave for Portland (box lunches will be delivered at 11:45a).

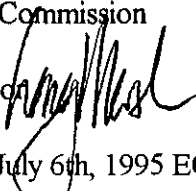
Note: Michael Huston will be going down on his own. He will try to be at the Thursday evening meeting; he will not be attending the breakfast. Michael will be attending Friday's meeting. (Michael will be staying at the Red Lion in Medford.)

State of Oregon

Department of Environmental Quality

Memorandum[†]

Date: June 21, 1995

To: Environmental Quality Commission
From: Langdon Marsh, Director 
Subject: Work Session Item 1, July 6th, 1995 EQC Informational Meeting

**UPDATE ON THE STATUS OF BEAR CREEK (ROUGE RIVER BASIN)
SUBBASIN POINT SOURCE DISCHARGE CONDITIONS AND NONPOINT SOURCE
MANAGEMENT IMPLEMENTATION COMPLIANCE SCHEDULE**

Statement of Purpose

This purpose of this meeting allows staff and the local Bear Creek basin Designated Management Agencies (DMAs) the chance to update the Commission on:

What efforts have been made to meet the TMDLs for the Bear Creek basin.

What tasks still need to be accomplished, and the time frame that they require.

How well the implementation process for the Bear Creek TMDLs has proceeded and what lessons have been learned.

Background

Bear Creek has been classified by the Department of Environmental Quality as water quality limited. Years of monitoring have shown that Rogue River basin standards for dissolved oxygen, pH and fecal coliform bacteria are routinely violated. Water of this quality will not support the beneficial uses of salmonid fish rearing, resident fish and aquatic life, water contact recreation or aesthetics.

Computer modeling, calibrated with water quality data collected in the Bear Creek basin, has determined numerical instream concentration limits for total phosphorus, total ammonia and five-day Biological Oxygen Demand (BOD5) that will allow for the protection of the beneficial uses mentioned above. These protective instream limits were adopted as Total Maximum Daily Loads (TMDL), and

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

Memo To: Environmental Quality Commission
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July 6, 1995 Meeting
Page 2

incorporated into the Oregon Administrative Rules in 1989. Scheduled dates for compliance were also included into the rule (OAR 340-41-385). The scheduled compliance dates have come and gone for complying with the TMDL limits.

The City of Ashland must still submit an approved facilities plan which details how their Waste Water Treatment Plant's (WWTP) discharge will comply with their TMDL waste load allocation. The City of Ashland has signed a Mutual Agreement and Order (MAO) with the department agreeing to a revised schedule for the completion a plan. Boise Cascade of Medford has submitted a request to revise the original waste load allocation set by the department. Department review of the Boise Cascade request is currently underway.

The dates for meeting the nonpoint source compliance schedule (adopted by the EQC in April of 1993), have also come and gone. Some of the required tasks are complete, some require more time. The revised nonpoint schedule details the status of specific tasks and any additional time that is being requested.

Additional, non-TMDL water quality factors also limit the beneficial uses relating to fish and aquatic life. TMDLs are not proposed for these problems, but they are mentioned here for completeness. Limiting factors which will be partly addressed through the nonpoint source program are the excessive instream temperatures and the lack of instream/riparian habitat. Limitations due to the toxicity of chlorine in the Ashland WWTP effluent will be addressed in the new NPDES discharge permit for that facility.

Summary of Public Input Opportunity

A public hearing was held in Medford on May 16, 1995. The hearing officer's report is listed as Attachment E in the July 7, 1995 Agenda package.

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Conclusions

Since the Bear Creek TMDL rule was adopted a number of activities have occurred within the basin that will bring us closer to meeting water quality standards. Although there have been delays in the early stages of implementation several factors have come together to provide assurance that standards will be met. Because of reorganization and staff assignment the Department has been able to provide additional resources to monitor progress towards implementation by both the point sources and the Designated Management Agencies (DMAs) responsible for nonpoint source impacts. In addition, staff are optimistic that this review of the issue by the Commission and a reaffirmation of the DMAs' commitment to the Commission will maintain the momentum. Finally, there is increased citizen and federal agency involvement in working to improve water quality and beneficial use protection in Bear Creek.

Intended Future Actions

This informational item is designed as an opportunity for the Commission to question staff and local Bear Creek basin DMAs on how efforts to meet the TMDLs set for the Bear Creek basin are proceeding. It is also intended to inform the Commission on what options are recommended for adoption during their July 7th, 1995 meeting.

Memo To: Environmental Quality Commission
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July 6, 1995 Meeting
Page 4

Attachments

A. Bear Creek Water Quality Update

B. Bear Creek Nonpoint Source Designated Management Agencies List of Accomplishments

Approved:

Section:

Kevin Downing

Division:

Michael How

Report Prepared By: Gary Arnold

Phone: 776-6010 Ex 241

Date Prepared: June 21, 1995

ga:ga
6/21/95

BEAR CREEK WATER QUALITY SUMMARY
July, 1995

The following is an update on the water quality parameters of interest in Bear Creek.

PHOSPHORUS

Figure 1 shows the contribution of phosphorus to Bear Creek from the Ashland wastewater treatment plant. It has been pointed out that some of this phosphorus comes from nonpoint source inputs between these sampling points, however, several monitoring data sets show that the Ashland effluent accounts for the great majority of the increases shown here.

Figure 2 shows how instream phosphorus data from August of 1994 (solid line) compares to historical August data (plotted stars). Figure 3 shows a longitudinal data set taken in August of 1976 (solid line with Xs) compared with the same data set collected in August 1994 (solid line with stars). Both figures show that 1994 instream phosphorus levels are some of the lowest ever recorded. Ashland was one of the first communities in Oregon to ban phosphate detergents, and it appears that this action has resulted in overall reductions of phosphorous concentrations.

Figure 4 shows how often the low flow season TMDL limit of 0.08 mg/l of total phosphorus as P has been exceeded. Open bars show pre-1990 data, dark bars show post 1990 data. The segments referred to on the X-axis are:

Segment 1: Walker Cr./Emigrant Cr. Confluence to TID Dam	(RM 23.0 - 27.0)
Segment 2: TID Dam to MID Dam	(RM 18.1 - 23.0)
Segment 3: MID Dam to Jackson St. Dam	(RM 9.8 - RM 18.1)
Segment 4: Jackson Street Dam to mouth	(RM 0 - RM 9.8)

It is clear that Bear Creek still has instream phosphorus levels above the TMDL target. Substantial reductions to both the point and nonpoint sources of phosphate are still required.

The most controversial subject of Bear Creek water quality has undoubtedly been the background phosphorus level set by the TMDL. Many have questioned the validity of the background level used in the computer model. Data collected high in the headwaters of the Bear Creek basin by the Oregon Department of Forestry supports these observations about background phosphorus levels:

Phosphorus levels from 1992 were higher than levels from 1994.

Tributary basins in the southern part of the Bear Creek watershed have the highest natural phosphorus levels.

Background levels in Neil, Ashland, Emigrant and Walker Creeks (all of which are upstream of the Ashland WWTP) show only two of the 31 samples collected above the 0.08 mg/l limit (both were 0.09 mg/l).

AMMONIA

The contribution of the Ashland plant to Bear Creek ammonia concentrations is shown in figure 5. In contrast to phosphorus or BOD5, the Ashland WWTP is the sole source of ammonia in the basin. Ammonia does not occur in any of the tributaries or above the plant. Ammonia has two negative effects to aquatic life, it is directly chronically toxic in the concentrations measured in Bear Creek, and it acts to lower dissolved oxygen levels below the Ashland outfall.

