

**9/9/1988**

**OREGON  
ENVIRONMENTAL QUALITY  
COMMISSION MEETING  
MATERIALS**



**State of Oregon  
Department of  
Environmental  
Quality**

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**DIRECTOR'S PARAGRAPH**

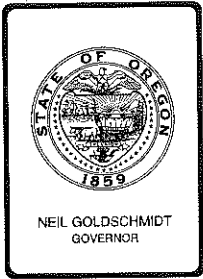
Agenda Item No. L:                    Proposed Adoption of Amendments and New Rules  
Relating to the Opportunity to Recycle Yard Debris,  
OAR 340-60-015 through 125.

This item proposes to amend existing rules and add new rules relating to the opportunity to recycle source separated yard debris. The proposed new amendments and new rules would; require local governments to develop yard debris recycling plans, describe a range of acceptable alternative recycling methods for yard debris, establish performance standards for yard debris recycling programs, and would provide a link between markets for yard debris products and yard debris collection program performance standards.

A public hearing on these proposed rules was held on July 13, 1988. The hearing officer's report is attached to the staff report on this item.

David Rozell, Waste Reduction Program Manager is present at the meeting to answer any questions which you might have.

David K. Rozell:wrb:b  
229-6165  
8/15/88  
ZB7781P



## Environmental Quality Commission

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

### EXECUTIVE SUMMARY

To: Environmental Quality Commission

From: Director *JH Ryan*

Subject: Agenda Item L, September 9, 1988, EQC Meeting

Adoption of proposed amendments and new rules relating to the opportunity to recycle yard debris. OAR 340-60-015 through 125

### BACKGROUND

On December 11, 1987 the Environmental Quality Commission (EQC) adopted rules identifying yard debris as a principal recyclable material in the five Portland area wastesheds. These proposed rules respond to the EQC's request, at that meeting, for the Department to develop additional rules which clarify the range of acceptable alternative methods for recycling yard debris.

The EQC has been dealing with the yard debris issue since the ban on backyard burning in 1983 and the adoption of rules relating to the Oregon Opportunity to Recycle Act in 1984.

On July 13, 1988 the Department held public hearings on the proposed rules. As a result of the information received at that meeting the Department made changes in the proposed rules and responded to other comments not incorporated in the rules. Although much of the public testimony was not favorable, in order to get the yard debris recycling program started, the Department believes rules should be adopted by the Commission.

The Department has developed five options for the EQC to consider, with option five being recommended.

### SUMMARY OF KEY ISSUES

The proposed rules offer three levels of involvement for the Metropolitan Service District in planning and implementing the opportunity to recycle yard debris. Should Metro have a specific role? If so, should it be to plan for yard debris recycling only? Should Metro have an implementation role, as well?

Agenda Item L  
Sept. 9, 1988, EQC Meeting  
Page 2

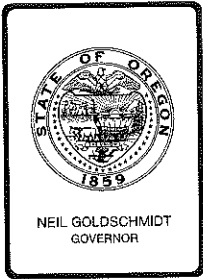
The Department recently completed a review which concludes that Metro has not adequately implemented a solid waste reduction program. Concern was also expressed in public testimony about Metro's ability to handle the yard debris recycling program.

The rule establishes performance and planning standards for removing yard debris from the solid waste stream. Are standards appropriate? Are they achievable? Who should be responsible for achieving these standards?

The rules have no specific funding source to implement yard debris recycling, assuming that local jurisdictions and/or the market through pricing structures will fund the programs. Is this reasonable and equitable?

The rules acknowledge the importance of matching the supply of yard debris from recycling programs to the processors capability to market yard debris compost. Will the planning process adequately address this issue? Should the market be of concern?

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## Environmental Quality Commission

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

### MEMORANDUM

To: Environmental Quality Commission

From: Director *JA Payne*

Subject: Agenda Item L, September 9, 1988, EQC Meeting,

Proposed Adoption of Amendments and New Rules Relating to the opportunity to Recycle Yard Debris, OAR 340-60-015 through 125.

### BACKGROUND AND PROBLEM STATEMENT

On December 11, 1986, the Environmental Quality Commission (EQC) adopted rules which identified yard debris as a principal recyclable material in the five Portland area wastesheds. This action is to become effective upon adoption of additional rules by the EQC. At the direction of the EQC, the Department drafted additional proposed rules to clarify acceptable alternative methods for recycling yard debris and presented them to the EQC on April 29, 1988 (Attachment II).

At that meeting, the EQC denied the request to go to public hearing and directed the Department to modify the proposed rules. On June 10, 1988, the Department returned to the Commission with modified proposed rules (Attachment III). At that time, the EQC authorized the Department to hold a public hearing.

A public hearing was held on July 13, 1988 in Portland. Ten individuals testified on the proposed rules. Copies of the hearings notice, written testimony, summaries of the oral testimony, the hearings officers report and the Department's response to comments are all attached to this staff report. (Attachments IV, V and VI).

One of the major issues raised at the public hearing was the appropriate role for Metro in yard debris recycling. No specific role for Metro was identified in the original proposed rules.

As a result of the public hearing, the Department has developed three variations of new proposed rules based on different levels of Metro involvement (Attachments Ia, Ib and Ic).

The proposed rules Ia are designed to place the major role for yard debris recycling with local government. Metro has an optional role as a planning agent. Under this approach, the Department has changed the proposed rules in the following manner:

1. Technical corrections or clarifications of language in OAR 340-60-015(8), -035(4), -115(1) and (2), -120(5).

2. Additional language in OAR 340-60-120(1) and (2) to clarify the potential role of Metro in the yard debris planning process.
3. Additional language in OAR 340-60-120(3) to clarify the concept of "processors' capability to utilize source separated yard debris".
4. Renumbering of sections in OAR 340-60-120 and -125.
5. Moving yard debris recycling performance standards from OAR 340-60-120 to -125.
6. Inclusion of Department enforcement authority in OAR 340-60-115(4).
7. Additional language in OAR 340-60-125(2) to provide for either a one mile radius or a 25,000 population service area.

Upon adoption of the new proposed rules Ia, yard debris would become a principal recyclable material in the five Portland area wastesheds. This means that each local government will have to determine if yard debris meets the specific definition of "recyclable material" in their jurisdiction. If so, local government will have to provide the opportunity to recycle source separated yard debris. The opportunity to recycle would mean on-route collection or an acceptable alternative method of collection of yard debris.

Source separated yard debris would be delivered to yard debris processors. Local governments and solid waste collection companies are concerned that there may not be an adequate outlet for the material which would be collected. They are concerned that yard debris processors will not be able to distribute composted yard debris product and thus will not be able to accept additional new material for processing.

The new proposed rules require local governments to plan and implement yard debris recycling programs (OAR 340-60-120 and -125). The rules provide performance standards for implementation (OAR 340-60-125(5)). These performance standards also serve as planning goals (OAR 340-60-120(6)). All of the performance standards and the resulting yard debris recovery rates are tied directly, through the yard debris recycling plans, to the processor's capability to utilize source separated yard debris. The yard debris recycling plans will identify the level of processors' capability to utilize yard debris and will identify the appropriate time and method to provide yard debris collection systems (OAR 340-60-120(4)).

There was a great deal of discussion at the public hearing that yard debris recycling plans should be developed on a multi-jurisdictional or regional basis. The new proposed rules provide for this level of planning (OAR 340-60-120(1) and (2)). They also allow for multi-jurisdictional or regional implementation of yard debris recycling programs. The rules do not require this level of planning or implementation. Each local government may plan and provide yard debris recycling independently.

There was also considerable comment at the public hearing that the EQC should postpone adoption of the new proposed rules until Metro has completed additional yard debris collection and yard debris compost marketing studies. There were also comments that the rules should not be adopted until the processors had demonstrated a capability to utilize much greater quantities of yard debris than they are presently handling. These comments are addressed in the Response to Comments and in the modification of the proposed rules to the new proposed rules.

The proposed rules Ib are designed to give Metro a more active role in yard debris recycling and to reduce the role of local governments. Under this approach, the proposed rules have been changed in the following manner.

1. Technical corrections or clarifications of language in OAR 340-60-015 (8) and 035 (4).
2. Drop all proposed language in OAR 340-60-115, -120 and -125.
3. Additional new language in OAR 340-60-035 (4) and (5).
4. Inclusion of Department enforcement authority to OAR 340-60-035 (6).

Upon adoption of new proposed rules Ib, yard debris would become a recyclable material in the five Portland area wastesheds. Local governments could provide the opportunity to recycle yard debris in the same manner as they do for other recyclable materials. When Metro develops a yard debris recycling program, it would be accepted as an alternative method of providing the opportunity to recycle yard debris for all of the local governments covered by the plan. Under these rules, Metro would develop the schedule, timeline, recycling methods and performance standards for yard debris recycling. Metro would be required to either implement the yard debris recycling program or to guarantee that local governments did so. It is very difficult to determine what the specifics of a Metro yard debris recycling program would be or how long it would take Metro to develop such a program.

The Department's proposed rules Ic is a combination of Ia and Ib. Under these proposed rules, all of the provisions of Ia would be in effect until Metro develops a plan and program as called for in Ib.

To accomplish this approach, the Department has changed the proposed rules in the following manner.

1. All of the changes for both Ia and Ib have been made.
2. Additional new language in OAR 340-60-035 (7) makes the requirements on local governments invalid when Metro develops a yard debris recycling program.

### ALTERNATIVES AND EVALUATION

The Department is proposing five alternative actions for EQC consideration.

First, the EQC could take no action. If the EQC does not adopt these additional rules in some form, the identification of yard debris as a principal recyclable material will not become effective. In choosing this alternative, the EQC would be allowing yard debris collection systems and market to continue to develop at their own pace. Under this alternative, it would be an undetermined period of time before yard debris would be treated as a recyclable material. Adoption of this alternative would result in a continued slow growth in yard debris recycling programs. Yard debris recycling might not be provided at all in some communities.

Second, the EQC could take no action and then reconsider the issue when Metro completes its study of markets for the three types of compost and makes a decision on the municipal solid waste composting facility. As in the first alternative, yard debris would not become a principal recyclable material until the EQC adopts additional rules. Under this alternative, it would be a limited period before the EQC acts on proposed yard debris recycling rules. During that period of time, more information about the demand for compost products could be developed. Postponing an EQC decision in this way would provide more time for yard debris processors to improve their markets and for local communities to develop information on yard debris collection options. There is no guarantee that Metro will move forward expeditiously with their studies or that local governments or yard debris processors will make any progress while waiting for a Metro decision.

Third, the EQC could adopt the new proposed rules presented in Attachment Ia. This option would result in the development of local government yard debris recycling plans, a further evaluation of processors' capability and, where appropriate, additional yard debris recycling programs. Under this option, some local governments might not start yard debris collection programs until there have been significant increases in processors' capability. All 38 local governments in the five affected wastesheds would have yard debris recycling plans with implementation timelines.

Fourth, the EQC could adopt the proposed rules as presented in Attachment Ib. This option would identify Metro as the major planning and implementing authority in yard debris recycling. Local, affected persons could deal with yard debris the same as any other recyclable material or they could participate in the implementation of a Metro yard debris recycling program. The elements of a Metro yard debris recycling program would be acceptable alternative methods for providing the opportunity to recycle yard debris. Under this alternative, Metro would make decisions as to when yard debris is a recyclable material and how yard debris is to be recycled. This alternative is dependent upon Metro developing an acceptable yard debris recycling program and the assumption that local governments will implement Metro's yard debris recycling program. It may take some time for Metro to develop a yard debris recycling program which is acceptable to both the Department and local governments.



Fifth, the EQC could adopt the proposed rules as presented in Attachment Ic. These rules are a combination of Ia and Ib such that yard debris recycling would take place as called for in Ia unless Metro develops an acceptable program as provided for in Ib. If Metro does develop an acceptable program, then the requirements for local government's yard debris recycling plans and programs described in Ia would not be effective. Metro would set local government implementation standards. This alternative gives Metro a chance to take the leadership but still provides for a yard debris recycling program if Metro fails to develop an acceptable program.

#### SUMMATION

1. Source separated yard debris has been identified as a principal recyclable material in the five Portland Area wastesheds.
2. Yard debris processors indicated at the public hearing that they are capable of utilizing yard debris at present recovery levels and, given time to increase product markets, at increasing levels.
3. The Department has proposed rules which will require a local government planning process to determine what levels of yard debris recycling are appropriate for each jurisdiction.
4. These rules contain implementation standards which will also serve as planning goals.
5. The yard debris recycling plans will set actual recovery rates based on the processors' capability to utilize source separated yard debris.
6. These rules provide a mechanism for joint intergovernmental planning and implementation of yard debris recycling programs.
7. The proposed rules provide a special process for regional yard debris recycling, planning, and implementation process utilizing the resources and authority of Metro.
8. In summary, the proposed rules provide for implementation of yard debris recycling at the rate determined by the processors' capability to utilize the material and by a method chosen by the local affected persons.

**DIRECTOR'S RECOMMENDATION**

Based upon the summation, it is recommended that the Commission adopt the proposed rules relating to yard debris recycling as presented by staff as Attachment Ic of this report.

Fred Hansen  
Director

Attachments:

- I. (a,b,c) Draft Rules
- II. April 29, 1988 Staff Report
- III. June 10, 1988 Staff Report
- IV. Hearing's Officer's Report
- V. Department's Response to Comments
- VI. Statement of Need for Rulemaking

David K. Rozell:wrb  
229-6165  
8/15/88  
YB7781

OREGON ADMINISTRATIVE RULES  
DIVISION 60  
Recycling and Waste Reduction

OAR 340-60-015 is amended as follows:

**Policy Statement**

340-60-015 Whereas inadequate solid waste collection, storage, transportation, recycling and disposal practices waste energy and natural resources and cause nuisance conditions, potential hazards to public health and pollution of air, water and land environment, it is hereby declared to be the policy of the Commission:

(1) To require effective and efficient waste reduction and recycling service to both rural and urban areas.

(2) To promote and support comprehensive local or regional government solid waste and recyclable material management:

(a) Utilizing progressive waste reduction and recycling techniques;

(b) Emphasizing recovery and reuse of solid waste; and

(c) Providing the opportunity to recycle to every person in Oregon through best practicable methods.

(3) To establish a comprehensive statewide program of solid waste management which will, after consideration of technical and economic feasibility, establish the following priority in methods of managing solid waste:

(a) First, to reduce the amount of solid waste generated;

(b) Second, to reuse material for the purpose for which it was originally intended;

(c) Third, to recycle material which cannot be reused;

(d) Fourth, to recover energy from solid waste that cannot be reused or recycled so long as the energy recovery facility preserves the quality of air, water and land resources; and

(e) To dispose of solid waste that cannot be reused, recycled, or from which energy cannot be recovered by landfilling or other methods approved by the Department.

(4) To retain primary responsibility for management of adequate solid waste programs with local government units.

(5) To encourage maximum participation of all affected persons and generators in the planning and development of required recycling programs.

(6) To place primary emphasis on the provision of the opportunity to recycle to residential generators of source separated recyclable materials.

(7) To encourage local government to develop programs to provide the opportunity to recycle which cause only minimum dislocation of:

(a) Recycling efforts, especially the activities of charitable, fraternal, and civic groups; and

(b) Existing recycling collection from commercial and industrial sources.

(8) To encourage local governments to develop programs to provide the opportunity to recycle source separated recyclable material in a manner which results in the highest level of public participation and the greatest level of removal of recyclable material from the solid waste stream. Such a program should provide a frequent, convenient and easily publicized and understood system for the collection of recyclable material from every generator in the jurisdiction.

(9) To encourage the utilization of products made from recyclable material including processed or composted yard debris products.

(10) To encourage the coordination of recovery of source separated recyclable materials with the demand for those materials and the demand for the products made from recyclable materials.

OAR 340-60-030 is amended as follows:

#### **Principal Recyclable Material**

340-60-030 (1) The following are identified as the principal recyclable materials in the wastesheds as described in Sections (4) through (12) of this rule:

- (a) Newspaper;
- (b) Ferrous scrap metal;
- (c) Non-ferrous scrap metal;
- (d) Used motor oil;
- (e) Corrugated cardboard and kraft paper;
- (f) Aluminum;
- (g) Container glass;
- (h) Hi-grade office paper;
- (i) Tin cans;
- (j) Yard debris[, effective upon adoption by the Commission of

additional rules which clarify the range of acceptable alternative methods for providing the opportunity to recycle source separated yard debris].

(2) In addition to the principal recyclable materials listed in section (1) of this rule, other materials may be recyclable material at specific locations where the opportunity to recycle is required.

(3) The statutory definition of "recyclable material" (ORS 459.005(15)) determines whether a material is a recyclable material at a specific location where the opportunity to recycle is required.