Figure 6 shows how 1994 data compares with historical data and figure 7 shows how instream levels compare to the TMDL limits. The segments in figure 7 are identical to the segments in figure 4. Low flow season TMDL limits for ammonia are 0.25 mg/l total ammonia as N and the high flow TMDL limits are 1.0 mg/l of total ammonia as N.

Again levels in 1994 are lower than historic levels, and the low flow season data shows that measurable reductions of ammonia have occurred throughout Bear Creek. Even though high flow limits are four times as high as low flow season limits, the data show an increase in ammonia in the segments directly downstream of the plant. Probably, this is due to the decreased efficiency of the Ashland plant due to colder winter temperatures and due to the increased age of the plant coinciding with the most recent data.

FIVE-DAY BIOLOGICAL OXYGEN DEMAND (BOD5)

Figure 8 shows the contribution of BOD5 from the Ashland WWTP to Bear Creek. Figure 9 shows how well TMDL limits have been met. The low flow TMDL limit for BOD5 is 3.0 mg/l, the high flow TMDL limit for BOD5 is 2.5 mg/l.

Substantially lower levels of nonpoint source BOD5 are measured in the upper reaches of Bear Creek (segment 1) during the most recent low flow seasons of data. The high flow season data shows an increased level of BOD5 in Bear Creek. Again, the advancing age of the present Ashland treatment plant is the probable cause.

INSTREAM TEMPERATURE

Traditional "grab" sampling for temperature has occurred in the Bear Creek basin since the late 1960's. With the current maturity of continuous monitoring technology for temperature, it can be said with confidence that more and better data was taken during the summer of 1994 than in the last 25 years. Approximately 25,000 data points were logged during the summer. The quality control audit measurements performed during the summer prove that the accuracy and precision of this data set are extremely high.

The data presented in figure 10 summarizes instream water temperature conditions in Bear Creek from mid August through early October. The data show that in the late summer of 1994 (*):

Lethal water temperatures for salmonids (above 24 degrees C.) in Bear Creek are rare, but do occur below the Jackson Street Dam

Instream temperatures are classified as "limiting or less than optimal " (between 15.6 and 24.0 degrees C.) about 75 percent of the time. Temperatures are classified as "optimal" (less than 15.6 Degrees C.) about 25 percent of the time.

Instream temperatures in the upper reaches of Bear Creek are already close to thermal equilibrium. In other words, the upper sections of Bear Creek provide little protection from solar heating from the sun.

The Jackson Street dam, at river mile 9.8 causes increased water temperature. Other data, not presented here, show that the Jackson Street dam increases water temperature at least 0.5 degrees Celsius 45 percent of the time.

(*) July of 1994 was the warmest July on record, 28 days were above 95 degrees F (as measured at the Medford airport). The data from 1994 is closer to a worst case scenario than to an average condition.

INSTREAM/RIPARIAN HABITAT

Stable aquatic populations need functional habitat niches as well as adequate water quality. Bear Creek will require protection and restoration work to provide for that habitat. Data collected by state agencies, volunteers, environmental groups and the Rogue Valley Council of Governments shows that the Bear Creek stream corridor suffers from lack of shading, lack of bank stability, potential spawning gravel beds that are buried under sediment, both excessive and inadequate stream flows, barriers to migration, lack of connections to groundwater...and a host of other factors. Measures taken to reduce excessive stream temperatures, such as enhancing the width, density and diversity of riparian plant communities, will also aid in correcting some of the habitat problems listed above.

ASHLAND WWTP EFFLUENT TOXICITY

Toxicity from the Ashland WWTP has been shown to be chronically toxic in standard bioassay tests. This is due to both chlorine and ammonia levels. Increased ammonia removal will be required of any of the wastewater treatment options that Ashland is considering. The selected option must also include either a dechlorination step before discharge or an alternative to chlorine for disinfection.

FIGURE 1

Phosphorus Concentrations in Bear Creek DEQ Data

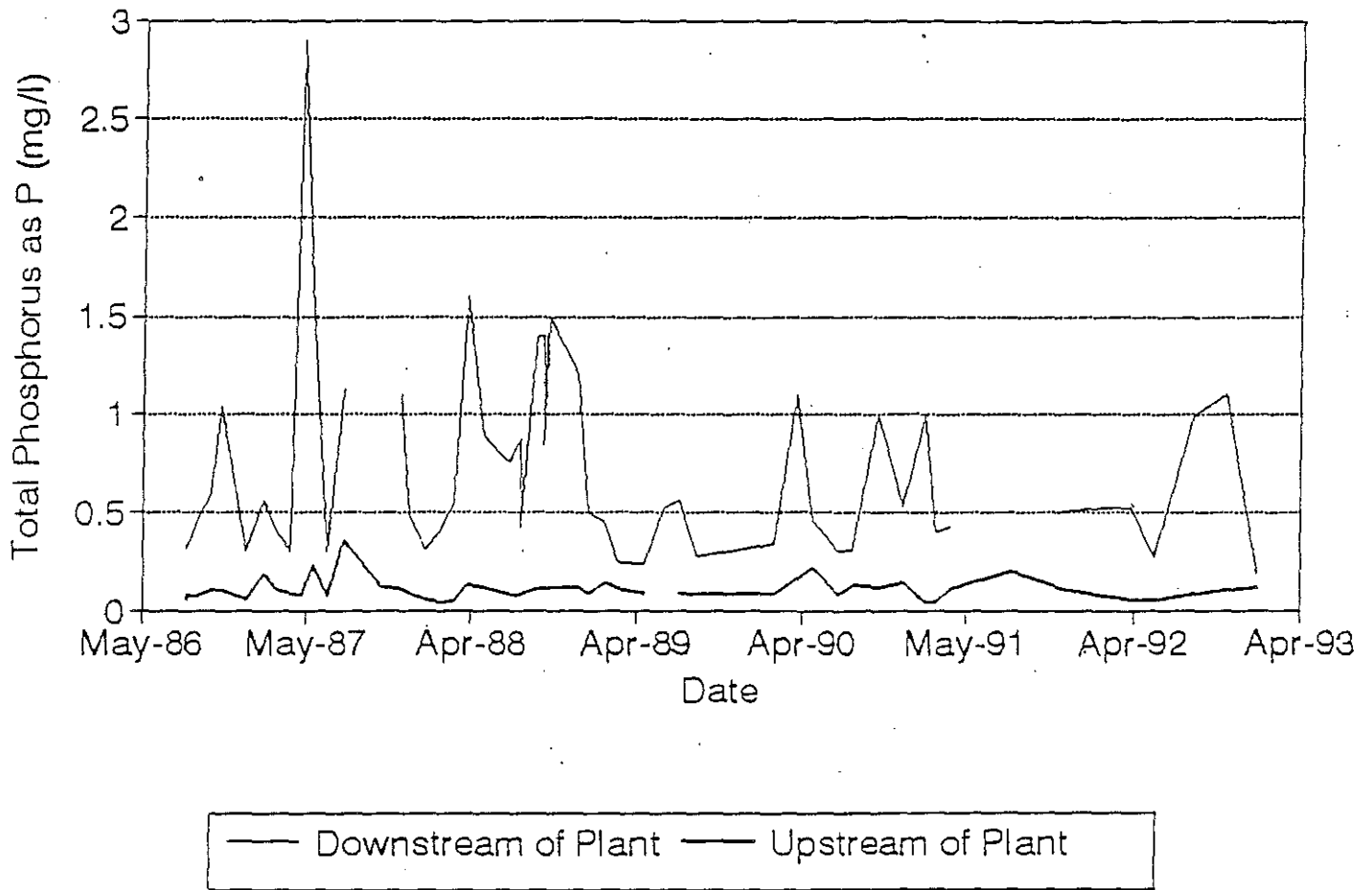
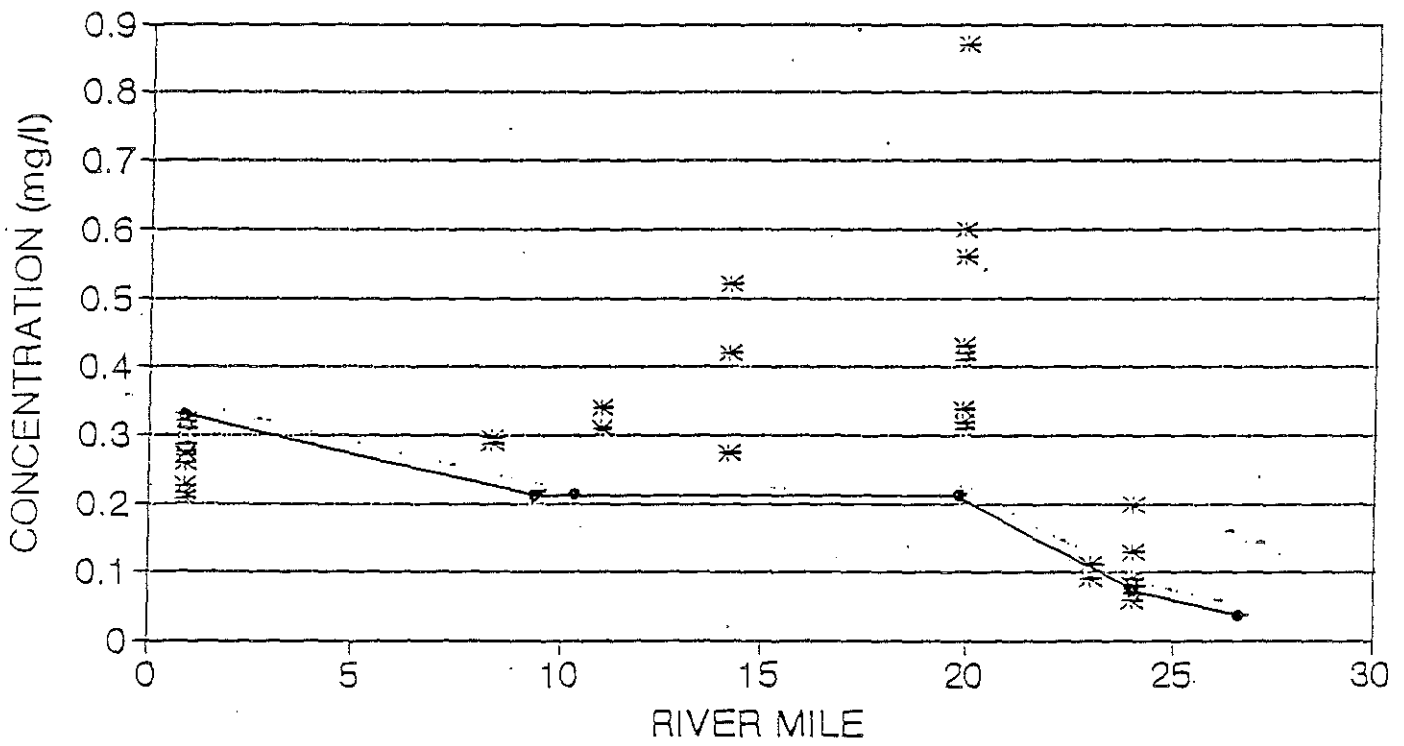