(4) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(a) through (j) of this rule:

- (a) Clackamas wasteshed;
- (b) Multnomah wasteshed;
- (c) Portland wasteshed;
- (d) Washington wasteshed;
- (e) West Linn wasteshed.

(5) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(a) through (i) of this rule:

- (a) Benton and Linn wasteshed;
  - (b) Clatsop wasteshed;
  - (c) Hood River wasteshed;
  - (d) Lane wasteshed;
  - (e) Lincoln wasteshed;
  - (f) Marion wasteshed;
  - (g) Polk wasteshed;
  - (h) Umatilla wasteshed;
  - (i) Union wasteshed;
  - (j) Wasco wasteshed;
  - (k) Yamhill wasteshed.
- (6) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(a) through (g) of this rule:
- (a) Baker wasteshed;
  - (b) Crook wasteshed;
  - (c) Jefferson wasteshed;
  - (d) Klamath wasteshed;
  - (e) Tillamook wasteshed.
- (7) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(a) through (h) of this rule:
- (a) Coos wasteshed;
  - (b) Deschutes wasteshed;
  - (c) Douglas wasteshed;
  - (d) Jackson wasteshed;
  - (e) Josephine wasteshed.
- (8) In the following wasteshed, the principal recyclable materials are those listed in subsections 1(a) through (f) of this rule:  
Malheur wasteshed.
- (9) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(a) through (g) and (i) of this rule:
- (a) Columbia wasteshed;
  - (b) Milton-Freewater wasteshed.
- (10) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(a) through (e) of this rule:
- (a) Curry wasteshed;
  - (b) Grant wasteshed;
  - (c) Harney wasteshed;
  - (d) Lake wasteshed.
- (11) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(a) through (d) of this rule:
- (a) Morrow wasteshed;
  - (b) Sherman wasteshed;
  - (c) Wallowa wasteshed.
- (12) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(b) through (d) of this rule:
- (a) Gilliam wasteshed;
  - (b) Wheeler wasteshed.

(13) (a) The opportunity to recycle shall be provided for each of the principal recyclable materials listed in sections (4) through (12) of this rule and for other materials which meet the statutory definition of recyclable material at specific locations where the opportunity to recycle is required.

(b) The opportunity to recycle is not required for any material which a recycling report, approved by the Department, demonstrates does not meet the definition of recyclable material for the specific location where the opportunity to recycle is required.

(14) Between the time of the identification of the principal recyclable materials in these rules and the submittal of the recycling reports, the Department will work with affected persons in every wasteshed to assist in identifying materials contained on the principal recyclable material list which do not meet the statutory definition of recyclable material at some locations in the wasteshed where the opportunity to recycle is required.

(15) Any affected person may request the Commission modify the list of principal recyclable material identified by the Commission or may request a variance under ORS 459.185.

(16) The Department will at least annually review the principal recyclable material lists and will submit any proposed changes to the Commission.

OAR 340-60-035 is amended as follows:

**Acceptable, Alternative Methods for Providing the Opportunity to Recycle**

340-60-035 (1) Any affected person in a wasteshed may propose to the Department an alternative method for providing the opportunity to recycle. Each submittal shall include a description of the proposed alternative method and a discussion of the reason for using this method rather than the general method set forth in OAR 340-60-020(1)(a).

(2) The Department will review these proposals as they are received. Each proposed alternative method will be approved, approved with conditions, or rejected based on consideration of the following criteria:

(a) The alternative will increase recycling opportunities at least to the level anticipated from the general method set forth in OAR 340-60-020 for providing the opportunity to recycle;

(b) The conditions and factors which make the alternative method necessary;

(c) The alternative method is convenient to the people using or receiving the service;

(d) The alternative method is as effective in recovering recyclable materials from solid waste as the general method set forth in OAR 340-60-020 for providing the opportunity to recycle.

(3) The affected persons in a wasteshed may propose as provided in section (1) of this rule an alternative method to providing on-route collection as part of the opportunity to recycle for low density population area within the urban growth boundaries of a city with a population over

4,000 or, where applicable, the urban growth boundaries established by a metropolitan district.

(4) In addition to any other standards or conditions, an alternative method for providing the opportunity to recycle yard debris shall meet the following minimum standards:

(a) The alternative method is available to substantially all yard debris generators in the local jurisdiction.

(b) The alternative method results in the recycling of yard debris from the solid waste stream.

(c) There is a promotion campaign which is designed to inform all potential users about the availability and use of the method.

(d) The jurisdictions covered by the alternative method are included in a yard debris recycling plan approved by the Department which includes the alternative method, and

(e) Implementation of the alternative method is designed to meet the performance requirements of OAR 340-60-125(5).

OAR 340-60-075 is amended as follows:

#### **Reasonable Specifications for Recyclable Materials**

340-60-075 No person providing the opportunity to recycle shall be required to collect or receive source separated recyclable material which has not been correctly prepared to reasonable specifications which are related to marketing, transportation [or] storage or regulatory agency requirements and which have been publicized as part of an education and promotion program.

#### **Local Government Responsibility**

340-60-115 Each local government unit in a watershed where yard debris has been identified as a principal recyclable material shall, either individually or jointly through intergovernmental agreement, provide for the following:

(1) An approved yard debris recycling plan as called for in OAR 340-60-120.

(2) Yard debris recycling service using one of the methods listed in OAR 340-60-125 (1) through (3) and

(3) An education and promotion program which meets the requirements of OAR 340-60-040.

(4) If a local government or the Metropolitan Service District does not submit an acceptable yard debris recycling plan or does not implement a yard debris recycling program they shall be considered to be not providing the opportunity to recycle yard debris and the Commission may order the Metropolitan Service District, the local governments or any affected person in the affected watersheds to provide the level of recycling service, including education and promotion, which in the Commission's opinion is necessary to meet the standards set in these rules.

Yard Debris Recycling Plans

340-60-120 (1) Each local government unit in the wastesheds where yard debris has been identified as a principal recyclable material shall, individually, jointly through intergovernmental agreement or through intergovernmental agreement as provided in Section (2) of this rule, submit to the Department, as part of the wasteshed recycling report, a yard debris recycling plan which describes how the opportunity to recycle yard debris will be provided to the residents in their jurisdiction.

(2)(a) A yard debris recycling plan developed by the Metropolitan Service District shall include the following:

(A) All of the information called for in section (4) of this rule, allocated to each jurisdiction covered under the plan;

(B) A time line and implementation goals for each jurisdiction covered under the plan;

(C) An implementation program for each jurisdiction which recommends the roles for the affected persons;

(D) Intergovernmental agreements between the Metropolitan Service District and each local government covered under the plan which:

(i) Contains a commitment from each party to implement the programs called for in the plan.

(ii) Identifies the roles of the affected person in the local jurisdictions and;

(iii) Identifies the amount and source of funds necessary to implement the plan.

(E) A program evaluation element which identifies the goals, performance measures and resources allocation necessary to implement the yard debris recycling program outlined in the plan.

(b) All intergovernmental agreements developed to implement the requirement of these rules shall be approved by the Department.

(c) Any yard debris recycling plan developed by the Metropolitan Service District shall be consistent with and incorporated into the Metropolitan Service District Waste Reduction Plan and the Metropolitan Service District Solid Waste Management Plan.

(d) Any changes in the Metropolitan Service District's yard debris recycling plan, waste reduction plan, or solid waste management plan affecting yard debris recycling shall be approved by the Department prior to being implemented.

(e) Metropolitan Service District shall monitor the implementation of the yard debris recycling programs and shall report local government and other affected person compliance or non compliance in a report to the Department at least annually.

(3) As used in this rule and in OAR 340-60-125 the term "processors' capability to utilize source separated yard debris" means, the ability of an individual processor or group of processors of source separated yard debris to accept, store and process source separated yard debris into a product and to sell or distribute that product within one year or on a schedule approved or set by the Department.



(4) A yard debris recycling plan shall include the following information:

- (a) The estimated amount of yard debris available.
- (b) The proposed collection method for yard debris.
- (c) The number of potential participants in the program.
- (d) The projected participation level.
- (e) The expected amount of material to be recovered.
- (f) The process by which the yard debris will be recycled or the names of the facilities to which the yard debris will be sent for recycling.
- (g) The projected capability of the facility which will be accepting yard debris generated in the jurisdiction to accept and utilize that yard debris.
- (h) The projected growth of the program over the first four years of operation.
- (i) A description of any alternative method for providing the opportunity to recycle yard debris which is going to be used.
- (j) A timeline which displays
  - (A) the projected growth of the program.
  - (B) use of collection and recycling methods, and
  - (C) projected growth of the facilities to which the yard debris will be sent.

(5) The Department shall review and approve or disapprove the yard debris recycling plans based on whether the information in the plan is accurate and the program described in the plan is designed to meet the performance standards in OAR 340-60-125(3) of this rule.

(6) Yard debris recycling plans developed for local jurisdictions in the Clackamas, Multnomah, Portland, Washington, or West Linn Wastesheds shall use OAR 340-60-125(5)(a) through (d) as goals except when it can be demonstrated to the Department's satisfaction, that such a program will produce more source separated yard debris than the yard debris or processor or processors serving the local or regional government jurisdiction are capable of utilizing.

#### Yard Debris Recycling Program Implementation

340-60-125 Each local government unit in a wasteshed where yard debris has been identified as a principal recyclable material shall, either individually or jointly through intergovernmental agreement, provide a yard debris recycling program by one of the following methods:

(1) Provide the opportunity to recycle as identified in OAR 340-60-020 or an equivalent level of service.

(2) Provide the opportunity to recycle yard debris by using an acceptable alternative method as identified in OAR 340-60-035. Acceptable alternative methods for collection or recycling of source separated yard debris include but are not limited to the following:

(a) Monthly or more often on-route collection of yard debris during the months of March, April, May and September, October, November with a drop-off depot for noncollection service customers available at least monthly, or

(b) A biweekly or more often yard debris collection depot within one mile of the yard debris generators, or such that there is at least one conveniently located depot for every 25,000 population.

(c) A monthly or more often yard debris collection depot, supplemented by a weekly or more often yard debris depot during the months of March, April, May and September, October, November, both within one mile of the yard debris generators, or such that there is at least one conveniently located depot for every 25,000 population.

(3) Provide a yard debris recycling program by using an acceptable alternative method or methods that are part of a Department approved yard debris recycling plan, as described in OAR 340-60-120.

(4) The Department shall include, but is not limited to, the following criteria in an evaluation of an alternative method for providing the opportunity to recycle yard debris submitted under section (2) or (3) of this rule.

(a) Projected participation rate.

(b) Projected recovery rate.

(c) Distance the residents of the jurisdiction have to travel to use the alternative method.

(d) Potential for expansion.

(e) The type and level of promotion and education associated with the alternative method.

(5) Unless otherwise provided in an approved yard debris recycling plan, yard debris recycling programs developed for local jurisdictions in the Clackamas, Multnomah, Portland, Washington, and West Linn Wastesheds shall be implemented to meet the following minimum performance standards for recovery of yard debris generated in that jurisdiction:

(a) By July 1, 1989 recovery of at least 25% of the yard debris generated in the area.

(b) By July 1, 1990 recovery of at least 40% of the yard debris generated in the area.

(c) By July 1, 1991 recovery of at least 60% of the yard debris generated in the area.

(d) By July 1, 1992 recovery of at least 80% of the yard debris generated in the area.

YF3030.A

OREGON ADMINISTRATIVE RULES  
DIVISION 60  
Recycling and Waste Reduction

OAR 340-60-015 is amended as follows:

**Policy Statement**

340-60-015 Whereas inadequate solid waste collection, storage, transportation, recycling and disposal practices waste energy and natural resources and cause nuisance conditions, potential hazards to public health and pollution of air, water and land environment, it is hereby declared to be the policy of the Commission:

(1) To require effective and efficient waste reduction and recycling service to both rural and urban areas.

(2) To promote and support comprehensive local or regional government solid waste and recyclable material management:

(a) Utilizing progressive waste reduction and recycling techniques;

(b) Emphasizing recovery and reuse of solid waste; and

(c) Providing the opportunity to recycle to every person in Oregon through best practicable methods.

(3) To establish a comprehensive statewide program of solid waste management which will, after consideration of technical and economic feasibility, establish the following priority in methods of managing solid waste:

(a) First, to reduce the amount of solid waste generated;

(b) Second, to reuse material for the purpose for which it was originally intended;

(c) Third, to recycle material which cannot be reused;

(d) Fourth, to recover energy from solid waste that cannot be reused or recycled so long as the energy recovery facility preserves the quality of air, water and land resources; and

(e) To dispose of solid waste that cannot be reused, recycled, or from which energy cannot be recovered by landfilling or other methods approved by the Department.

(4) To retain primary responsibility for management of adequate solid waste programs with local government units.

(5) To encourage maximum participation of all affected persons and generators in the planning and development of required recycling programs.

(6) To place primary emphasis on the provision of the opportunity to recycle to residential generators of source separated recyclable materials.

(7) To encourage local government to develop programs to provide the opportunity to recycle which cause only minimum dislocation of:

(a) Recycling efforts, especially the activities of charitable, fraternal, and civic groups; and

(b) Existing recycling collection from commercial and industrial sources.

(8) To encourage local governments to develop programs to provide the opportunity to recycle source separated recyclable material in a manner which results in the highest level of public participation and the greatest level of removal of recyclable material from the solid waste stream. Such a program should provide a frequent, convenient and easily publicized and understood system for the collection of recyclable material from every generator in the jurisdiction.

(9) To encourage the utilization of products made from recyclable material including processed or composted yard debris products.

(10) To encourage the coordination of recovery of source separated recyclable materials with the demand for those materials and the demand for the products made from recyclable materials.

OAR 340-60-030 is amended as follows:

**Principal Recyclable Material**

340-60-030 (1) The following are identified as the principal recyclable materials in the wastesheds as described in Sections (4) through (12) of this rule:

- (a) Newspaper;
- (b) Ferrous scrap metal;
- (c) Non-ferrous scrap metal;
- (d) Used motor oil;
- (e) Corrugated cardboard and kraft paper;
- (f) Aluminum;
- (g) Container glass;
- (h) Hi-grade office paper;
- (i) Tin cans;

(j) Yard debris[, effective upon adoption by the Commission of additional rules which clarify the range of acceptable alternative methods for providing the opportunity to recycle source separated yard debris].

(2) In addition to the principal recyclable materials listed in section (1) of this rule, other materials may be recyclable material at specific locations where the opportunity to recycle is required.

(3) The statutory definition of "recyclable material" (ORS 459.005(15)) determines whether a material is a recyclable material at a specific location where the opportunity to recycle is required.

(4) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(a) through (j) of this rule:

- (a) Clackamas wasteshed;
- (b) Multnomah wasteshed;
- (c) Portland wasteshed;
- (d) Washington wasteshed;
- (e) West Linn wasteshed.

(5) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(a) through (i) of this rule:

- (a) Benton and Linn wasteshed;
- (b) Clatsop wasteshed;
- (c) Hood River wasteshed;
- (d) Lane wasteshed;
- (e) Lincoln wasteshed;
- (f) Marion wasteshed;
- (g) Polk wasteshed;
- (h) Umatilla wasteshed;
- (i) Union wasteshed;
- (j) Wasco wasteshed;
- (k) Yamhill wasteshed.

(6) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(a) through (g) of this rule:

- (a) Baker wasteshed;
- (b) Crook wasteshed;
- (c) Jefferson wasteshed;
- (d) Klamath wasteshed;
- (e) Tillamook wasteshed.

(7) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(a) through (h) of this rule:

- (a) Coos wasteshed;
- (b) Deschutes wasteshed;
- (c) Douglas wasteshed;
- (d) Jackson wasteshed;
- (e) Josephine wasteshed.

(8) In the following wasteshed, the principal recyclable materials are those listed in subsections 1(a) through (f) of this rule:  
Malheur wasteshed.

(9) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(a) through (g) and (i) of this rule:

- (a) Columbia wasteshed;
- (b) Milton-Freewater wasteshed.

(10) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(a) through (e) of this rule:

- (a) Curry wasteshed;
- (b) Grant wasteshed;
- (c) Harney wasteshed;
- (d) Lake wasteshed.

(11) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(a) through (d) of this rule:

- (a) Morrow wasteshed;
- (b) Sherman wasteshed;
- (c) Wallowa wasteshed.

(12) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(b) through (d) of this rule:

- (a) Gilliam wasteshed;
- (b) Wheeler wasteshed.

(13) (a) The opportunity to recycle shall be provided for each of the principal recyclable materials listed in sections (4) through (12) of this rule and for other materials which meet the statutory definition of recyclable material at specific locations where the opportunity to recycle is required.

(b) The opportunity to recycle is not required for any material which a recycling report, approved by the Department, demonstrates does not meet the definition of recyclable material for the specific location where the opportunity to recycle is required.