FIGURE 2

BEAR CREEK TOTAL PHOSPHORUS

ALL DATA FOR MONTH OF AUG - 1980/1991



* TOTAL PHOS. AS P

FIGURE 3

Main Stem Bear Creek
Aug 76 Compared to Aug 94

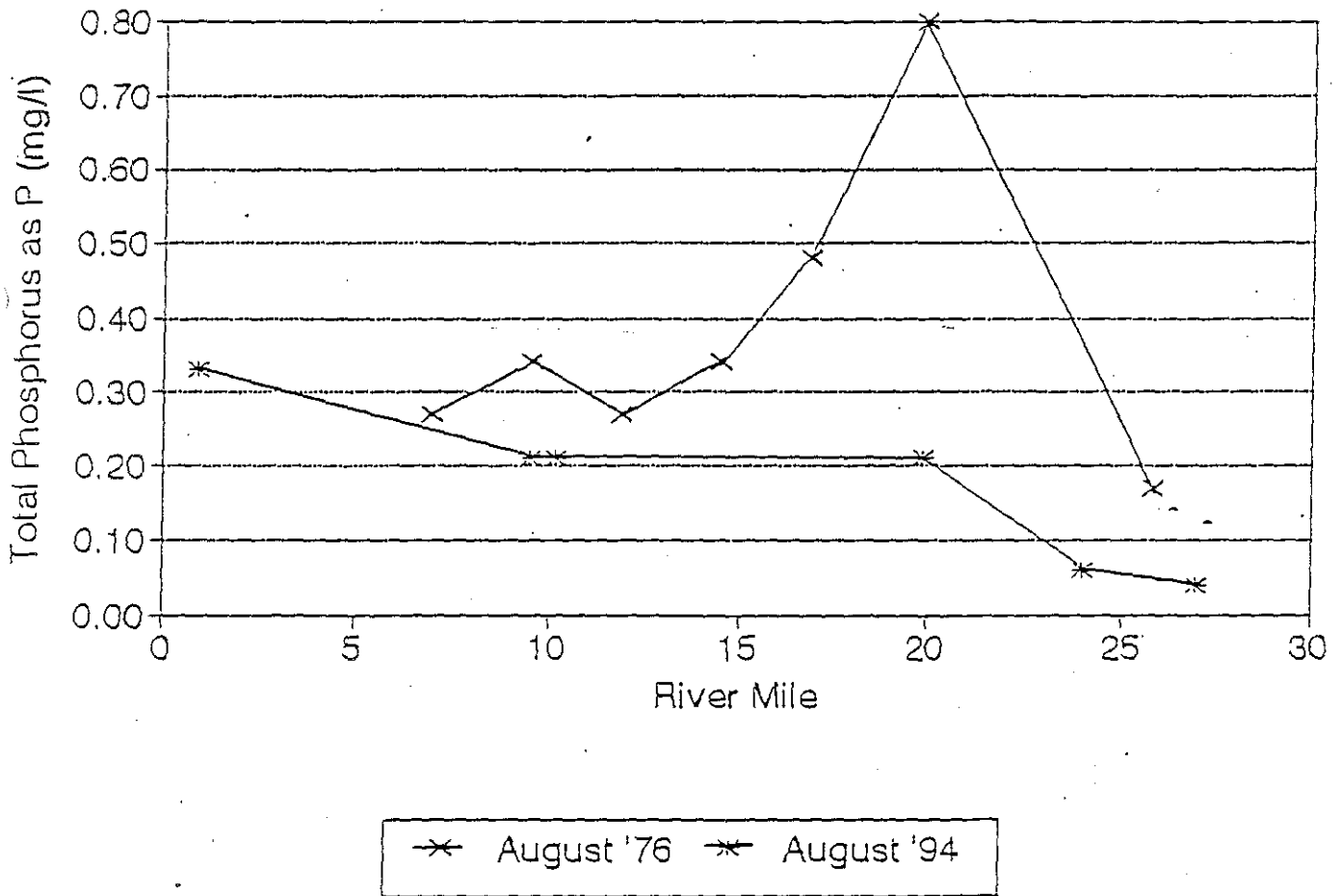


FIGURE 4 TMDL Phosphorus Standard

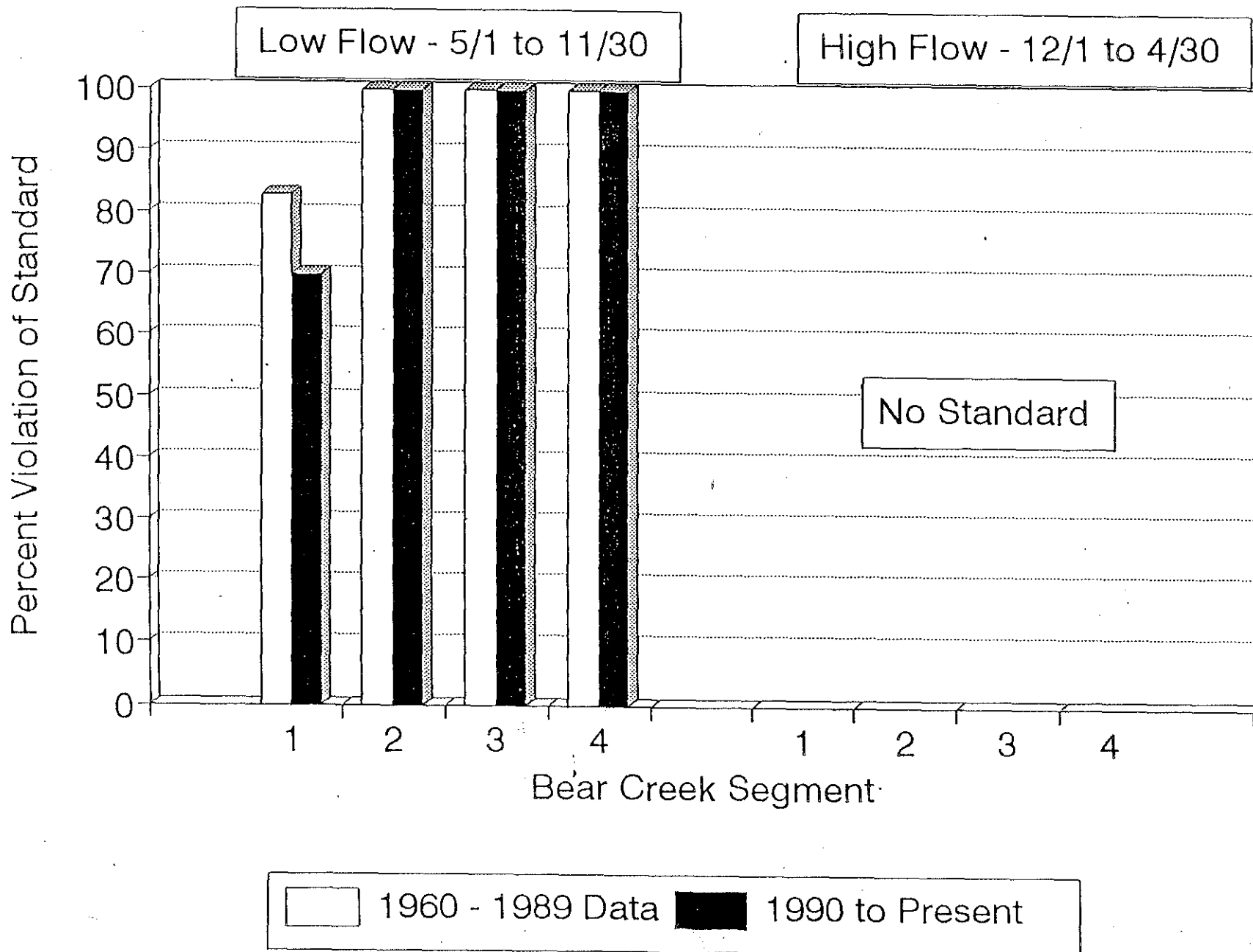


FIGURE 5

Ammonia Concentrations in Bear Creek DEQ Data

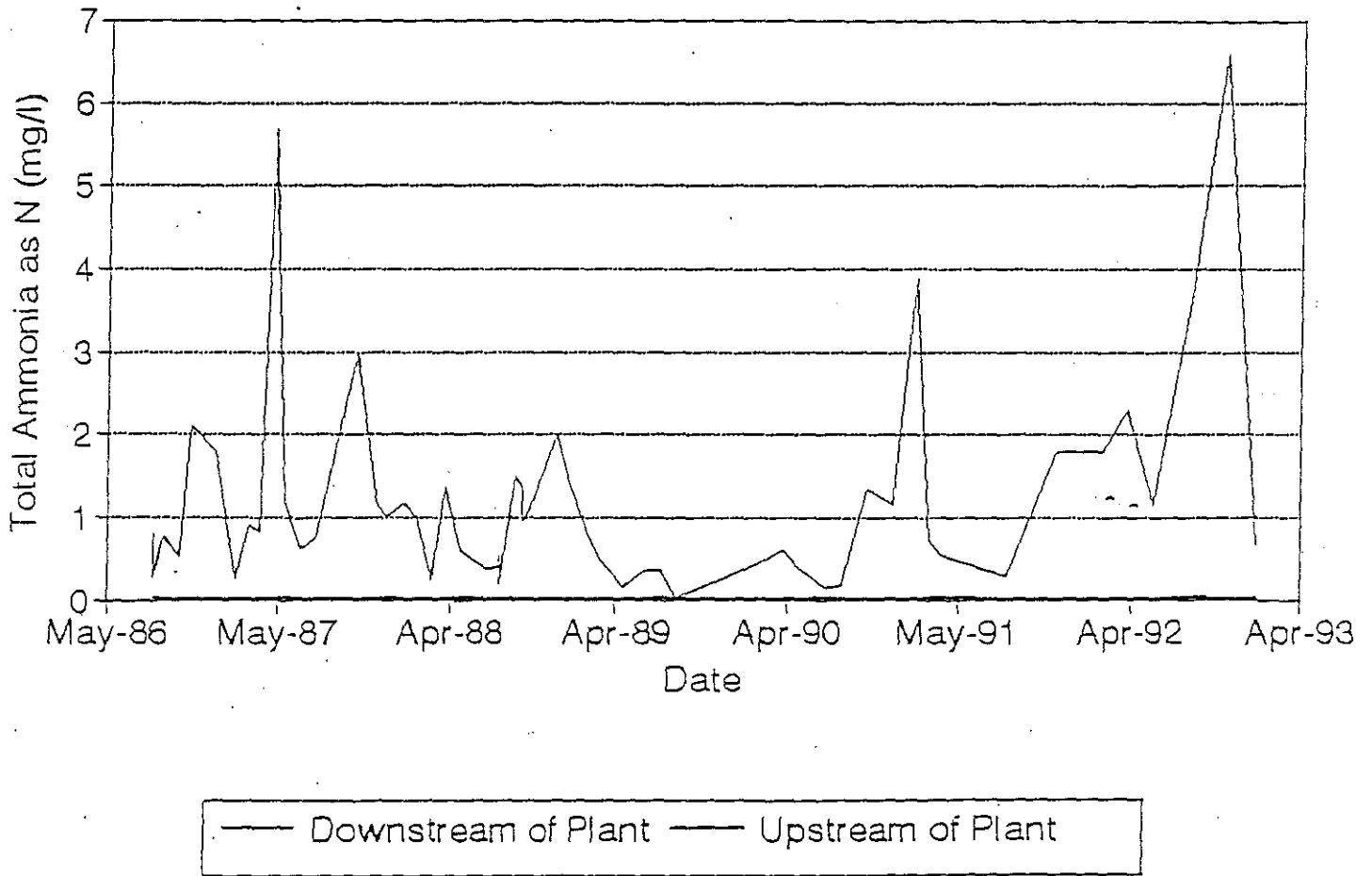


FIGURE 6

BEAR CREEK TOTAL AMMONIA