(14) Between the time of the identification of the principal recyclable materials in these rules and the submittal of the recycling reports, the Department will work with affected persons in every wasteshed to assist in identifying materials contained on the principal recyclable material list which do not meet the statutory definition of recyclable material at some locations in the wasteshed where the opportunity to recycle is required.

(15) Any affected person may request the Commission modify the list of principal recyclable material identified by the Commission or may request a variance under ORS 459.185.

(16) The Department will at least annually review the principal recyclable material lists and will submit any proposed changes to the Commission.

OAR 340-60-035 is amended as follows:

**Acceptable, Alternative Methods for Providing the Opportunity to Recycle**

340-60-035 (1) Any affected person in a wasteshed may propose to the Department an alternative method for providing the opportunity to recycle. Each submittal shall include a description of the proposed alternative method and a discussion of the reason for using this method rather than the general method set forth in OAR 340-60-020(1)(a).

(2) The Department will review these proposals as they are received. Each proposed alternative method will be approved, approved with conditions, or rejected based on consideration of the following criteria:

(a) The alternative will increase recycling opportunities at least to the level anticipated from the general method set forth in OAR 340-60-020 for providing the opportunity to recycle;

(b) The conditions and factors which make the alternative method necessary;

(c) The alternative method is convenient to the people using or receiving the service;

(d) The alternative method is as effective in recovering recyclable materials from solid waste as the general method set forth in OAR 340-60-020 for providing the opportunity to recycle.

(3) The affected persons in a wasteshed may propose as provided in section (1) of this rule an alternative method to providing on-route collection as part of the opportunity to recycle for low density population area within the urban growth boundaries of a city with a population over

4,000 or, where applicable, the urban growth boundaries established by a metropolitan district.

(4) In addition to any other standards or conditions, an alternative method for providing the opportunity to recycle yard debris shall meet the following minimum standards:

(a) The alternative method is available to substantially all yard debris generators in the local jurisdiction.

(b) The alternative method results in the recycling of yard debris from the solid waste stream.

(c) There is a promotion campaign which is designed to inform all potential users about the availability and use of the method.

(5) A yard debris recycling program developed by the Metropolitan Service District and implemented by the Metropolitan Service District or another affected person will be considered to be an acceptable alternative method of providing the opportunity to recycle source separated yard debris if the program meets the following criteria:

(a) The program results in the recovery and utilization of yard debris.

(b) The program is approved by the Department, and

(c) The program includes commitments from the local governments covered by the program to implement the program or a demonstration of the Metropolitan Service District's authority to implement the program.

(d) The program is consistent with a Department approved yard debris recycling plan which includes the following information for each local government jurisdiction covered by the plan:

(A) The estimated amount of yard debris available.

(B) The proposed collection method for yard debris.

(C) The number of potential participants in the program.

(D) The projected participation level.

(E) The expected amount of material to be recovered.

(F) The process by which the yard debris will be recycled or the names of the facilities to which the yard debris will be sent for recycling.

(G) The projected capability of the facility which will be accepting yard debris generated in the jurisdiction to accept and utilize that yard debris.

(H) The projected growth of the program over the first four years of operation.

(I) Intergovernmental agreements between the Metropolitan Service District and each local government covered under the plan which:

(i) Contains a commitment from each party to implement the programs called for in the plan.

(ii) Identifies the roles of the affected person in the local jurisdictions and;

(iii) Identifies the amount and source of funds necessary to implement the plan.

(e) the plan and program include a program evaluation element which identifies the goals, performance measures and resources allocation necessary to implement the yard debris recycling program outlined in the plan.

(f) All intergovernmental agreements developed to implement the requirement of these rules shall be approved by the Department.

(g) Any yard debris recycling plan developed by the Metropolitan Service District shall be consistent with and incorporated into the Metropolitan Service District waste reduction plan and the Metropolitan Service District solid waste management plan.

(h) Any changes in the Metropolitan Service District yard debris recycling plan, waste reduction plan, or solid waste management plan affecting yard debris recycling shall be approved by the Department prior to being implemented.

(i) The Metropolitan Service District shall monitor the implementation of the yard debris recycling programs and shall report local government and other affected person compliance or non compliance in a report to the Department at least annually.

(6) If a local government or the Metropolitan Service District does not submit an acceptable yard debris recycling plan or does not implement a yard debris recycling program they shall be considered to be not providing the opportunity to recycle yard debris and the Commission may order the Metropolitan Service District, the local governments or any affected person in the affected wastesheds to provide the level of recycling service, including education and promotion, which in the Commission's opinion is necessary to meet the standards set in these rules.

OAR 340-60-075 is amended as follows:

**Reasonable Specifications for Recyclable Materials**

340-60-075 No person providing the opportunity to recycle shall be required to collect or receive source separated recyclable material which has not been correctly prepared to reasonable specifications which are related to marketing, transportation [or], storage or regulatory agency requirements and which have been publicized as part of an education and promotion program.

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OREGON ADMINISTRATIVE RULES  
DIVISION 60  
Recycling and Waste Reduction

OAR 340-60-015 is amended as follows:

**Policy Statement**

340-60-015 Whereas inadequate solid waste collection, storage, transportation, recycling and disposal practices waste energy and natural resources and cause nuisance conditions, potential hazards to public health and pollution of air, water and land environment, it is hereby declared to be the policy of the Commission:

(1) To require effective and efficient waste reduction and recycling service to both rural and urban areas.

(2) To promote and support comprehensive local or regional government solid waste and recyclable material management:

(a) Utilizing progressive waste reduction and recycling techniques;

(b) Emphasizing recovery and reuse of solid waste; and

(c) Providing the opportunity to recycle to every person in Oregon through best practicable methods.

(3) To establish a comprehensive statewide program of solid waste management which will, after consideration of technical and economic feasibility, establish the following priority in methods of managing solid waste:

(a) First, to reduce the amount of solid waste generated;

(b) Second, to reuse material for the purpose for which it was originally intended;

(c) Third, to recycle material which cannot be reused;

(d) Fourth, to recover energy from solid waste that cannot be reused or recycled so long as the energy recovery facility preserves the quality of air, water and land resources; and

(e) To dispose of solid waste that cannot be reused, recycled, or from which energy cannot be recovered by landfilling or other methods approved by the Department.

(4) To retain primary responsibility for management of adequate solid waste programs with local government units.

(5) To encourage maximum participation of all affected persons and generators in the planning and development of required recycling programs.

(6) To place primary emphasis on the provision of the opportunity to recycle to residential generators of source separated recyclable materials.

(7) To encourage local government to develop programs to provide the opportunity to recycle which cause only minimum dislocation of:

(a) Recycling efforts, especially the activities of charitable, fraternal, and civic groups; and

(b) Existing recycling collection from commercial and industrial sources.

(8) To encourage local governments to develop programs to provide the opportunity to recycle source separated recyclable material in a manner which results in the highest level of public participation and the greatest level of removal of recyclable material from the solid waste stream. Such a program should provide a frequent, convenient and easily publicized and understood system for the collection of recyclable material from every generator in the jurisdiction.

(9) To encourage the utilization of products made from recyclable material including processed or composted yard debris products.

(10) To encourage the coordination of recovery of source separated recyclable materials with the demand for those materials and the demand for the products made from recyclable materials.

OAR 340-60-030 is amended as follows:

**Principal Recyclable Material**

340-60-030 (1) The following are identified as the principal recyclable materials in the wastesheds as described in Sections (4) through (12) of this rule:

- (a) Newspaper;
- (b) Ferrous scrap metal;
- (c) Non-ferrous scrap metal;
- (d) Used motor oil;
- (e) Corrugated cardboard and kraft paper;
- (f) Aluminum;
- (g) Container glass;
- (h) Hi-grade office paper;
- (i) Tin cans;

(j) Yard debris[, effective upon adoption by the Commission of additional rules which clarify the range of acceptable alternative methods for providing the opportunity to recycle source separated yard debris].

(2) In addition to the principal recyclable materials listed in section (1) of this rule, other materials may be recyclable material at specific locations where the opportunity to recycle is required.

(3) The statutory definition of "recyclable material" (ORS 459.005(15)) determines whether a material is a recyclable material at a specific location where the opportunity to recycle is required.

(4) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(a) through (j) of this rule:

- (a) Clackamas wasteshed;
- (b) Multnomah wasteshed;
- (c) Portland wasteshed;
- (d) Washington wasteshed;
- (e) West Linn wasteshed.

(5) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(a) through (i) of this rule:

- (a) Benton and Linn wasteshed;
- (b) Clatsop wasteshed;
- (c) Hood River wasteshed;
- (d) Lane wasteshed;
- (e) Lincoln wasteshed;
- (f) Marion wasteshed;
- (g) Polk wasteshed;
- (h) Umatilla wasteshed;
- (i) Union wasteshed;
- (j) Wasco wasteshed;
- (k) Yamhill wasteshed.

(6) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(a) through (g) of this rule:

- (a) Baker wasteshed;
- (b) Crook wasteshed;
- (c) Jefferson wasteshed;
- (d) Klamath wasteshed;
- (e) Tillamook wasteshed.

(7) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(a) through (h) of this rule:

- (a) Coos wasteshed;
- (b) Deschutes wasteshed;
- (c) Douglas wasteshed;
- (d) Jackson wasteshed;
- (e) Josephine wasteshed.

(8) In the following wasteshed, the principal recyclable materials are those listed in subsections 1(a) through (f) of this rule:  
Malheur wasteshed.

(9) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(a) through (g) and (i) of this rule:

- (a) Columbia wasteshed;
- (b) Milton-Freewater wasteshed.

(10) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(a) through (e) of this rule:

- (a) Curry wasteshed;
- (b) Grant wasteshed;
- (c) Harney wasteshed;
- (d) Lake wasteshed.

(11) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(a) through (d) of this rule:

- (a) Morrow wasteshed;
- (b) Sherman wasteshed;
- (c) Wallowa wasteshed.

(12) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(b) through (d) of this rule:

- (a) Gilliam wasteshed;
- (b) Wheeler wasteshed.

(13) (a) The opportunity to recycle shall be provided for each of the principal recyclable materials listed in sections (4) through (12) of this rule and for other materials which meet the statutory definition of recyclable material at specific locations where the opportunity to recycle is required.

(b) The opportunity to recycle is not required for any material which a recycling report, approved by the Department, demonstrates does not meet the definition of recyclable material for the specific location where the opportunity to recycle is required.

(14) Between the time of the identification of the principal recyclable materials in these rules and the submittal of the recycling reports, the Department will work with affected persons in every wasteshed to assist in identifying materials contained on the principal recyclable material list which do not meet the statutory definition of recyclable material at some locations in the wasteshed where the opportunity to recycle is required.

(15) Any affected person may request the Commission modify the list of principal recyclable material identified by the Commission or may request a variance under ORS 459.185.

(16) The Department will at least annually review the principal recyclable material lists and will submit any proposed changes to the Commission.

OAR 340-60-035 is amended as follows:

**Acceptable, Alternative Methods for Providing the Opportunity to Recycle**

340-60-035 (1) Any affected person in a wasteshed may propose to the Department an alternative method for providing the opportunity to recycle. Each submittal shall include a description of the proposed alternative method and a discussion of the reason for using this method rather than the general method set forth in OAR 340-60-020(1)(a).

(2) The Department will review these proposals as they are received. Each proposed alternative method will be approved, approved with conditions, or rejected based on consideration of the following criteria:

(a) The alternative will increase recycling opportunities at least to the level anticipated from the general method set forth in OAR 340-60-020 for providing the opportunity to recycle;

(b) The conditions and factors which make the alternative method necessary;

(c) The alternative method is convenient to the people using or receiving the service;

(d) The alternative method is as effective in recovering recyclable materials from solid waste as the general method set forth in OAR 340-60-020 for providing the opportunity to recycle.

(3) The affected persons in a wasteshed may propose as provided in section (1) of this rule an alternative method to providing on-route collection as part of the opportunity to recycle for low density population area within the urban growth boundaries of a city with a population over

4,000 or, where applicable, the urban growth boundaries established by a metropolitan district.

(4) In addition to any other standards or conditions, an alternative method for providing the opportunity to recycle yard debris shall meet the following minimum standards:

(a) The alternative method is available to substantially all yard debris generators in the local jurisdiction.

(b) The alternative method results in the recycling of yard debris from the solid waste stream.

(c) There is a promotion campaign which is designed to inform all potential users about the availability and use of the method.

(d) The jurisdictions covered by the alternative method are included in a yard debris recycling plan approved by the Department which includes the alternative method, and

(e) Implementation of the alternative method is designed to meet the performance requirements of OAR 340-60-125(5).

(5) A yard debris recycling program developed by the Metropolitan Service District and implemented by the Metropolitan Service District or another affected person will be considered to be an acceptable alternative method of providing the opportunity to recycle source separated yard debris if the program meets the following criteria:

(a) The program results in the recovery and utilization of yard debris.

(b) The program is approved by the Department, and

(c) The program includes commitments from the local governments covered by the program to implement the program or a demonstration of the Metropolitan Service District's authority to implement the program.

(d) The program is consistent with a Department approved yard debris recycling plan which includes the following information for each local government jurisdiction covered by the plan:

(A) The estimated amount of yard debris available.

(B) The proposed collection method for yard debris.

(C) The number of potential participants in the program.

(D) The projected participation level.

(E) The expected amount of material to be recovered.

(F) The process by which the yard debris will be recycled or the names of the facilities to which the yard debris will be sent for recycling.

(G) The projected capability of the facility which will be accepting yard debris generated in the jurisdiction to accept and utilize that yard debris.

(H) The projected growth of the program over the first four years of operation.

(I) Intergovernmental agreements between the Metropolitan Service District and each local government covered under the plan which:

(i) Contains a commitment from each party to implement the programs called for in the plan.

(ii) Identifies the roles of the affected person in the local jurisdictions and:

(iii) Identifies the amount and source of funds necessary to implement the plan.

(e) the plan and program include a program evaluation element which identifies the goals, performance measures and resources allocation necessary to implement the yard debris recycling program outlined in the plan.

(f) All intergovernmental agreements developed to implement the requirement of these rules shall be approved by the Department.

(g) Any yard debris recycling plan developed by the Metropolitan Service District shall be consistent with and incorporated into the District's waste reduction plan and the District's solid waste management plan.

(h) Any changes in the Metropolitan Service District yard debris recycling plan, waste reduction plan, or solid waste management plan affecting yard debris recycling shall be approved by the Department prior to being implemented.

(i) The Metropolitan Service District shall monitor the implementation of the yard debris recycling programs and shall report local government and other affected person compliance or non compliance in a report to the Department at least annually.

(6) The provisions of OAR 340-60-115, 120, and 125 are not effective if: (a) The Metropolitan Service District develops a yard debris recycling program as described in Section (5) of this rule, and

(b) Either the Metropolitan Service District or the other affected persons in the areas covered implements the program.

(7) If a local government or the Metropolitan Service District does not submit an acceptable yard debris recycling plan or does not implement a yard debris recycling program they shall be considered to be not providing the opportunity to recycle yard debris and the Commission may order the Metropolitan Service District, the local governments or any affected person in the affected wastesheds to provide the level of recycling service, including education and promotion, which in the Commission's opinion is necessary to meet the standards set in these rules.

OAR 340-60-075 is amended as follows:

#### **Reasonable Specifications for Recyclable Materials**

340-60-075 No person providing the opportunity to recycle shall be required to collect or receive source separated recyclable material which has not been correctly prepared to reasonable specifications which are related to marketing, transportation [or], storage or regulatory agency requirements and which have been publicized as part of an education and promotion program.

#### **Local Government Responsibility**

340-60-115 Each local government unit in a wasteshed where yard debris has been identified as a principal recyclable material shall, either individually or jointly through intergovernmental agreement, provide for the following:

(1) An approved yard debris recycling plan as called for in OAR 340-60-120.

(2) Yard debris recycling service using one of the methods listed in OAR 340-60-125 (1) through (3) and

(3) An education and promotion program which meets the requirements of OAR 340-60-040.

### **Yard Debris Recycling Plans**

340-60-120 (1) Each local government unit in the wastesheds where yard debris has been identified as a principal recyclable material shall, individually, jointly through intergovernmental agreement or through intergovernmental agreement as provided in Section (2) of this rule, submit to the Department, as part of the wasteshed recycling report, a yard debris recycling plan which describes how the opportunity to recycle yard debris will be provided to the residents in their jurisdiction.

2)(a) A yard debris recycling plan developed by the Metropolitan Service District shall include the following:

A. All of the information called for in section (4) of this rule, allocated to each jurisdiction covered under the plan;

B. A time line and implementation goals for each jurisdiction covered under the plan;

C. An implementation program for each jurisdiction which recommends the roles for the affected persons;

D. Intergovernmental agreements between Metro and each local government covered under the plan which:

i. Contains a commitment from each party to implement the programs called for in the plan,

ii. Identifies the roles of the affected person in the local jurisdictions and;

iii. Identifies the amount and source of funds necessary to implement the plan.

(E) A program evaluation element which identifies the goals, performance measures and resources allocation necessary to implement the yard debris recycling program outlined in the plan.

(b) All intergovernmental agreements developed to implement the requirement of these rules shall be approved by the Department.

(c) Any yard debris recycling plan developed by Metro shall be consistent with and incorporated into the Metro waste reduction plan and the Metro solid waste management plan.

(d) Any changes in the Metro yard debris recycling plan, waste reduction plan, or solid waste management plan affecting yard debris recycling shall be approved by the Department prior to being implemented.

(e) Metro shall monitor the implementation of the yard debris recycling programs and shall report local government and other affected person compliance or non compliance in a report to the Department at least annually.

(3) As used in this rule and in OAR 340-60-125 the term "processors' capability to utilize source separated yard debris" means, the ability of an individual processor or group of processors of source separated yard debris

to accept, store and process source separated yard debris into a product and to sell or distribute that product within one year or on a schedule approved or set by the Department.

(4) A yard debris recycling plan shall include the following information:

- (a) The estimated amount of yard debris available.
- (b) The proposed collection method for yard debris.
- (c) The number of potential participants in the program.
- (d) The projected participation level.
- (e) The expected amount of material to be recovered.
- (f) The process by which the yard debris will be recycled or the names of the facilities to which the yard debris will be sent for recycling.
- (g) The projected capability of the facility which will be accepting yard debris generated in the jurisdiction to accept and utilize that yard debris.
- (h) The projected growth of the program over the first four years of operation.
- (i) A description of any alternative method for providing the opportunity to recycle yard debris which is going to be used.
- (j) A timeline which displays
  - (A) the projected growth of the program.
  - (B) use of collection and recycling methods, and
  - (C) projected growth of the facilities to which the yard debris will be sent.

(5) The Department shall review and approve or disapprove the yard debris recycling plans based on whether the information in the plan is accurate and the program described in the plan is designed to meet the performance standards in OAR 340-60-125(3) of this rule.

(6) Except as provided in section (7) of this rule, yard debris recycling plans developed for local jurisdictions in the Clackamas, Multnomah, Portland, Washington, or West Linn Wastesheds shall use OAR 340-60-125(5)(a) through (d) as goals:

(7) Yard debris recycling plans shall incorporate the minimum standards set out in section (6) of this rule except when it can be demonstrated to the Department's satisfaction, that a program which meets these minimum standards will produce more source separated yard debris than the yard debris or processor or processors serving the local or regional government jurisdiction are capable of utilizing.

#### Yard Debris Recycling Program Implementation

340-60-125 Each local government unit in a wasteshed where yard debris has been identified as a principal recyclable material shall, either individually or jointly through intergovernmental agreement, provide a yard debris recycling program by one of the following methods:

(1) Provide the opportunity to recycle as identified in OAR 340-60-020 or an equivalent level of service.

(2) Provide the opportunity to recycle yard debris by using an acceptable alternative method as identified in OAR 340-60-035. Acceptable



alternative methods for collection or recycling of source separated yard debris include but are not limited to the following:

(a) Monthly or more often on-route collection of yard debris during the months of March, April, May and September, October, November with a drop-off depot for noncollection service customers available at least monthly, or

(b) A biweekly or more often yard debris collection depot within one mile of the yard debris generators, or such that there is at least one conveniently located depot for every 25,000 population.

(c) A monthly or more often yard debris collection depot, supplemented by a weekly or more often yard debris depot during the months of March, April, May and September, October, November, both within one mile of the yard debris generators, or such that there is at least one conveniently located depot for every 25,000 population.

(3) Provide a yard debris recycling program by using an acceptable alternative method or methods that are part of a Department approved yard debris recycling plan, as described in OAR 340-60-120.

(4) The Department shall include, but is not limited to, the following criteria in an evaluation of an alternative method for providing the opportunity to recycle yard debris submitted under section (2) or (3) of this rule.

(a) Projected participation rate.

(b) Projected recovery rate.

(c) Distance the residents of the jurisdiction have to travel to use the alternative method.

(d) Potential for expansion.

(e) The type and level of promotion and education associated with the alternative method.

(5) Unless otherwise provided in an approved yard debris recycling plan, yard debris recycling programs developed for local jurisdictions in the Clackamas, Multnomah, Portland, Washington, and West Linn Wastesheds shall be implemented to meet the following minimum performance standards for recovery of yard debris generated in that jurisdiction:

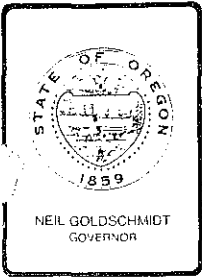
(a) By July 1, 1989 recovery of at least 25% of the yard debris generated in the area.

(b) By July 1, 1990 recovery of at least 40% of the yard debris generated in the area.

(c) By July 1, 1991 recovery of at least 60% of the yard debris generated in the area.

(d) By July 1, 1992 recovery of at least 80% of the yard debris generated in the area.

YB7781C



## Environmental Quality Commission

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

### MEMORANDUM

**To:** Environmental Quality Commission  
**From:** Director  
**Subject:** Agenda Item H, April 29, 1988, EQC Meeting

Request for authorization to conduct a public hearing on proposed amendments and new rules relating to the opportunity to recycle yard debris. OAR 340-60-015 through 140.

### BACKGROUND

On December 11, 1987 the Environmental Quality Commission (EQC) adopted rules which identified yard debris as a principal recyclable material in the five Portland area wastesheds. At that meeting the EQC directed the Department to draft additional rules which clarify the range of acceptable alternative methods for providing the opportunity to recycle yard debris.

The Commission has been dealing with the issue of yard debris recycling since they adopted rules relating to the implementation of the Oregon Recycling Opportunity Act in December 1984. Over that time period the Department has met with a series of yard debris recycling task forces, held a number of informational meetings and public hearings and periodically returned to the Commission with issues related to yard debris recycling.

The major questions which have been raised before the Commission and the Department have been as follows:

- 1) Are the yard debris processors capable of handling the additional volume which will be generated from a collection system? Is there a market for more processed yard debris products?
- 2) How can yard debris collection and processing capacity be balanced?
- 3) Who will plan, provide and pay for yard debris collection.
- 4) What level of yard debris recycling/collection service will be required?

5) What are acceptable alternative methods for providing the opportunity to recycle? What standard will be used for the acceptance or non acceptance of a proposed alternative method?

Local governments, solid waste and recyclable material collectors and yard debris processors in each of the five wastesheds of focus must determine where yard debris can be successfully collected and recycled and where it fails to meet the definition of a "recyclable material".

Program costs are a concern for both the service providers and the public. If programs are established too quickly they may overload the existing processing capacity and create economic and environmental problems. If inefficient programs are established they may be so costly that there will be a public backlash with a resulting low participation. On the other hand, local government and the collection industry are very hesitant to initiate a costly new collection program without assurance of program success and some form of cost recovery.

The Department has continued to work with an advisory group of affected persons during this rule drafting process. This group has reviewed and commented on the proposed rules but has not reached a consensus in support of the proposed rules. There remains a strong difference of opinion as to the appropriate level of yard debris recycling and the appropriate role for the Department and Commission in directing the development of yard debris collection and recycling programs.

The proposed rules address eight major issues elements: 1) standards for a range of acceptable alternative methods; 2) responsibility for development of the yard debris recycling plan; 3) responsibility for providing the opportunity to recycle yard debris; 4) performance standards for yard debris recycling programs; 5) an annual report on processor demand; 6) linkage between the processor demand and collection system performance standards; 7) requirements related to yard debris recycling at depots and disposal sites; and 8) clarification of the ability of service providers to charge for yard debris collection service.

The proposed rules both identify standards for acceptable alternative methods and list specific methods which might be proposed. There was discussion of this issue with the advisory group and some proposed alternative methods were dropped from the rules. A strong feeling among some of the advisors was that a greater range of acceptable alternative methods should be provided. There was also some concern that the standards were too restrictive on service providers.

The responsibility for planning and development of yard debris recycling program falls on local government. Some of the advisors felt either the planning or both the planning and development functions were more appropriately done at the regional level. The proposed rules were changed to provide the option for local governments to use regional planning and

implementation agencies if they so desire. There was also a suggestion that the Department or Commission should use its authority over Metro's regional waste reduction plan to facilitate the development of a regional yard debris recycling program.

Performance standards for yard debris programs have been incorporated into the proposed rules. These performance standards are linked to the ability of the yard debris processors to utilize increasing amount of material. There is also a linkage between the processor demand and the planning process. The rules call for the Department to report on processor demand so that this information can be incorporated into the planning process. The performance standards are designed so that local government will not be required to provide yard debris collection programs which are beyond the processor's marketing capacity. There was strong advisor support for the concept of linking collection requirements to processor market capacity. However, some advisors felt this relationship was already implicit in the definition of "recyclable material" and that it was unnecessary to delineate it further in performance standards.

The rules also provide guidance for the operation of collection depots at disposal sites or other appropriate locations and restrict disposal of source separated yard debris at landfills.

The question of how new yard debris collection programs will be financed is another major issue. Early drafts of the proposed rules contained specific financing mechanisms. However, the advisory group felt that local and regional governments already had adequate authority to finance the cost of yard debris collection and specific financing proposals were removed at their suggestion.

#### ALTERNATIVES AND EVALUATION

The Commission has three major alternatives in adopting rules relating to the collection and recycling of yard debris. First, the Commission could adopt the minimum required guidance and leave the bulk of the details on how the opportunity to recycle will be provided to the affected persons in each watershed. Second, the Commission could identify the major issues and provide rules which structure the decision making process for local governments and the affected persons. Finally, the Commission could adopt rules which deal with each specific local issue.

The Oregon revised statutes and administrative rules related to the opportunity to recycle provide the basic direction for affected persons to determine if and how to provide the opportunity to recycle yard debris. These basic standards leave a great deal of room for interpretation. Most important, however, is that they do not address the issues of responsibility or level of performance for each aspect of providing the opportunity to recycle. These issues are only addressed by the Commission after it has

made a finding that the opportunity to recycle is not being provided to a portion of a wasteshed.

If the Commission adopts rules which provide guidance as to responsibility for and adequacy of program implementation, this guidance will be available to the affected persons prior to program planning and implementation. Local governments and service providers will be aware of their roles and be able to act accordingly. The proposed rules provide this type of guidance. These rules identify the specific role of local government, provide criteria for determining when an alternative method is acceptable, and set minimum performance standards of yard debris recycling programs. They also address some specific issues which have been raised by affected persons during past yard debris recycling discussions.

Finally, the Commission could adopt rules which attempt to resolve each local issue relating to yard debris. This approach would make local government's planning process much easier. However, there is so much diversity among the local yard debris recycling situations it would be very difficult to produce specific rules which address all of the situations satisfactorily. Very specific rules may not allow the affected person to design and implement the most appropriate yard debris recycling program for their jurisdiction.

#### SUMMATION

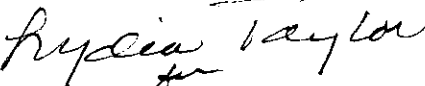
1. The Commission has identified yard debris as a principal recyclable material in the five Portland area wastesheds.
2. The Commission has directed the Department to draft additional rules which clarify the range of acceptable alternative methods for providing the opportunity to recycle source separated yard debris.
3. The Department has drafted proposed rules which clarify the range of alternative methods.
4. These proposed rules also assign responsibility for planning and implementation of yard debris recycling programs and provide a process for linking the rate of yard debris collection to the demand for material from yard debris processors.
5. The Department has conferred with key affected person during the development of the proposed rules. Although many suggestions were incorporated into the proposed rules there was no consensus on several of the major issues addressed in the rule.
6. The proposed rules provide guidance on the major issues relating to yard debris recycling. These rules also set minimum standards for yard debris recycling programs and for alternative methods for providing the

Agenda Item H  
April 29, 1988, EQC Meeting  
Page 5

opportunity to recycle yard debris. However, these rules still leave room for local governments and other affected persons to decide what specific direction yard debris recycling will take in their jurisdiction.

DIRECTOR'S RECOMMENDATION

Based upon the summation, it is recommended that the Commission authorize a public hearing on the proposed rule changes related to yard debris recycling programs.

  
Fred Hansen

Attachments

- I. Proposed Rule Changes OAR 340-60-015 to 140
- II. Rule Making Statements 1987 EQC Meeting
- III. Public Notice

William R. Bree:WRB  
229-6975  
March 30, 1988  
YF3027.1

OREGON ADMINISTRATIVE RULES  
DIVISION 60  
Recycling and Waste Reduction

OAR 340-60-015 is amended as follows:

**Policy Statement**

340-60-015 Whereas inadequate solid waste collection, storage, transportation, recycling and disposal practices waste energy and natural resources and cause nuisance conditions, potential hazards to public health and pollution of air, water and land environment, it is hereby declared to be the policy of the Commission:

(1) To require effective and efficient waste reduction and recycling service to both rural and urban areas.

(2) To promote and support comprehensive local or regional government solid waste and recyclable material management:

(a) Utilizing progressive waste reduction and recycling techniques;

(b) Emphasizing recovery and reuse of solid waste; and

(c) Providing the opportunity to recycle to every person in Oregon through best practicable methods.

(3) To establish a comprehensive statewide program of solid waste management which will, after consideration of technical and economic feasibility, establish the following priority in methods of managing solid waste:

(a) First, to reduce the amount of solid waste generated;

(b) Second, to reuse material for the purpose for which it was originally intended;

(c) Third, to recycle material which cannot be reused;

(d) Fourth, to recover energy from solid waste that cannot be reused or recycled so long as the energy recovery facility preserves the quality of air, water and land resources; and

(e) To dispose of solid waste that cannot be reused, recycled, or from which energy cannot be recovered by landfilling or other methods approved by the Department.

(4) To retain primary responsibility for management of adequate solid waste programs with local government units.

(5) To encourage maximum participation of all affected persons and generators in the planning and development of required recycling programs.

(6) To place primary emphasis on the provision of the opportunity to recycle to residential generators of source separated recyclable materials.

(7) To encourage local government to develop programs to provide the opportunity to recycle which cause only minimum dislocation of:

(a) Recycling efforts, especially the activities of charitable, fraternal, and civic groups; and

(b) Existing recycling collection from commercial and industrial sources.

(8) To encourage local governments to develop programs to provide the opportunity to recycle source separated recyclable material in a manner which results in the highest level of public participation and the greatest level of removal of recyclable material from the solid waste stream. Such a program should provide frequent, convenient and easily publicized and understood system for the collection of recyclable material from every resident in the jurisdiction.

(9) Encourage the utilization of products made from recyclable material including processed or composted yard debris products.

(10) Coordinate the recovery of source separated recyclable materials with the demand for those materials from the facilities which recycled them and the demand for the products made from recyclable materials.

OAR 340-60-030 is amended as follows:

**Principal Recyclable Material**

340-60-030 (1) The following are identified as the principal recyclable materials in the wastesheds as described in Sections (4) through (12) of this rule:

- (a) Newspaper;
- (b) Ferrous scrap metal;
- (c) Non-ferrous scrap metal;
- (d) Used motor oil;
- (e) Corrugated cardboard and kraft paper;
- (f) Aluminum;
- (g) Container glass;
- (h) Hi-grade office paper;
- (i) Tin cans;

(j) Yard debris[, effective upon adoption by the Commission of additional rules which clarify the range of acceptable alternative methods for providing the opportunity to recycle source separated yard debris].

(2) In addition to the principal recyclable materials listed in section (1) of this rule, other materials may be recyclable material at specific locations where the opportunity to recycle is required.

(3) The statutory definition of "recyclable material" (ORS 459.005(15)) determines whether a material is a recyclable material at a specific location where the opportunity to recycle is required.

(4) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(a) through (j) of this rule:

- (a) Clackamas wasteshed;
- (b) Multnomah wasteshed;
- (c) Portland wasteshed;
- (d) Washington wasteshed;
- (e) West Linn wasteshed.

(5) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(a) through (i) of this rule:

- (a) Benton and Linn wasteshed;
- (b) Clatsop wasteshed;
- (c) Hood River wasteshed;



- (d) Lane wasteshed;
- (e) Lincoln wasteshed;
- (f) Marion wasteshed;
- (g) Polk wasteshed;
- (h) Umatilla wasteshed;
- (i) Union wasteshed;
- (j) Wasco wasteshed;
- (k) Yamhill wasteshed.

(6) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(a) through (g) of this rule:

- (a) Baker wasteshed;
- (b) Crook wasteshed;
- (c) Jefferson wasteshed;
- (d) Klamath wasteshed;
- (e) Tillamook wasteshed.