ALL DATA FOR MONTH OF AUG - 1980/1991

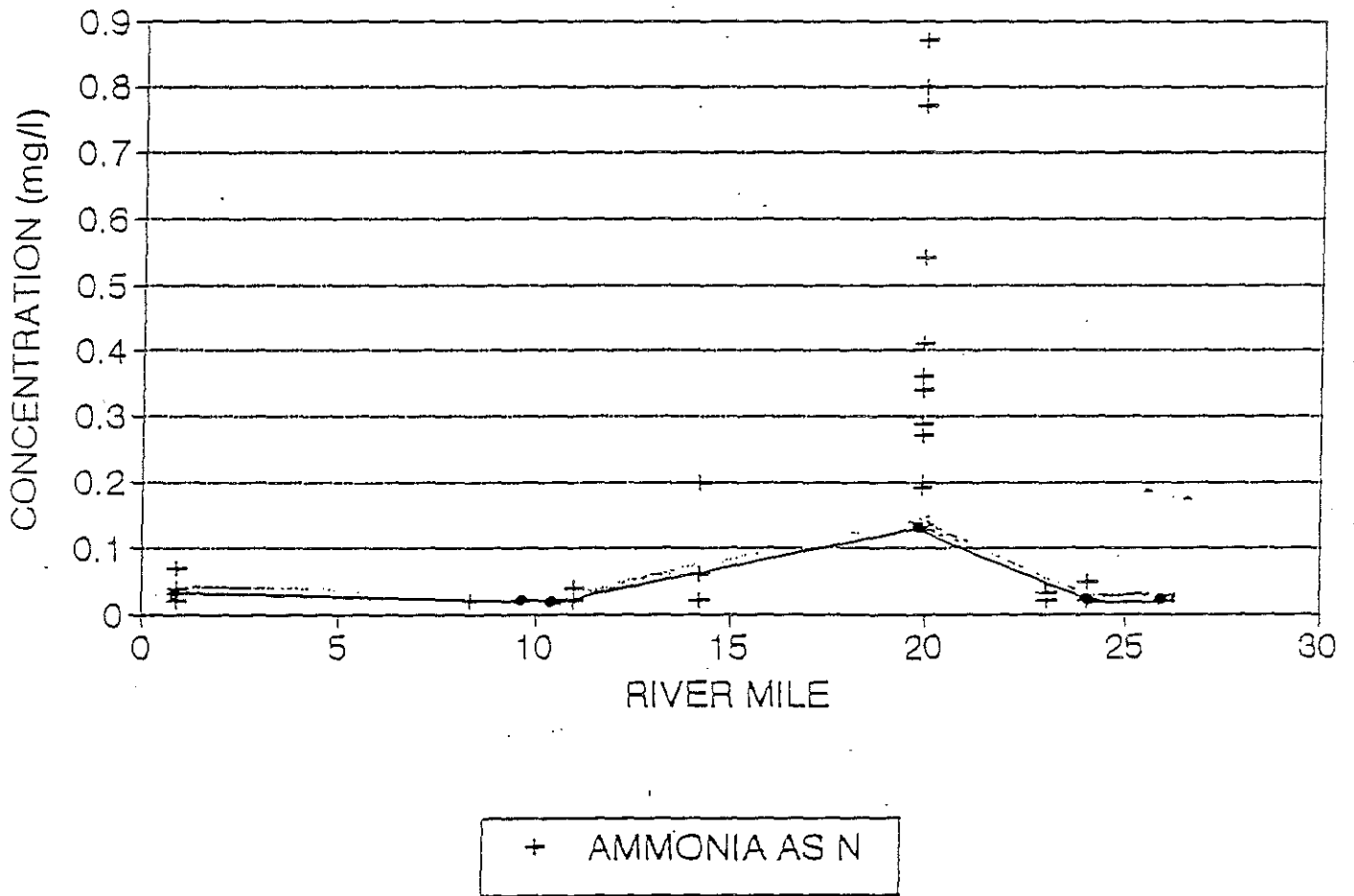


FIGURE 7 TMDL Ammonia Standard

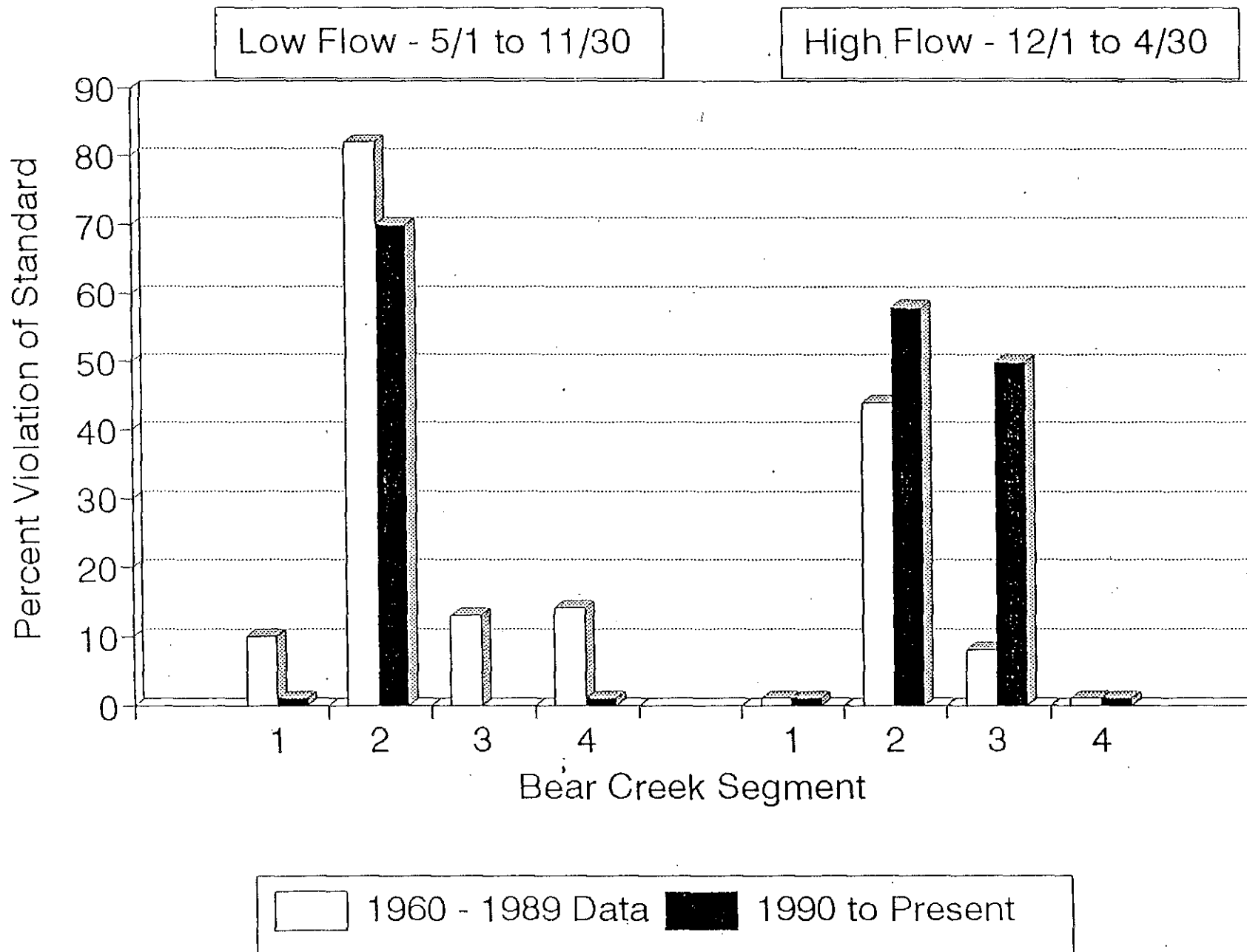
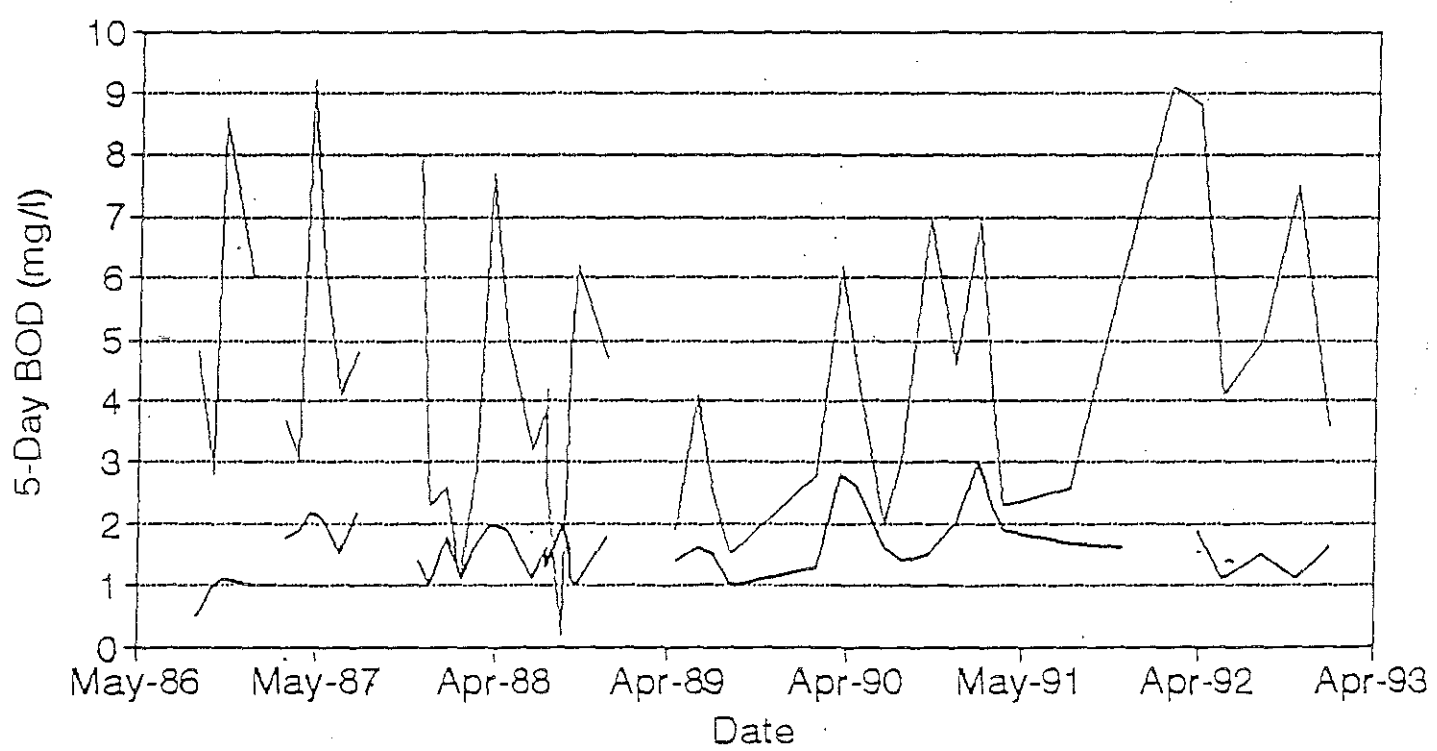