(7) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(a) through (h) of this rule:

- (a) Coos wasteshed;
- (b) Deschutes wasteshed;
- (c) Douglas wasteshed;
- (d) Jackson wasteshed;
- (e) Josephine wasteshed.

(8) In the following wasteshed, the principal recyclable materials are those listed in subsections (1)(a) through (f) of this rule:  
Malheur wasteshed.

(9) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(a) through (g) and (i) of this rule:

- (a) Columbia wasteshed;
- (b) Milton-Freewater wasteshed.

(10) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(a) through (e) of this rule:

- (a) Curry wasteshed;
- (b) Grant wasteshed;
- (c) Harney wasteshed;
- (d) Lake wasteshed.

(11) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(a) through (d) of this rule:

- (a) Morrow wasteshed;
- (b) Sherman wasteshed;
- (c) Wallowa wasteshed.

(12) In the following wastesheds, the principal recyclable materials are those listed in subsections (1)(b) through (d) of this rule:

- (a) Gilliam wasteshed;
- (b) Wheeler wasteshed.

(13) (a) The opportunity to recycle shall be provided for each of the principal recyclable materials listed in sections (4) through (12) of this rule and for other materials which meet the statutory definition of recyclable material at specific locations where the opportunity to recycle is required.

(b) The opportunity to recycle is not required for any material which a recycling report, approved by the Department, demonstrates does not meet the definition of recyclable material for the specific location where the opportunity to recycle is required.

(14) Between the time of the identification of the principal recyclable materials in these rules and the submittal of the recycling reports, the Department will work with affected persons in every wasteshed to assist in identifying materials contained on the principal recyclable material list which do not meet the statutory definition of recyclable material at some locations in the wasteshed where the opportunity to recycle is required.

(15) Any affected person may request the Commission modify the list of principal recyclable material identified by the Commission or may request a variance under ORS 459.185.

(16) The Department will at least annually review the principal recyclable material lists and will submit any proposed changes to the Commission.

OAR 340-60-035 is amended as follows:

**Acceptable, Alternative Methods for Providing the Opportunity to Recycle**

340-60-035 (1) Any affected person in a wasteshed may propose to the Department an alternative method for providing the opportunity to recycle. Each submittal shall include a description of the proposed alternative method and a discussion of the reason for using this method rather than the general method set forth in OAR 340-60-020(1)(a).

(2) The Department will review these proposals as they are received. Each proposed alternative method will be approved, approved with conditions, or rejected based on consideration of the following criteria:

(a) The alternative will increase recycling opportunities at least to the level anticipated from the general method set forth in; OAR 340-60-020 for providing the opportunity to recycle;

(b) The conditions and factors which make the alternative method necessary;

(c) The alternative method is convenient to the people using or receiving the service;

(d) The alternative method is as effective in recovering recyclable materials from solid waste as the general method set forth in OAR 340-60-020 for providing the opportunity to recycle.

(3) The affected persons in a wasteshed may propose as provided in section (1) of this rule an alternative method to providing on-route collection as part of the opportunity to recycle for low density population area within the urban growth boundaries of a city with a population over 4,000 or, where applicable, the urban growth boundaries established by a metropolitan district.

(4) The Department may not approve or conditionally approve an alternative method for providing the opportunity to recycle yard debris if the program does not meet the following minimum standards:

(a) The alternative method is available to all residents in the local jurisdiction.

(b) The alternative method results in the recycling of yard debris.

(c) There is a promotion campaign which is designed to inform all potential users about the availability and use of the method.

(d) The jurisdictions covered by the alternative method are included in a yard debris recycling plan approved by the Department which includes the alternative method, and

(e) Implementation of the alternative method will meet the performance requirements of section OAR 340-60-130.

(5) The Department shall include, but is not limited to, the following criteria in an evaluation of an alternative method for providing the opportunity to recycle yard debris.

(a) Projected participation rate.

(b) Projected recovery rate.

(c) Distance the residents of the jurisdiction have to travel to use the alternative method.

(d) Potential for expansion.

(e) The type and level of promotion and education associated with the alternative method.

(6) The Department may provide conditional approval of an alternative method for providing the opportunity to recycle yard debris which is not as effective as monthly on-route collection if:

(a) One of the conditions of approval is a phased improvement in the alternative method to reach or exceed the level of effectiveness of on-route collection or.

(b) In a jurisdiction which is served only by a processor or processors who have a limited demand for yard debris one of the conditions of the approval is a phased improvement in the alternative method to match the growth in processor demand for yard debris.

(7) The following methods for providing the opportunity to recycle yard debris shall be considered to be acceptable alternatives to monthly on-route collection of yard debris provided they can meet the performance standards set out in OAR 340-60-130:

(a) Seasonal weekly or seasonal monthly on-route collection of yard debris from all collection service customers or all residents:

(b) Seasonal weekly or seasonal monthly on-call collection of yard debris from all residents:

(c) Weekly, bimonthly, monthly, monthly with weekly service during high generation seasons, seasonal weekly, seasonal monthly or continuously available collection depot for yard debris from all residents:

(d) Annual or biannual on-route or on-call collection of yard debris from all residents.

OAR 340-60-075 is amended as follows:

**Reasonable Specifications for Recyclable Materials**

340-60-075 No person providing the opportunity to recycle shall be required to collect or receive source separated recyclable material which

has not been correctly prepared to reasonable specifications which are related to marketing, transportation [or], storage or regulatory agency requirements and which have been publicized as part of an education and promotion program.

OAR 340-60-080 is amended as follows:

**Prohibition**

340-60-080 In addition to the provisions set forth in ORS 459.195, no person shall:

(1) Dispose of source separated recyclable material which has been collected or received from the generator [by any method other than reuse or recycling.] by landfilling.

(2) Contaminate source separated recyclable material which has been set out for collection or delivered to a collection depot or to a recycling facility with solid waste or other material in such a way as to render that material not recyclable.

**Local Government Responsibility**

340-60-115 Each local government unit in a wasteshed where yard debris has been identified as a principal recyclable material shall, either individually or jointly through intergovernmental agreement, provide for the following:

(1) The yard debris recycling plan called for in OAR 340-60-125.

(2) Either an on-route program for yard debris collection from each collection service customer in the jurisdiction, or an acceptable alternative method which meets the criteria set out in OAR 340-60-035 and OAR 340-60-130, and

(3) An education and promotion program which meets the requirements of OAR 340-60-040.

**Yard Debris Processors' Demand Report**

340-60-120 The Department will at least annually review and report the level of demand for yard debris at processing facilities including:

(1) Yard debris received;

(2) Sales and distribution of yard debris products;

(3) Projected sales and distribution for the next three years.

**Yard Debris Recycling Plans**

340-60-125 (1) Each local government unit in the wastesheds where yard debris has been identified as a principal recyclable material shall, individually or jointly through intergovernmental agreement, submit to the Department, as part of the wasteshed recycling report, a yard debris recycling plan which describes how the opportunity to recycle yard debris will be provided to the residents in their jurisdiction.

(2) The yard debris recycling plan shall include the following information:

- (a) The estimated amount of yard debris available.
- (b) The proposed collection method for yard debris.
- (c) The number of potential participants in the program.
- (d) The projected participation level.
- (e) The expected amount of material to be recovered.
- (f) The process by which the yard debris will be recycled or the location to which the yard debris will be sent for recycling.
- (g) The projected growth of the program over the first four years of operation, and
- (h) Any approved alternative method for providing the opportunity to recycle yard debris which is going to be used.

(3) The Department shall review and approve or disapprove the yard debris recycling plans based on whether the information in the plan is accurate and the program described in the plan is designed to meet the performance requirements in OAR 340-60-030.

#### Yard Debris Recycling Programs

OAR 340-60-130 Each local government unit in the wastesheds where yard debris has been identified as a principal recyclable material shall, either individually or jointly through intergovernmental agreement, provide the opportunity to recycle source separated yard debris.

(1) Programs for providing the opportunity to recycle yard debris shall be designed to recover yard debris at the level identified in an approved yard debris recycling plan.

(2) Within one year after the Department has reported a processors' demand of 25% and has approved the local government's yard debris recycling report, that local government shall provide a yard debris recycling program which results in recovery of at least 25% of the yard debris generated in the jurisdiction.

(3) Within one year after the Department has reported a processors' demand of 50% and has approved the local government's yard debris recycling report, that local government shall provide a yard debris recycling program which results in recovery of at least 50% of the yard debris generated in the jurisdiction.

(4) Within one year after the Department has reported a processors' demand of 75% and has approved the local government's yard debris recycling report, that local government shall provide a yard debris recycling program which is designed to recover 75% and results in recovery of at least 50% of the yard debris generated in the jurisdiction.

(5) Within one year after the Department has reported a processors' demand of 100% and has approved the local government's yard debris recycling report, that local government shall provide a yard debris recycling program which is designed to recover 100% and results in recovery of at least 50% of the yard debris generated in the jurisdiction.

(6) If a local government unit does not submit an acceptable yard debris recycling plan as called for in OAR 340-60-125, or if a yard debris

recycling program fails to meet the performance standards set out in this rule it shall be considered to be not providing the opportunity to recycle yard debris and the Department may order the local government to provide:

(a) Weekly on route collection of yard debris to all of the residents of that jurisdiction, and

(b) An education and promotion program which meets the requirements of OAR 340-60-040.

#### CHARGE FOR SERVICE

340-60-135 A local government unit, yard debris depot operator, or yard debris collector may charge the yard debris generators who use the collection system an amount up the actual cost of providing the service:

(1) The charge for operation of a separate program for the collection of yard debris shall not be considered an additional charge for service as is prohibited in ORS 459.190.

(2) The cost of providing the service may include associated costs such as the cost of administration, enforcement, nuisance control and reasonable profit to private operators.

#### YARD DEBRIS AT DISPOSAL SITES

340-60-140 (1) All disposal sites in a wasteshed in which yard debris has been identified as a principal recyclable material are prohibited from receiving source separate yard debris for disposal after the Department has made the capacity review and report called for in OAR 340-60-120.

(2) By January 1, 1989 each disposal site in the wastesheds where yard debris has been identified as a principal recyclable material shall provide at a separate location, a yard debris collection depot, where yard debris can be delivered. The operator of the disposal site shall be responsible to see that all of the yard debris delivered to the yard debris collection depot is recycled into a usable product on-site or is sent to a facility where it is recycled into a usable product.

(3) A disposal site operator may refer the public to a "more convenient location", as provided in ORS 459.165 (1)(a), for delivery of source separated yard debris if the location is more convenient to the majority of the public served by the disposal site.

(4) A disposal site may refuse to accept source separated yard debris for disposal if it has documented to the Department that source separated yard debris is not a recyclable material at:

(a) the on-site yard debris recycling depot or

(b) a "more convenient location" as provided in ORS 459.165 (1)(a).

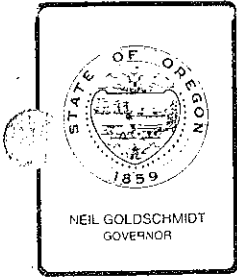
(5) The operator of a depot for the collection of source separated yard debris may not include the cost transfer to and tipping fees at a processing facility to calculated if yard debris is a recyclable material unless those costs are included in the fee charged to the public to deliver yard debris to the depot.

(6) Each disposal site where source separated yard debris is a recyclable material shall charge a surcharge for loads of material which are

Attachment I  
Agenda Item H  
4/29/88, EQC Meeting

substantially all yard debris but are contaminated with 10% or less by volume contamination and thus not suitable for recycling. The surcharge shall be the greater of \$1 per cubic yard or \$5 per ton. The revenue from such a surcharge shall be returned to the local government unit from which the material originated and shall be used for the yard debris collection promotion and education programs.

YF3030



## Environmental Quality Commission

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

### MEMORANDUM

**To:** Environmental Quality Commission  
**From:** Director  
**Subject:** Agenda Item D, June 10, 1988, EQC Meeting

Request for authorization to conduct a public hearing on proposed amendments and new rules relating to the opportunity to recycle yard debris. OAR 340-60-015 through 125.

### BACKGROUND

On December 11, 1987 the Environmental Quality Commission (EQC) adopted rules which identified yard debris as a principal recyclable material in the five Portland area wastesheds. At that meeting the EQC directed the Department to draft additional rules which clarify the range of acceptable alternative methods for providing the opportunity to recycle yard debris. On April 29, 1988 the Department returned to the Commission with proposed rules and a request for authorization to hold a public hearing. The Commission directed the Department to make further modifications to the proposed rules.

The Commission has been dealing with the issue of yard debris recycling since the ban on backyard burning in 1983 and the adoption of rules relating to the implementation of the Oregon Recycling Opportunity Act in December 1984. Over that time period the Department has met with a series of yard debris recycling task forces, held a number of informational meetings and public hearings and periodically returned to the Commission with issues related to yard debris recycling.

The major questions which have been raised before the Commission and the Department have been as follows:

- 1) Are the yard debris processors capable of handling the additional volume which will be generated from a collection system? Is there a market for more processed yard debris products?
- 2) How can yard debris collection and processing capacity be balanced?
- 3) Who will plan, provide and pay for yard debris collection.



4) What level of yard debris recycling/collection service will be required?

5) What are acceptable alternative methods for providing the opportunity to recycle? What standard will be used for the acceptance or non acceptance of a proposed alternative method?

Local governments, solid waste and recyclable material collectors and yard debris processors in each of the five wastesheds of focus must determine where yard debris can be successfully collected and recycled and where it fails to meet the definition of a "recyclable material".

Program costs are a concern for both the service providers and the public. If programs are established too quickly they may overload the existing processing capacity and create economic and environmental problems. If inefficient programs are established they may be so costly that there will be a public backlash with a resulting low participation. On the other hand, local government and the collection industry are very hesitant to initiate a costly new collection program without assurance of program success and some form of cost recovery.

The Department has continued to work with an advisory group of affected persons during this rule drafting process. This group has reviewed and commented on the proposed rules but has not reached a consensus in support of the proposed rules. There remains a strong difference of opinion as to the appropriate level of yard debris recycling and the appropriate role for the Department and Commission in directing the development of yard debris collection and recycling programs.

The proposed rules address five issues: (1) a range of acceptable alternative methods (OAR 340-60-125(2)); (2) responsibility for development of the yard debris recycling plan (OAR 340-60-120); (3) responsibility for providing the opportunity to recycle yard debris (OAR 340-60-125); (4) performance standards for yard debris recycling programs (OAR 340-60-120(4)); and (5) linkage between the processor demand and collection system performance standards (OAR 340-60-120(5)).

The responsibility for planning and development of yard debris recycling program is assigned to local government (OAR 340-60-115). Some of the advisors felt either the planning or both the planning and implementation functions were more appropriately done at the regional level. The proposed rules provide an option for local governments to use regional planning and implementation agencies if they so desire. There was also a suggestion that the Department or Commission should use its authority over Metro's regional waste reduction plan to facilitate the development of a regional yard debris recycling program. The rules do not address this issue.

Performance standards for yard debris programs have been incorporated into the proposed rules. The standards set minimum rates of recovery of yard debris from the solid waste stream. The recovery rates increase over a four

year period. The previously proposed rules called for the Department to report on processor demand so that this information could be incorporated into the planning process. The performance standards were designed so that local government would not be required to provide yard debris collection programs which were beyond the processors' marketing capacity. There was strong advisor support for the concept of linking collection requirements to processor market capacity. However, some advisors felt this relationship was already implicit in the definition of "recyclable material" and that it was unnecessary to delineate it further in performance standards. In the new proposed rule this linkage has been incorporated into the local government planning process (OAR 340-60-120(5)).

The previous rules discussed at the April EQC meeting provided guidance for the operation of collection depots at disposal sites or other appropriate locations and restrict disposal of source separated yard debris at landfills. This material has been removed from the proposed rules. If such regulation is necessary it can be accomplished through disposal site permit requirements.

The question of how new yard debris collection programs will be financed is another major issue. Early drafts of the proposed rules contained specific financing mechanisms. However, the advisory group felt that local and regional governments already had adequate authority to finance the cost of yard debris collection and specific financing proposals were removed at their suggestion.

#### ALTERNATIVES AND EVALUATION

The Commission has three major alternatives in considering the proposed rules. They can authorize the proposed rules, with no major changes, for public hearing. They can consider and make major changes in some or all of the approaches to the five significant issues covered in the proposed rules and send the rules with those changes directly to public hearing. Or, they could propose major changes to the proposed rules and direct the Department to draft those changes and make them available for advisory group review prior to returning to the Commission for hearings authorization. Discussion of these alternatives follows.

The proposed rules have already received substantial Commission and interest group consideration. The major policy issues related to yard debris recycling are presently incorporated into the proposed rules. If there are new major issues or directions which should be considered in these rules they will probably be raised at the public hearing. Any issues which are raised at the hearing will be reviewed and responded to by the Department and available for Commission consideration. All such issues will be forwarded to the Commission in the hearings officer's report and the Department's response to comments.

The Commission may wish to change the details or the specific approach to each of the five significant issues addressed in these rules. The

Commission may wish to change the methods of providing yard debris recycling which are categorized in OAR 340-60-125(2). The proposed rules place the responsibility for yard debris recycling planning with local government (OAR 340-60-115 and 120). This responsibility could be placed on regional government or some other affected person. The responsibility for yard debris recycling implementation is also placed with local government (OAR 340-60-125). This responsibility could be shifted to regional government or to private industry. The previous proposed rules placed responsibility for determining market capacity with the Department. These proposed rules place that role in the local planning process (OAR 340-60-125(2) and (5)). The Commission may wish to reassign this responsibility.

If there are extensive changes suggested to the proposed rules it might be most appropriate to send those changes back to the Department and advisory group for review and comments prior to making them available for a public hearing. While this procedure would further extend the rulemaking process it might eliminate problems with new policy directions which would not become apparent until after the public hearing. The delay would not be notable in relation to the total scope of the proposed program.

#### SUMMATION

1. The Commission has identified yard debris as a principal recyclable material in the five Portland area wastesheds.
2. The Commission has directed the Department to draft additional rules which clarify the range of acceptable alternative methods for providing the opportunity to recycle source separated yard debris.
3. The Department has drafted proposed rules which clarify the range of alternative methods.
4. These proposed rules also assign responsibility for planning and implementation of yard debris recycling programs and provide a process for linking the rate of yard debris collection to the demand for material from yard debris processors.
5. The Department has conferred with key affected person during the development of the proposed rules. Although many suggestions were incorporated into the proposed rules there was no consensus on several of the major issues addressed in the rule.
6. The proposed rules provide guidance on the major issues relating to yard debris recycling. These rules also set minimum standards for yard debris recycling programs and for alternative methods for providing the opportunity to recycle yard debris. However, these rules still leave room for local governments and other affected persons to decide what specific direction yard debris recycling will take in their jurisdiction.

Agenda Item D  
June 10, 1988, EQC Meeting  
Page 5

DIRECTOR'S RECOMMENDATION

Based upon the summation, it is recommended that the Commission authorize a public hearing on the proposed rule changes related to yard debris recycling programs as proposed by the Department.



Fred Hansen

Attachments

- I. Proposed Rule Changes OAR 340-60-015 to 125
- II. Rule Making Statements
- III. Public Notice

William R. Bree:m  
229-6975  
May 12, 1988  
YF3027.1

OREGON ADMINISTRATIVE RULES  
DIVISION 60  
Recycling and Waste Reduction

OAR 340-60-015 is amended as follows:

**Policy Statement**

340-60-015. Whereas inadequate solid waste collection, storage, transportation, recycling and disposal practices waste energy and natural resources and cause nuisance conditions, potential hazards to public health and pollution of air, water and land environment, it is hereby declared to be the policy of the Commission:

(1) To require effective and efficient waste reduction and recycling service to both rural and urban areas.

(2) To promote and support comprehensive local or regional government solid waste and recyclable material management:

(a) Utilizing progressive waste reduction and recycling techniques;

(b) Emphasizing recovery and reuse of solid waste; and

(c) Providing the opportunity to recycle to every person in Oregon through best practicable methods.

(3) To establish a comprehensive statewide program of solid waste management which will, after consideration of technical and economic feasibility, establish the following priority in methods of managing solid waste:

(a) First, to reduce the amount of solid waste generated;

(b) Second, to reuse material for the purpose for which it was originally intended;

(c) Third, to recycle material which cannot be reused;

(d) Fourth, to recover energy from solid waste that cannot be reused or recycled so long as the energy recovery facility preserves the quality of air, water and land resources; and

(e) To dispose of solid waste that cannot be reused, recycled, or from which energy cannot be recovered by landfilling or other methods approved by the Department.

(4) To retain primary responsibility for management of adequate solid waste programs with local government units.

(5) To encourage maximum participation of all affected persons and generators in the planning and development of required recycling programs.

(6) To place primary emphasis on the provision of the opportunity to recycle to residential generators of source separated recyclable materials.

(7) To encourage local government to develop programs to provide the opportunity to recycle which cause only minimum dislocation of:

(a) Recycling efforts, especially the activities of charitable, fraternal, and civic groups; and

(b) Existing recycling collection from commercial and industrial sources.

(8) To encourage local governments to develop programs to provide the opportunity to recycle source separated recyclable material in a manner which results in the highest level of public participation and the greatest level of removal of recyclable material from the solid waste stream. Such a program should provide frequent, convenient and easily publicized and understood system for the collection of recyclable material from every generator in the jurisdiction.

(9) To encourage the utilization of products made from recyclable material including processed or composted yard debris products.

(10) To coordinate the recovery of source separated recyclable materials with the demand for those materials and the demand for the products made from recyclable materials.

OAR 340-60-030 is amended as follows:

#### Principal Recyclable Material

340-60-030 (1) The following are identified as the principal recyclable materials in the wastesheds as described in Sections (4) through (12) of this rule:

- (a) Newspaper;
- (b) Ferrous scrap metal;
- (c) Non-ferrous scrap metal;
- (d) Used motor oil;
- (e) Corrugated cardboard and kraft paper;
- (f) Aluminum;
- (g) Container glass;
- (h) Hi-grade office paper;
- (i) Tin cans;
- (j) Yard debris[, effective upon adoption by the Commission of

additional rules which clarify the range of acceptable alternative methods for providing the opportunity to recycle source separated yard debris].

(2) In addition to the principal recyclable materials listed in section (1) of this rule, other materials may be recyclable material at specific locations where the opportunity to recycle is required.

(3) The statutory definition of "recyclable material" (ORS 459.005(15)) determines whether a material is a recyclable material at a specific location where the opportunity to recycle is required.

(4) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(a) through (j) of this rule:

- (a) Clackamas wasteshed;
- (b) Multnomah wasteshed;
- (c) Portland wasteshed;
- (d) Washington wasteshed;
- (e) West Linn wasteshed.

(5) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(a) through (i) of this rule:

- (a) Benton and Linn wasteshed;
  - (b) Clatsop wasteshed;
  - (c) Hood River wasteshed;
  - (d) Lane wasteshed;
  - (e) Lincoln wasteshed;
  - (f) Marion wasteshed;
  - (g) Polk wasteshed;
  - (h) Umatilla wasteshed;
  - (i) Union wasteshed;
  - (j) Wasco wasteshed;
  - (k) Yamhill wasteshed.
- (6) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(a) through (g) of this rule:
- (a) Baker wasteshed;
  - (b) Crook wasteshed;
  - (c) Jefferson wasteshed;
  - (d) Klamath wasteshed;
  - (e) Tillamook wasteshed.
- (7) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(a) through (h) of this rule:
- (a) Coos wasteshed;
  - (b) Deschutes wasteshed;
  - (c) Douglas wasteshed;
  - (d) Jackson wasteshed;
  - (e) Josephine wasteshed.
- (8) In the following wasteshed, the principal recyclable materials are those listed in subsections (1)(a) through (f) of this rule:  
Malheur wasteshed.
- (9) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(a) through (g) and (i) of this rule:
- (a) Columbia wasteshed;
  - (b) Milton-Freewater wasteshed.
- (10) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(a) through (e) of this rule:
- (a) Curry wasteshed;
  - (b) Grant wasteshed;
  - (c) Harney wasteshed;
  - (d) Lake wasteshed.
- (11) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(a) through (d) of this rule:
- (a) Morrow wasteshed;
  - (b) Sherman wasteshed;
  - (c) Wallowa wasteshed.
- (12) In the following wastesheds, the principal recyclable materials are those listed in subsections (1)(b) through (d) of this rule:
- (a) Gilliam wasteshed;
  - (b) Wheeler wasteshed.

(13) (a) The opportunity to recycle shall be provided for each of the principal recyclable materials listed in sections (4) through (12) of this rule and for other materials which meet the statutory definition of recyclable material at specific locations where the opportunity to recycle is required.

(b) The opportunity to recycle is not required for any material which a recycling report, approved by the Department, demonstrates does not meet the definition of recyclable material for the specific location where the opportunity to recycle is required.

(14) Between the time of the identification of the principal recyclable materials in these rules and the submittal of the recycling reports, the Department will work with affected persons in every wasteshed to assist in identifying materials contained on the principal recyclable material list which do not meet the statutory definition of recyclable material at some locations in the wasteshed where the opportunity to recycle is required.

(15) Any affected person may request the Commission modify the list of principal recyclable material identified by the Commission or may request a variance under ORS 459.185.

(16) The Department will at least annually review the principal recyclable material lists and will submit any proposed changes to the Commission.

OAR 340-60-035 is amended as follows:

**Acceptable, Alternative Methods for Providing the Opportunity to Recycle**

340-60-035 (1) Any affected person in a wasteshed may propose to the Department an alternative method for providing the opportunity to recycle. Each submittal shall include a description of the proposed alternative method and a discussion of the reason for using this method rather than the general method set forth in OAR 340-60-020(1)(a).

(2) The Department will review these proposals as they are received. Each proposed alternative method will be approved, approved with conditions, or rejected based on consideration of the following criteria:

(a) The alternative will increase recycling opportunities at least to the level anticipated from the general method set forth in OAR 340-60-020 for providing the opportunity to recycle;

(b) The conditions and factors which make the alternative method necessary;

(c) The alternative method is convenient to the people using or receiving the service;

(d) The alternative method is as effective in recovering recyclable materials from solid waste as the general method set forth in OAR 340-60-020 for providing the opportunity to recycle.

(3) The affected persons in a wasteshed may propose as provided in section (1) of this rule an alternative method to providing on-route collection as part of the opportunity to recycle for low density population



area within the urban growth boundaries of a city with a population over 4,000 or, where applicable, the urban growth boundaries established by a metropolitan district.

(4) In addition to any other standards or conditions, an alternative method for providing the opportunity to recycle yard debris shall meet the following minimum standards:

(a) The alternative method is available to substantially all yard debris generators in the local jurisdiction.

(b) The alternative method results in the recycling of yard debris from the solid waste stream.

(c) There is a promotion campaign which is designed to inform all potential users about the availability and use of the method.

(d) The jurisdictions covered by the alternative method are included in a yard debris recycling plan approved by the Department which includes the alternative method, and

(e) Implementation of the alternative method is designed to meet the performance requirements of OAR 340-60-120(4).

OAR 340-60-075 is amended as follows:

#### **Reasonable Specifications for Recyclable Materials**

340-60-075 No person providing the opportunity to recycle shall be required to collect or receive source separated recyclable material which has not been correctly prepared to reasonable specifications which are related to marketing, transportation [or], storage or regulatory agency requirements and which have been publicized as part of an education and promotion program.

#### **Local Government Responsibility**

340-60-115 Each local government unit in a wasteshed where yard debris has been identified as a principal recyclable material shall, either individually or jointly through intergovernmental agreement, provide for the following:

(1) The yard debris recycling plan called for in OAR 340-60-120.

(2) Yard debris recycling service using one of the methods listed in OAR 340-60-125 and

(3) An education and promotion program which meets the requirements of OAR 340-60-040.

#### **Yard Debris Recycling Plans**

340-60-120 (1) Each local government unit in the wastesheds where yard debris has been identified as a principal recyclable material shall, individually or jointly through intergovernmental agreement, submit to the Department, as part of the wasteshed recycling report, a yard debris recycling plan which describes how the opportunity to recycle yard debris will be provided to the residents in their jurisdiction.

(2) The yard debris recycling plan shall include the following information:

(a) The estimated amount of yard debris available.

- (b) The proposed collection method for yard debris.
- (c) The number of potential participants in the program.
- (d) The projected participation level.
- (e) The expected amount of material to be recovered.
- (f) The process by which the yard debris will be recycled or the names of the facilities to which the yard debris will be sent for recycling.
- (g) The projected capability of the facility which will be accepting yard debris generated in the jurisdiction to accept and utilize that yard debris.
- (h) The projected growth of the program over the first four years of operation.
- (i) A description of any alternative method for providing the opportunity to recycle yard debris which is going to be used.
- (j) A timeline which displays
  - (A) the projected growth of the program.
  - (B) use of collection and recycling methods, and
  - (C) projected growth of the facilities to which the yard debris will be sent.
- (3) The Department shall review and approve or disapprove the yard debris recycling plans based on whether the information in the plan is accurate and the program described in the plan is designed to meet the performance requirements in section (4) of this rule.
- (4) Unless otherwise provided in an approved yard debris recycling plan, yard debris recycling programs developed for local jurisdictions in the Clackamas, Multnomah, Portland, Washington, or West Linn Wastesheds shall be designed and implemented to meet the following standards for recovery of yard debris generated from within individual jurisdictions or multi-jurisdictional planning areas:
  - (a) By July 1, 1989 recovery of at least 25% of the yard debris in the waste stream.
  - (b) By July 1, 1990 recovery of at least 40% of the yard debris in the waste stream.
  - (c) By July 1, 1991 recovery of at least 60% of the yard debris in the waste stream.
  - (d) By July 1, 1992 recovery of at least 80% of the yard debris in the waste stream.
- (5) Yard debris recycling plans shall incorporate the minimum standards set out in section (4) of this rule except when it can be demonstrated to the Department's satisfaction, that the yard debris processor or processors serving the local or regional government jurisdiction are not capable of utilizing the amount of material set in those standards.
- (6) If a local government unit does not submit an acceptable yard debris recycling plan or if a yard debris recycling program fails to meet the performance standards set out in this rule it shall be considered to be not providing the opportunity to recycle yard debris and the EQC may order the local government to provide the level of recycling service including education and promotion, which, in the Commission's opinion, is necessary to meet the standards.

Yard Debris Recycling Program Implementation

340-60-125 Each local government unit in a watershed where yard debris has been identified as a principal recyclable material shall, either individually or jointly through intergovernmental agreement, provide a yard debris recycling program by one of the following methods:

(1) Provide the opportunity to recycle as identified in OAR 340-60-020 or an equivalent level of service.

(2) Provide the opportunity to recycle yard debris by using an acceptable alternative method as identified in OAR 340-60-035. Acceptable alternative methods for collection or recycling of source separated yard debris include but are not limited to the following:

(a) Monthly or more often on-route collection of yard debris during the months of March, April, May and September, October, November with a drop-off depot for noncollection service customers available at least monthly, or

(b) A biweekly or more often yard debris collection depot within one mile of the yard debris generators, or

(c) A monthly or more often yard debris collection depot, supplemented by a weekly or more often yard debris depot during the months of March, April, May and September, October, November, both within one mile of the yard debris generators.

(3) Provide a yard debris recycling program by using an acceptable alternative method or methods that are part of a Department approved yard debris recycling plan, as described in OAR 340-60-120.

(4) The Department shall include, but is not limited to, the following criteria in an evaluation of an alternative method for providing the opportunity to recycle yard debris submitted under section (2) or (3) of this rule.

(a) Projected participation rate.

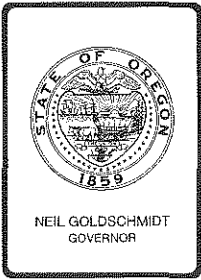
(b) Projected recovery rate.

(c) Distance the residents of the jurisdiction have to travel to use the alternative method.

(d) Potential for expansion.

(e) The type and level of promotion and education associated with the alternative method.

YF3030.A



Department of Environmental Quality Attachment IV  
9/9/88 EQC Meeting  
Agenda Item 4  
811 SW SIXTH AVENUE, PORTLAND, OREGON 97204-1390 PHONE (503) 229-5696

TO: Environmental Quality Commission DATE: August 15, 1988  
FROM: David K Rozell, Waste Reduction Manager  
SUBJECT: Agenda Item No. 4 September 9, EQC Meeting

Hearing Officer's Report on Proposed Amendments and New Rules  
Relating to the Opportunity to Recycle Yard Debris, OAR 340-60-015  
through 125.

After due notice, afternoon and evening public hearings were held in Portland at 2:00 p.m. and 7:00 p.m. on July 13, 1988 to consider amendments and new rules relating to the recycling of yard debris. Twelve people attended the hearing, 9 provided oral testimony. One additional person submitted written comments to the hearing. A summary of all oral testimony at those hearings and all written testimony received by the Department follows.

- \* a copy of written comments is attached.
- \*\* a copy of a summary transcript of oral testimony is attached.

Note: All reference to OAR sections are base on the proposed rules as presented to the public hearing.