FIGURE 8

5-Day BOD Concentrations in Bear Creek DEQ Data



— Downstream of Plant — Upstream of Plant

FIGURE 9

TMDL 5-Day BOD Standard

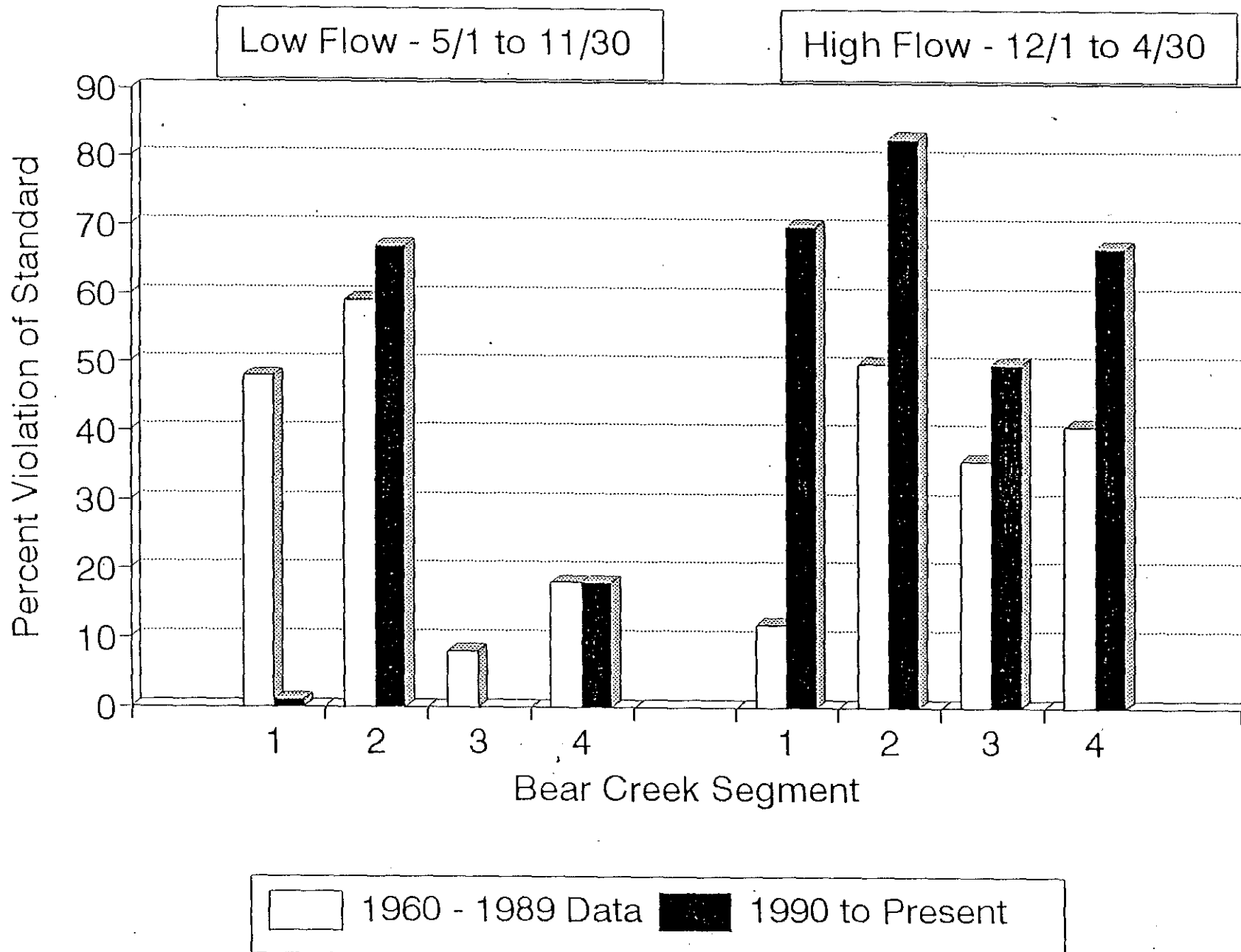


FIGURE 10

Bear Creek Temperature Profile

Aug 17 at 0600 to Oct 3 at 1400, 1994

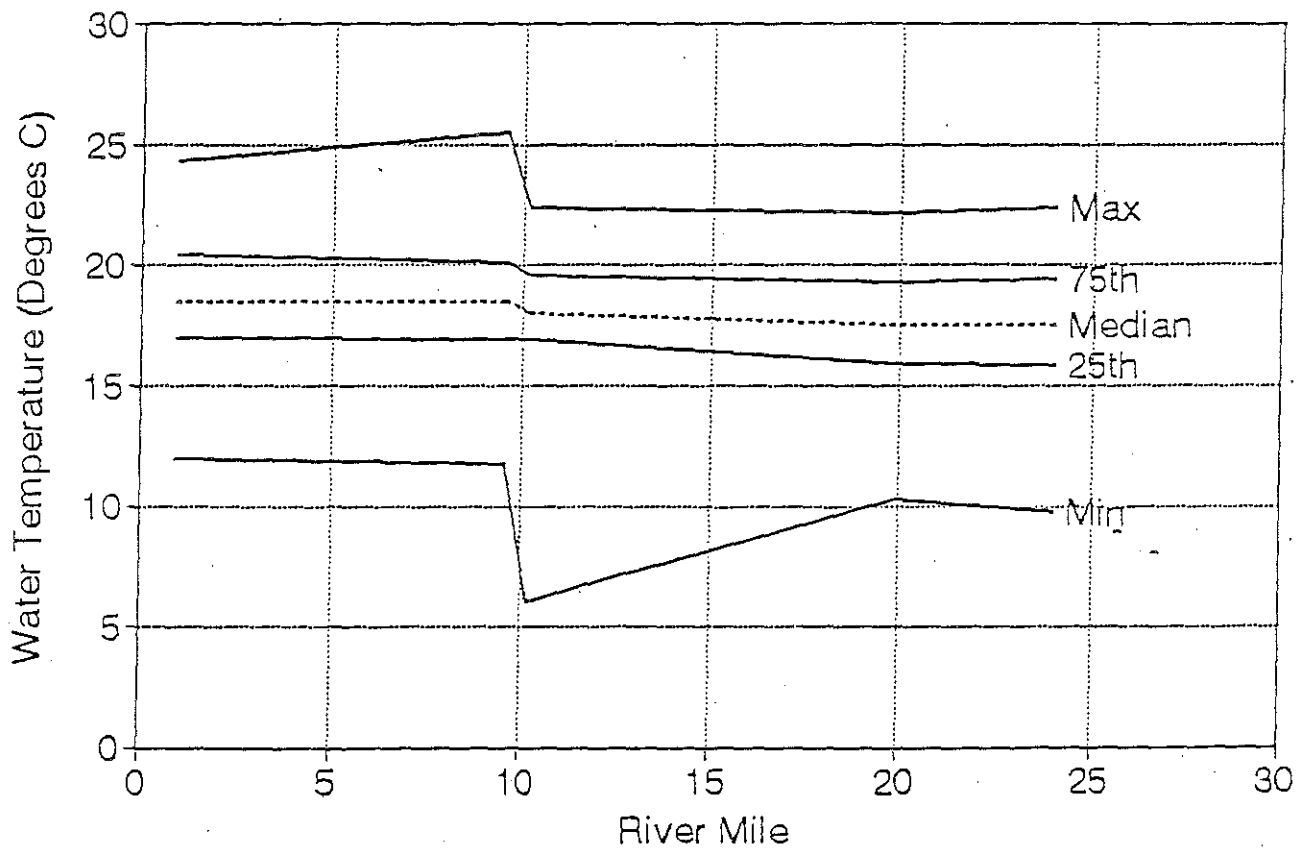


Figure 15

ATTACHMENT B

PARTIAL LIST OF ACCOMPLISHMENT BY DMAs (AND OTHERS) IN THE BEAR CREEK BASIN

Most of the accomplishments listed below deal with meeting TMDL limits on nonpoint source pollution. The 1993 Nonpoint Source Management Implementation and Compliance Schedule identified specific Designated management Agencies (DMAs) with responsibility for meeting the Bear Creek TMDLs. Certain tasks could be performed by all of the DMAs throughout the basin, some tasks are unique to one jurisdiction.

BASIN WIDE TASKS PERFORMED BY DMAs

Figure 1 details which DMAs have accomplished these basin wide tasks.

UTILITY BILL MAILINGS

Information dealing with nonpoint source pollution control measures included in city utility bills. The city of Phoenix elected to distribute bilingual door hangers using high school students.

STORMDRAIN STENCILING

Many drains have been labeled, some twice as the original paint has worn off. The Bear Creek Watershed subcommittee on Education will help to coordinate efforts for future stenciling efforts.

TOWN MEETINGS/CONFERENCES

The county and cities have discussed nonpoint source compliance goals in council meetings. Talent presented a forum specific to local water issues. Ashland has done several TV cable access presentations dealing with its WWTP options.

Two water quality conferences were held in the basin in March of 1995. Oregon Department of Agriculture, the Jackson County Soil and Water District and the Natural Resources Conservation Service co-sponsored a conference dealing with agricultural issues. Most of the nonpoint source DMAs were in attendance or presented at the one and one half day long conference. Southern Oregon State College also presented a two day conference on Bear Creek surface and groundwater issues. Again, many local DMAs were involved.

Interest has been expressed in presenting future conferences on these topics:

- 1) The importance of wetlands to controlling nonpoint source pollution.

2) A seminar directed towards county and city planners, elected officials and realtors on how to incorporate nonpoint source control measures into local ordinances.