\*Estle Harlan, of the Tri-County Council, stated that the minimum standards for recovery in the proposed rules are not linked to either a known or projected market capability. She questioned why the rules should provide an arbitrary minimum standard and a provision for exemption from those standards "when processors are incapable of "utilizing" the amount of material set in the minimum standards"? She stated that the determination of market capability needs to be coordinated on a regional basis and that Metro is the logical provider of this service.

She stated that Oregon City and Gladstone rejected programs which operated for only a portion of a year based on cost, operational and community nuisance considerations.

She stated that local governments will have to determine funding sources for yard debris programs. She expressed specific concerns about the use of property tax as a source of funding for yard debris programs. She provided a table of costs (based on the present costs of the Oregon City program) for various jurisdictions to provide weekly on route collection of source separated yard debris by a franchised garbage collection company under

contract to a local government. She stated that the City of Oregon City is seeking a way to terminate the serial levy passed by the voters.

In summary, she stated the proposed rule should not prescribe recovery levels but should let the market dictate those levels, Metro should coordinate yard debris programs and the feasibility of local government providing proposed programs should be determined prior to imposition of any rule.

\*David Phillips, of Clackamas County, Stated that the proposed rules were filled with problems. These problems include the following: the present DEQ restriction on McFarlane's to accept increased amounts of yard debris; there is not a large amount of additional capacity at Grimms Fuel; other processors are not prepared to take yard debris; Local governments could not develop curbside programs which would "phase in", they would jump to the 60%-80% level within 6 months and flood the market. He stated that we should proceed as we have for the last five years with a steady growth in yard debris recycling without the proposed rules.

\*\*Greg Dollowitch, of Dollowitch Disposal, stated that he was in opposition to the proposed rules. He feels that yard debris is not recyclable because it breaks down naturally in the environment. He is concerned that the proposed rules will prohibit home composting. He is opposed to recycling something unless there is a market. He does not feel that there is a market for yard debris because it is so readily available.

\*Delyn Kies, of the City of Portland, recommended that the EQC postpone consideration of the proposed rules until more definite information about market for composted material is available and can be incorporated into the rules. She stated the following concerns: Markets need to be analyzed for the proposed supply of processed yard debris compost; recycling program performance standards need to be developed based on that marketing analysis; publicly sponsored recycling programs need to be coordinated with private processor demands on a regional basis; and the City does not have general funding to operate DEQ's currently proposed minimum yard debris recycling program.

\*\*Peter Harvey, of the City of Lake Oswego, stated that these rules do not deal with the problems related to yard debris recycling. He does not feel that there is a market for the yard debris which can be easily collected. Yard debris collection needs to be linked with the processing and market capability.

He indicated that collecting a fee for yard debris recycling service would be difficult and would discourage participation. A tax base funded yard debris collection program would not have general public support because there is not a direct relationship between property value and need for yard debris recycling service.

He felt the proposed rules place an unnecessary data collection burden on local government. He felt that there should be some form of regional coordination but is hesitant to place that role with Metro. He feels there are potential land use problems in trying to site yard debris recycling depots within one mile of the generators.

\*\*Rod Grimm, of Grimms Fuel, stated that there were three big negatives facing yard debris recycling which needed to be dealt with. 1) The processors need time to deal with increasing volumes of yard debris being made available to be recycled. 2) DEQ is forcing more waste wood products, which compete with yard debris products, into the market place. 3) Metro is planning on dumping large quantities of subsidized composted solid waste into the "yard debris products market place" Grimms and McFarlane's have spent years developing a market for yard debris products. They will be able to deal with all of the yard debris in the region but DEQ and Metro are forcing and dumping other products into the "yard debris products market place" which they developed.

On the positive side, he stated that the yard debris processors will be able to process and market all of the yard debris generated in the region. They are doing research and market development and are growing with the supply of material available. Yard debris recycling is less expensive than yard debris disposal. Yard debris recycling is an environmental and economic benefit to the community.

\*Edward Druback, of the City of West Linn, stated that the City's Solid Waste and Recycling Citizen's Advisory Committee and staff agree with the intent of the proposed rules. The City of West Linn has been operating a yard debris recycling depot since 1984. While the program is not financially self-supporting, it has strong public support.

He is very concerned about proposed OAR 340-60-125 (2) which indicate depots must be within one mile of the generator. This would force West Linn to abandon their present successful depot and locate three new ones. He proposed that this be changed to "conveniently located to serve a population not to exceed 25,000." He stated that "given the performance standards set forth in OAR 340-60-125 (3) the limitations in (2) may not be that important".

\*Heidi Sieberts, of the Metropolitan Service District (Metro), stated that the Metropolitan Service District endorses the concept of the proposed rules except with respect to the minimum standards for recovery specified in OAR 340-60-120(4). In lieu of the minimum standards Metro proposes to serve as the agent responsible for phased implementation of the rules based upon analysis of the capacity of yard debris processors and market demand for compost.

"Metro has established a planning process for the purpose of obtaining consensus and establishing accountability." "A plan outlining collection strategies developed by local government for the collection industry,

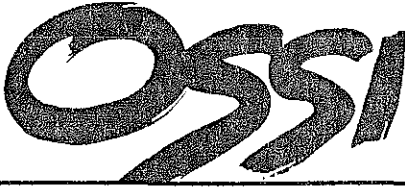
together with a plan developed by Metro outlining processing and marketing strategies, would lay the necessary ground work for yard debris rule implementation."

\*\*Forrest Soth, of the City of Beaverton, described the Beaverton monthly yard debris collection depot program. He stated that yard debris recycling needs to be left to the local jurisdictions in cooperation with the garbage collectors. It would be difficult to get tax dollars to run a yard debris recycling program. Garbage collectors should set the fees. He recommends against on-route collection and the use of unattended drop boxes. He feels the arbitrary one mile radius is not realistic because of the cost of multiple depots. He noted that the rules do not address the problems associated with yard debris recycling from multifamily units. He also indicated that the processors needed to be consulted about the volume of yard debris which they could handle.

\*Jeanne Roy, of Recycling Advocates, submitted written testimony. Recycling Advocates is very supportive of the yard debris rules. They suggest two changes. First, the "one mile" condition be changed to "one depot for every 20,000 residents". And, second, there should be clarification of the base for the percentages in the recovery standards in OAR 340-60-120(4).

Attachments: II. Written testimony

David K. Rozell:wrb  
229-6165  
8/15/88  
YF3377.3



Reply to: 2202 SE Lake Road  
Milwaukie, OR 97222  
654-9533

MEMBER  
**NSWMA**  
National Solid Wastes  
Management Association

OREGON SANITARY SERVICE INSTITUTE

July 13, 1988

TO: Hearings Officer, Environmental Quality Commission

Re: Proposed Rules Relating to the Opportunity to Recycle Yard Debris

(This testimony is given on behalf of the Tri-County Council, which is comprised of representatives from the six solid waste associations in the Metro region: Clackamas County Refuse Disposal Association, Multnomah County Refuse Disposal Association, Oregon Sanitary Service Institute, Portland Association of Sanitary Service Operators, Teamsters Local 281, and Washington County Refuse Disposal Association.)

Under the proposed rules, local governments will be responsible for providing an acceptable yard debris recycling plan for their individual jurisdiction. The Minimum standards call for at least 25% recovery by July 1, 1989 escalating to at least 80% recovery by July 1, 1992.

ISSUE 1. These recovery levels are not linked to either a known or a projected market capability. The rule states that a local government does not have to meet the recovery levels if yard debris processors are incapable of "utilizing" the amount of material set in the minimum standards. Then why set an arbitrary standard if it does not have to be met due to market insufficiency? Let the market control the standard for recovery.

ISSUE 2. The determination of market capability needs to be coordinated on a regional basis. Metro is the logical provider of this service. If there is no regional approach and every jurisdiction works in isolation, one or two cities could flood the processor's capacity. What do the rest of the cities do with the yard debris collected under their programs? This rule is ominously silent on coordination authority.

The proposed rules state that the Department of Environmental Quality (DEQ) will recognize acceptable alternative programs such as programs that operate for portions of a year rather than on a full year basis.

ISSUE: This proposal has been examined and rejected by both the cities of Oregon City and Gladstone (the only cities currently conducting curbside collection of yard debris through taxpayer funding). The reason for rejecting the proposal was that there was little difference in cost compared to the loss of service benefit. Fixed costs remain constant; employees cannot be hired for just six months and must be maintained in some other capacity; customers stock-pile the yard debris during the off months so there is basically the same volume to contend with, and the stock-piled yard debris creates a nuisance problem.



July 13, 1988

Local governments will have to determine the funding source for the yard debris programs. The solid waste industry's initial response from jurisdictions that regulate the industry is that the jurisdiction will not be able to fund programs through the tax structure. The City of Oregon City is seeking a way to terminate the serial levy passed by the voters because of the impact it has on that city's tax rate.

ISSUE 1. The commercial community pays a major share of the jurisdiction's tax, but they get little benefit from the yard debris program.

ISSUE 2. The standards in the proposed rule would be very costly to local jurisdictions, even if inequities in the funding source are overlooked. Based on the proven record in Oregon City, the unit cost per property owner (which is the broadest funding base available for comparison purposes) is \$25.46 per year. That is slightly below the nearly \$27 for the Gladstone program which also uses tax funds. Using Oregon City's lower figures, the cost to various jurisdictions would be:

<u>Jurisdiction</u>	<u>*Number of Households</u>	x	<u>\$25.46</u>	=	<u>Total Per Year</u>
Beaverton	13,471	x	25.46	\$	342,976
Fairview	712	x	25.46		18,116
Gresham	16,212	x	25.46		412,765
Hillsboro	11,666	x	25.46		297,020
Lake Oswego	9,317	x	25.46		237,209
Milwaukie	6,721	x	25.46		171,121
Portland	145,769	x	25.46		3,711,285
Tigard	7,971	x	25.46		202,945
Troutdale	2,635	x	25.46		67,077
Tualatin	3,904	x	25.46		99,392
West Linn	4,982	x	25.46		126,850
Wilsonville	1,425	x	25.46		36,281
Wood Village	998	x	25.46		25,411

(\*Number of Households are computed by taking the total population per jurisdiction in the 1987-88 Oregon Blue Book and dividing by 2.6. The 1980 official census for the region gives the average number of persons per household as 2.6.)

It should be noted that the City of Oregon City originally provided yard debris collection as a municipal service. They now contract with the franchised solid waste collector in the city because that company could do it for 38% less than what it had cost the city to provide service.

CONCLUSION: The proposed rule should not prescribe recovery levels but should let the market dictate those levels; coordination of yard debris programs should be by Metro; the feasibility of local governments providing proposed programs should be determined prior to imposition of any rule.

Respectfully submitted,

*Estle Harlan*  
ESTLE HARLAN, Consultant

EH:e

C: OSSI

TRI-COUNTY COUNCIL



# CLACKAMAS COUNTY

## Department of Transportation & Development

WINSTON KURTH  
EXECUTIVE DIRECTOR

RICHARD DOPP  
DIRECTOR  
OPERATIONS & ADMINISTRATION

TOM VANDERZANDEN  
DIRECTOR  
PLANNING & DEVELOPMENT

TO: EQC Hearings Officer

FROM: David G. Phillips  
Clackamas County Solid Waste Administrator

DATE: July 1, 1988

SUBJ: Proposed DEQ Rules on Yard Debris

The proposed yard debris rules as proposed are filled with problems. The first and foremost problem is that of process and market capacity for yard debris. The only yard debris processor in Clackamas County is McFarland and, as you should be aware, they are under a compliance order which requires them, among other things, to not receive more yard debris than they did in 1987 and to that end, they have raised their rate to discharge more material coming in. Therefore, if Clackamas County were to insulate a yard debris program, we would be unable to deliver it to McFarland so it would have to be landfilled, which would be a direct violation of the SB 405 requirements.

Rod Grimm, another major processor, has stated that he could only market the yard debris from one or two programs more per year the size of Oregon City and Gladstone. So, there is not a large amount of additional capacity at Grimms'.

I also think it needs to be pointed out that current efforts of promoting yard debris recycling in the metro region has resulted in a 10 to 15% increase per year since the start of the program and this has already buried one processor and it remains to be seen if the other processor can market all of the material they have processed.

Two other small sites have opened in Clackamas County without land use approval and will very likely be closed. Southeast Recycling, which has taken yard debris, had to be ordered by DEQ to dig up yard debris they had buried. So, in short, the processing and market capacity is not there.

The way the rules are drafted Local Government is supposed to do a phase in program of 25%, 40%, 60% and 80%. If local government is to start a curbside program, it would have to be provided to all citizens and we would jump from the current level to a 60% to 80% level within 6 months of implementation which would, in effect, bury the processors in yard debris and would probably flood the market. The market capacity for curbside programs needs to be there before the program starts. The material needs

Page 2  
EQC Hearings Officer  
July 1, 1988

to be in demand not in stockpiles at the yard debris processors as is the current situation. If these processors are unable to handle all of the material, local land use authorities will be forced to close the facilities in order to alleviate the nuisances.

These rules will effectively put an end to the yard debris program. You should realize the market development for used news print didn't happen in 5 years or even 10 years, but it happened over many 10's of years. So lets proceed as we have for the last 5 years with a significant steady growth in our yard debris program.

Respectfully Submitted,

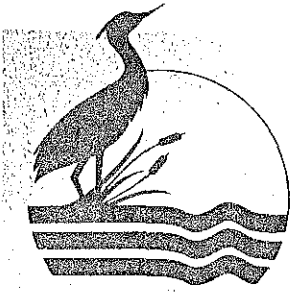
DAVID G. PHILLIPS - Administrator  
Community Environment

Summary Transcript of Oral Testimony  
Greg Dollowitch  
Dollowitch Disposal

My name is Greg Dollowitch. I own a garbage route in North and Northeast Portland. I have been recycling for about ten years. Prior to PRRS we did it on our own. I am the son of a garbageman and the grandson of a farmer. I can't see why something that rots and makes more earth can be part of recycling. Ok, for glass we're using sand, for paper we're using trees, for motor oil we're saving our oil supply. Yard debris, I maintain, can not be a recyclable because your processing something which is going to do what mother nature does naturally. We have used our route to promote recycling saying that we are saving the earth for our kids. How can we tell our kids, "You can't do that compost pile any more because we should recycle it and process it." "Well, why mom?" "Well, so we get fertilizer." We are going to have to in a year?

I realize that your intentions are very good, to take a lot of tonnage out of the waste stream. I agree with that. I am probably one of the youngest garbage men in the City of Portland. Like I said, I have been doing it for 15 years. I am 30 years old now.

Maybe I am just missing something, but I can't see recycling something unless there is a market. The market can't be developed. We said that about newspaper too. There wouldn't be a market. But there is. If you look at the market that there is for newspaper, it is from smaller countries that we are selling to. Activists groups have taken up and they don't want us to cut lumber anymore. I say that grass grows every where. It grows in Japan, in Korea, it grows everywhere. They are not going to want what we have here. They have their own.



July 13, 1988

Mr. David Rozell, Hearings Officer  
Waste Reduction Section Manager  
Hazardous and Solid Waste Division  
Department of Environmental Quality  
811 SW 6th Avenue  
Portland, OR 97204

1120 S.W. 5th Avenue  
Room 400  
Portland, Oregon  
97204-1972  
(503) 796-7740

Testimony Re: DEQ Proposed Amendments to O.A.R. 340,  
Section 60, Yard Debris Recycling Program Standards

Dear Mr. Rozell:

My name is Delyn Kies. I am the Director of Solid Waste in the Bureau of Environmental Services for the City of Portland. On behalf of the City, I have attended and participated in the DEQ sponsored advisory committee meetings that were held during the drafting of these proposed amendments to the Oregon Recycling Opportunity Act. After careful consideration of these proposed rules, I would like to provide the following comments on behalf of the City of Portland.

1. Markets need to be analyzed for the proposed supply of processed yard debris compost.
2. Recycling program performance standards need to be developed based on that marketing analysis.
3. Publicly sponsored recycling programs need to be coordinated with private processor demands on a regional basis.
4. The City does not have the general funding to operate DEQ's currently proposed minimum yard debris recycling program.

#### Markets

The City of Portland initiated a voluntary recycling collection program in 1987 in response to the Oregon Recycling Opportunity Act. During the past year the program has grown and expanded to the point that today, within the City, nearly 16,500 tons of recyclable materials are annually diverted from the total municipal waste stream. The future of the program is bright, especially for recyclable materials which have a high market demand such as cardboard, paper and newsprint.

CITY OF PORTLAND  
ENVIRONMENTAL SERVICES



Page Two  
Yard Debris Testimony  
July 13, 1988

Based on the latest available statistics provided by Metro, yard debris constitutes approximately 10.5 percent of the region's municipal solid waste, more than 7.4% less than the national average. This I believe attests to the success of the region's efforts to educate the public about the value of recycling. Since 1983, when less than 100,000 cubic yards of yard debris were received by private processors, the rate of growth in material recovered has increased at an average of more than 35% annually. Through the combination of public promotion and competitive private processor pricing, the prospects for continued growth of the program are good, especially with the recently announced increased costs in traditional landfilling.