STREAMWALKS

Streamwalks were assigned as a first step to identify the worst problem areas. Several trash cleanup days have occurred as a direct result of these walks.

STORMWATER SYSTEM SAMPLES/MAPPING

The identification of the location of stormdrains that input into Bear Creek and the quality of the stormwater coming from them.

FUNDING NPS MONITORING

Rather than having nine separate monitoring programs, the Rogue Valley Council of Governments (RVCOG) is coordinating one nonpoint source monitoring program for the basin. The DMAs, except for Department of Forestry, have provided monies to fund the monitoring program.

WATER QUALITY MONITORING

Rather than contribute funds to the basin nonpoint source program, the Department of Forestry elected to monitor sites high in the basin. This data has been shared with all of the DMAs and has been very useful in establishing natural background nutrient levels. The RVCOG, although not a DMA, has been monitoring in the basin since the mid 1970s.

TASKS BY INDIVIDUAL DMAs

Ashland

Has facilitated the formation of a citizen work group that is looking for alternatives to periodic sluicing of the city's Reeder Reservoir. Material from the sluicing activities (currently allowed every three years) becomes a moderate to severe sediment load in Ashland and Bear Creek. The group is exploring measures to 1) stabilize hillsides above the reservoir and 2) optimizing the timing of releases from the dam to better mimic natural basin hydrology.

Ashland has constructed a demonstration wetland, through funding from the Oregon Watershed Health program, for treating urban stormwater runoff. The city is pursuing EPA 319

funding for expanding this wetland and also to develop new wetlands in new city park land. The new park land, bordered by Bear Creek, may also have substantial habitat restoration work done in the riparian zone.

Phoenix

Recently passed an ordinance which required minimum riparian buffers along city creeks and wetlands. Phoenix is also currently pursuing funding for the construction of stormwater treatment wetlands in new city park land.

Talent

Is looking to create a greenway along Wagner Creek. Middle school students recently planted native vegetation along Wagner Creek with material obtained through the Watershed Health Program.

Jackson County

Recently entered into a cooperative study with Oregon Department of Transportation to find better vegetative covers for county roadsides.

Department of Agriculture

In cooperation with the Jackson County Soil and Water District and the Natural Resources Conservation Service has sought funding from the US Department of Agriculture PL566 program to reduce runoff from irrigation activities. Part of the water recovered through increased efficiency would be used to meet the target of a minimum 10 cubic feet per second discharge throughout Bear Creek. The reduced runoff would also reduce sediment and nutrient loading from agricultural lands.

ACTIONS TAKEN BY OTHER AGENCIES AND GROUPS

Rogue Valley Council of Governments (RVCOG)

The RVCOG has facilitated and coordinated studies and activities throughout the basin. They have done water quality monitoring in the basin since the mid 1970's. Because of their experience in monitoring, they have taken the lead for developing the current nonpoint source monitoring program.

The new program will increase the parameters that are tested and will increase the number of tributaries that are monitored. Other notable accomplishments of the RVCOG are:

Identification and prioritization of stream banks in the agricultural areas which lack shading and are prone to erosion.

Collected discharge information along the main stem so that a more accurate hydrologic model for the basin can be constructed. Partial funding for this study came from Oregon Department of Water Resources. The NRCS has done discharge measurement of tributaries in the basin, and has shared that data with the RVCOG.

Has formed a group of educators that will identify and coordinate a basin wide program for environmental education. The RVCOG, through an AmeriCorp position, was able to form this nucleus of teachers who will work to develop water quality monitoring specialties for each high school in the basin. Data from these investigations will be presented in a yearly basin-wide water quality congress involving all of the schools. Elementary school educators, also in the group, will use Bear Creek as their focus for teaching water quality concepts. Southern Oregon College will be involved by: 1) providing education students to assist in field and classroom instruction about Bear Creek in K-12 schools and 2) collecting data for analysis by students in college level natural science classes.

Published an informational brochure on Bear Creek. The booklet details current conditions, the difference between healthy and degraded streams and steps that individuals can take to improve water quality.

Is collecting environmental ordinances from Portland area METRO and the American Planning Association. This reference collection of existing ordinances will be used as a resource guide for local city/county planners and councils in the drafting of effective ordinances.

Is conducting a five year study, using a local naturalist, to determine the number and location of spawning redds in three one- mile-long test reaches along Bear Creek.

Coordinated and helped to fund a Bear Creek macroinvertebrate sampling of Bear Creek by students from Crater High School (in Central Point). The students sampled six sites during different seasons. A report of their findings will be out before the end of the school year.

Adhered the Bear Creek watershed assessment and action plan that was submitted to and accepted by the Strategic Water Management Group (SWMG) from the governors office.

The RVCOG has a very capable GIS system. They currently are collecting existing Bear Creek data layers and are developing water quality data into GIS compatible format. Their aim is to be the center for GIS analysis of Bear Creek natural resource issues.

Bear Creek Watershed Council

Secured \$400,000+ grant from the Oregon Watershed Health program, \$375,000 from the Medford Urban Renewal Agency and \$100,000 from the US Bureau of Reclamation to remove the Jackson Street Dam in downtown Medford. The dam is a barrier to fish migration and has been shown to increase instream water temperatures.

Has commissioned reports on the projected water needs of agriculture and municipal/industrial activities within the basin. Has completed a report to determine what amount of water is required to maintain a healthy stream ecology, and what can be done to obtain these minimum instream flows.

The education subcommittee will continue to coordinate water issues education at elementary, middle and high schools levels.

Watershed Health Program

As mentioned before, has funded several projects in the Bear Creek basin.

Watershed Education Program

Part of the Watershed Enhancement Team (WET) subcommittee of the Headwaters environmental group. Obtained Governors Watershed Enhancement Board (GWEB) grant for teaching watershed education at the Ashland Middle School. Classroom and field studies have highlighted, macroinvertebrate monitoring, fish health and environmental resource mapping. Willow plantings along Bear Creek were arranged by student volunteers of the program.

Rogue River National Forest

Will distribute a "Bear Watershed Analysis" (currently in draft form) on the conditions of Ashland, Upper Wagner, Neil, Wrights, Hamilton, Tolman and Clayton Creeks. The assessment of aquatic systems will focus on basin hillslope processes, flow regimes and aquatic resident species and habitats.

Figure 1

Basin Wide Tasks Performed By Designated Management Agencies

DMA's	Utility Bill Mailings	Storm Drain Stenciling	Sponsored Town Meetings	Sponsored WQ Conference	Participated In Streamwalks	Sampled Stormwater System	Mapped Stormwater System	Funding NPS Monitoring	Engaged In WQ Monitoring
Ashland	Yes	Yes	Yes	No	No	Yes - Limited	Yes	Yes	No
Central Point	Yes	Yes	No	No	Yes - '92 & '93	Yes (limited parms)	No	Yes	No
Jacksonville	Yes	Yes	No	No	Yes	Yes	Yes	Yes	No
Medford	Yes	Yes	No	No	Yes-Annually	Yes	Yes	Yes	No
Phoenix	Yes	Yes	No	No	Yes	No	Yes	Yes	No
Talent	No	No	Yes	No	Yes	No	Yes	Yes	No
Jackson County	NA	NA	NA	No	No	NA	NA	Yes	Yes - Septic Tank Program
Department of Agriculture	NA	NA	NA	Yes	No	NA	NA	Yes	No
Department of Forestry	NA	NA	NA	No	No	NA	NA	No	Yes