Our experience in developing and implementing the present City wide recycling program, together with our experience producing and marketing almost 40,000 tons of sewage sludge compost annually, leads me to stress that the Environmental Quality Commission carefully consider the potential marketability of any recyclable product.

The rules as proposed make both a policy statement (340.60.015(a)) and recycling plan criteria (340.60.120(5)) that yard debris processor capability to "utilize" the amount of yard debris recovered be considered. "Utilize" is not defined. It should clearly be stated that this means current and long-term forecasted sales of composted yard debris products by the processor. /NB

Our concern that the yard debris recycling program be market driven is further based on the fact that within 18 months this region will be asked to support three separate compost products: yard debris compost, sewage sludge compost and municipal solid waste compost - in addition to other compost products, soil additives and landscaping materials in the market place.

No other municipal region in the nation has committed itself to recycling to the extent that Portland has. Market acceptance has come slowly and steadily. Establishing and maintaining a position in the compost market should not be automatically assumed. There is not an infinite "carrying capacity" for all compost production within the region and significant economic and institutional factors limit developing markets beyond the metropolitan area and northern Willamette Valley.

I would like to urge DEQ to adopt the same careful consideration of potential markets as you have established in granting permits for other compost facilities. The "utilization" of the compost, whether it be sludge compost, municipal solid waste compost or yard debris compost, must be an over-riding consideration in adopting these rules or in issuing a permit for a composting facility.

Page Three  
Yard Debris Testimony  
July 13, 1988

In an effort to directly address the issue of market segmentation, the City and Metro, with consultation from DEQ staff, have contracted a market survey for all the regional compost products. This market analysis is currently underway and the results are expected within two months. It is our hope that the study will provide both realistic absorption forecasts for the region's compost products and also assist us in identifying new markets to target our products. Since this study includes consideration of existing and potential yard debris compost markets, we feel that any proposed amendment to present recycling and waste reduction rules should be postponed until the market survey results are available. Postponement in favor of drafting a new approach to the recycling of yard debris in the context of the region's overall strategy for marketing its compost products seems to me to be far preferable than encoding rules oblivious to the realities of the market place.

#### Performance Standards

Since 1983, two private yard debris processors have operated composting facilities in the metropolitan area. One processor has successfully developed a marketing program for yard debris compost, and he has plans to expand his plant and equipment as new markets opportunities exist. The other private processor has not been successful in establishing reliable markets for composted yard debris - to the extent that a surplus of processed material currently exists on the processor's site. DEQ is aware of this surplus situation and has issued compliance orders to the processor to reduce the current stock pile. The portion of yard debris that cannot be marketed by the processor will either have to be sold at a loss or eventually landfilled.

Against this current situation, the Department of Environmental Quality has proposed a series of rules which would mandate the City of Portland, and the other cities and counties in the Portland area wastesheds, to expand the current 25 percent regional level of yard debris recycling to an 80% recovery level by 1992. While such a required level of recovery is a worthwhile program goal, there is no factual data which substantiates that such a goal is achievable.

The proposed rules include a policy statement that recovery levels be coordinated with the demand for recovered materials and for products made from those recyclable materials (340.60.015(10)). But again, the criteria for recycling plans focuses on the processors capability to utilize the amount of material recovered (340.60.120(5)) as set in the performance standards: 25% - 80% within three years (340.60.120(4)).

It is our opinion that "processing" capacity is defined by the mechanical and biological ability to hold, receive, process and store yard debris. Often the total capacity of any facility far exceeds its actual operating output. Usually plant equipment is not operated at its

*Insufficient*

Page Four  
Yard Debris Testimony  
July 13, 1988

theoretical capacity due to unforeseen interruptions in operations, periodic maintenance and seasonal variations in the supply and demand for products produced. Using the concept of "processing" capacity, we believe, is an inappropriate basis for developing an expanded yard debris recycling program.

During the working sessions for these proposed rules, we have suggested that any expansion of the region's yard debris program should be tied to the demand for the composted product, as measured by the actual annual sales of the material. By linking an expanded recycling program with the regional demand for compost, public and private investments can be made on an incremental basis with each financial expenditure directly accountable to the growth in the real market demand.

Therefore, we suggest that it is inappropriate to enact performance standards as an Oregon Administrative Rule until the standards are based on market demand defined by actual and forecasted sales of yard debris compost products.

*Could we do*

#### Coordination

Another aspect of the proposed yard debris recycling rules we ask that the DEQ reconsider, is the need to coordinate the publicly sponsored recycling programs with private sector demands. There are two private processors operating to support all the jurisdictions in the five wastesheds set out in these proposed rules. Allocation of the market share of these processors among the individual cities and counties is necessary in any expanded yard debris recycling program. Without a coordinated and cooperative recycling approach, it is doubtful that any city will be able to assure that their financial investments in promotion and material recovery can be justified. Clearly implementation of any mandatory yard debris recycling rules must directly involve the regional government, Metro.

We recommend that adoption of these rules be postponed until a coordinated approach can be negotiated in the region with Metro rather than the proposed options for intergovernmental agreement in 340.60.115 and 340.60.120 which leave less chance for successful recycling programs by the individual jurisdictions.

#### Funding

On a more pragmatic level, the City and particularly the Bureau of Environmental Services, is concerned that the proposed rules will mandate a municipally sponsored collection system which cannot be funded and would not meet the definition of "recyclable materials" in 340.60.010 even given the scheduled increase in November of regional disposal fees. While the exact nature of a program providing bi-weekly yard debris collection depots within one mile of yard debris generators



Page Five  
Yard Debris Testimony  
July 13, 1988

city wide as proposed in 340.60.125(2)(b) cannot be fully defined now, the approximate cost of such a system exceeds \$200,000 per year and \$160.00 per ton of recovered material. This estimate does not include costs for attendants at the depots or for disposal of material other than yard debris which may be deposited at the sites.

The City does not have the authority in its present charter to recover these costs from generators. The only immediately available source of money to carry out a yard debris recycling program as mandated in the proposed rules is the General Fund. I can assure you that the City does not have the discretionary reserves in that fund to finance such a recycling program.

#### Recommendation

The City and the Bureau of Environmental Services recognizes the environmental objectives of DEQ that have motivated the development of these proposed yard debris rules. We share the Environmental Quality Commission's, and other interest groups', concerns that it is in everyone's best interest to maximize the recycling of all municipal solid wastes.

Understanding that we have a common purpose, we strongly suggest that the region's and the City's yard debris recycling efforts progress in a measured, timely fashion. As existing markets are expanded and private processors increase their capacity accordingly with the sales of composted yard debris products, the rate of recovery of yard debris will grow because it will be a cost-effective alternative to traditional landfill disposal.

We recommend that the Department of Environmental Quality postpone consideration of these rules regarding yard debris recycling until more definitive information about the markets for composted material is available and can be incorporated into the rules.

Summary Transcript of Oral Testimony  
Peter Harvey  
City of Lake Oswego

My reaction to the proposed rules is that they generate more questions than they purport to solve. Can the yard debris processors be capable of handling the increases? Is there a market? I have some very serious questions on that. In Lake Oswego for the past several years we have had a citywide spring clean up program. It has been for one weekend per year at several sites throughout the city. People can bring their debris and put it in drop boxes and have it taken away. In 87 and 88 there were a series of questions about whether processor could handle the debris from one weekend a year. We have had the same problem with homeowners associations where they have gone into joint programs to take care of yard debris. And also people in the present program calling for extra pickups. There is fear that they would flood the market. There is some question about the ability to provide that type of program. In 79 and 80 during the two ice storms we ended up stockpiling material in a central site in the city. Even though that was monitored, we had problems with landscaping firms dumping and individual residents dumping tires, refrigerators and materials other than yard debris. We did at that time, and I realize that the ice storms were an unusual occurrence, calculate the impact of chipping the material. We calculated it out that if we chipped it and spread it over all of the city parks it would cover all of our city parks to a depth of two and one half feet. I don't have the figures on the total volume.

I think the planning on having to provide a fee for the yard debris collection, if the proposed rules address any items, it appears reasonable and rational for a regional agency such as Metro rather than a local government to coordinate. Though the rules place the responsibility on local government, the opportunity for intergovernmental agreements do exist in the proposed rules right now. There is perhaps not the best relationship between some local government units and Metro right now. This is not directly due to Metro but it is because of a Metro task force that is looking at a change in Metro structure and that has antagonized that relationship.

In regard to the cost for a program, we are going to have two alternatives, property tax or a fee structure. We have extended the costs from the Oregon City experience you have already hear about and projected that if that was added to the present programs, your can rate would increase costs about 30%. Well that does not include administration cost, potential property acquisition for one mile sites. We project it would be much higher because of the potential for yard debris in Lake Oswego compared to Oregon City. In our case using property tax revenue as a potential source would require a vote of the people and voter approval. There is not necessarily a relationship between property values and yard debris generation. When you look at the fee structure for garbage generation, again, it would not necessarily relate to usage. A fee structure would discourage use of that service and would be very cumbersome to administer.

I think that if we are going to have a yard debris program it must be related to the ability of the processor to handle the material. This may require a subsidy. If it is not related then the yard debris would have to go to a landfill or burner which defeats the recycling purpose. I think it makes no sense to get into the collection system that would be on a scheduled basis and then have that system be an on again off again when the processor and market capabilities were not there.

There are substantial requirements imposed on a local government to develop a program with a tremendous amount of added data gathering. I am not sure how capable all of the individual jurisdictions would be to generate that data. Perhaps we need some distinction in the rules between a Metro role and a local government role.

The concept of having the collection depots within one mile of the generator gets you into a land use matter. In regard to use and staffing, if they are left unattended they are going to have material contaminated with other garbage. There is also the problem of how the homeowner gets their material from the home to the facility. If you are serious about that type of approach you should approach the next session of the legislature and get such a facility exempted from the land use process. I see serious problems with local jurisdictions going through their own land use processes.

I think that yard debris has to be dealt with but I don't feel that these rules do it. There has to be a relation between collection and marketing as well as a distribution of costs. I think you should either take out or revise the performance standards. They need to be better linked with the processing and market capability. I think they should distinguish between a regional role and a local role. I think we need to look at financing options for various aspects of the program maybe different financing techniques developed for collection, processing and marketing.

Summary Transcript of Oral Testimony  
Rod Grimm  
Grimms Fuel Company

These rules are all good and fine. I think that there is more but we had better deal with the problems. There are three big negatives here and the finger points right at DEQ and Metro.

I made a commitment two years ago and again at recent hearings. I have commitments to the haulers, to local governments and to other processor. My commitment was (to the amount of material I could process). Originally there was 660,000 yds of material in the Portland Area. That has now increased to one million yards. The potential to handle this material is still there for the one million yards. I think it will go to one and one half million yards. I am basing this on Oregon City and Gladstone. I will receive 37,800 from them in the next year. If you multiply this out by the different municipalities in the Metro boundaries it is going to be considerably more than one million yards.

Two things have happened. DEQ has gone to the saw mills in the area and they are forcing them to take their log deck waste, which is high in leachate contaminate, (and market it). There is only one market that this material can go to and that is the ground cover market. The ground cover market is already flooded with material, barkdust, this mill waste and yard debris. DEQ is going to have to look at this .

Next, there is the problem of processing mixed solid waste. Not only are you going to put composted mixed solid waste into a flooded market, it will be subsidized. It will hurt the yard debris processors. You asked us to participate. We are now processing 440,000 yards. In another five year we could handle the other million yards.

The other are the saw mills. Are you going to subsidize them for the millions of dollars that they are putting into their plants to process their material to get it out of the waste stream. It may not be in the exact scope of metro, but is in the scope of DEQ because they are forcing the issue. Animal waste composting ( is another issue). DEQ is pushing this issue in numerous different areas. (This material) has to be composted and markets somewhere. Then there are barkdust retailers throughout the Portland area. There are 25 or 30 of us. You are going to bring somebody in that is going to give their product away. A product that we have been selling for years. What kind of a subsidy are you going to give these people for the lose of their business because of the free product.

Portland has spent \$18 million on that sewage sludge plant. Their plant is close to being subsidized (when you) take the total cost of the operation and what the product is being marketed for. It is being market now to where it is damaging the yard debris programs. You're marketing it grossly below cost and grossly below what it is costing someone who has a product like it. The same thing is going to happen with the mixed solid waste compost.

The answer is already here. We don't need subsidize mixed solid waste plants. We don't need subsidize any of these operations.

Grimms fuel has been handling material for forty years. We sell to the nursery and landscaping markets. We marketed rotted sawdust. DEQ closed the teepee burners and we were again asked to develop markets. We were asked to participate in the yard debris program and we developed markets. We never got any subsidy. We developed all these markets but yet we are going to be competing with a mixed solid waste that is going to get a subsidy. It is going to come into the markets that we developed. I think it is grossly wrong. I might understand it a little more if we did not have a potential for a landfill difference. You know that it is going to cost \$55-60 per ton at the landfill. That will open the doors for the processors. I say that the same way that these other four products are being handled through the dealers in the Portland area they can handle part of the composted waste that is brought in without subsidy. The controls and regulations are probable here already. The present Opportunity to Recycle Act says if it is cheaper to recycle than to go to the landfill it shouldn't go to the landfill. That will open the doors for the processors to go in and to solve this. We don't need any subsidies.

On the positive side, in the last year we have shown a 50% increase in the volume through our plant. We have processed and marketed all of the material. We are developing a larger pile of material which is composting but it has already been processed. We process it at the time it comes in. Grimms and McFarlane's will each process approximately 200,000 yards of loose material next year. That also includes the material which is coming from the St Johns Landfill. At the present time we have eight products we are making out of the waste stream. We have spent two years in research, mainly on our own. Metro has been participating by making sure that our products were of high quality and protecting the general public interest. Metro is working on more research to protecting the public by making sure that the herbicides are out of there, that the pesticides are out of there, and that the plant diseases are out of there. This is an extremely important thing. We have done experiments leading to where 80% of the total yard debris will be out of the waste stream. The container mixes which we are putting together will have a high cation exchange capacity, the ability to hold nitrogen. So, consequently we will be helping DEQ with the runoff from the nurseries. Where they are using commercial fertilizers they will require less fertilizer and they will retain more of the nitrogen. To assure the development of quality products going into the nursery industry, we have developed an aerated slab that is about 50% complete. This will hopefully be on line by late fall or early winter. This will assure the continued quality which we have gained. There is another thing we can do. We can totally pasteurize these container mixes. The only way that can be done at the present time is to use steam and you know about the cost of energy.

We have four other potential products which will be coming off of the aerated slab. I feel that the commitments Grimms Fuel Company has made, and McFarlane's has made over the last 6 years, McFarlane's have been in it for 8 years, (will be met). We have done a good job. I hate to see something

with so much potential be put down with the three negatives. We are processing material for \$2.50 a yard. McFarlane's is at \$3 and East County is at \$4. Any place else that is doing this it is costing them around 7\$ per yard, particularly if any kind of bureaucracy is involved. We are the only place that I can find anywhere in the world where 100% of our product is being marketed to the general public. Every place else the material is going to landfills or to mine reclamation. And, our product is of high quality. I guess that it is all going to go down the tube if you guys don't deal with the three big negatives. The reason I put the volume of material down as one of the negatives is that we can really handle it but we need the time to develop these markets.

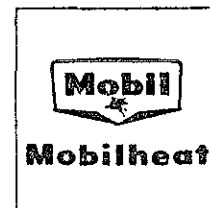
MOBILHEAT  
FURNACE & STOVE  
OILS

FURNACE REPAIRS  
FIREPLACE WOOD  
DECORATIVE ROCK  
GARDEN SAWDUST  
GROUND BARK

# GRIMM'S FUEL CO.

DOING BUSINESS SINCE 1929

1631 South Shore Blvd., Lake Oswego, Oregon 97034



Phone 636-3623

William Bree  
Department of Environmental Quality  
811 SW Sixth Avenue  
Portland, Oregon 97204

Hazardous & Solid Waste Division  
Dept. of Environmental Quality  
**RECEIVED**  
JUL 28 1988

Dear Bill,

Enclosed is a copy of the letter I have recently written to Rena Cusma. In this letter, and in prior testimony to DEQ, I have outlined some of my concerns regarding METRO's proposed Solid Waste Composting plant. There are some very serious problems with this proposed facility and I thought that the DEQ and the EQC should be aware of these problems since these agencies are ultimately responsible for protecting our environment.

During the different hearings with DEQ and EQC, I have given input that was partially responsible for making yard debris a principal recyclable. I feel that DEQ and EQC have been very responsive to my concerns regarding the phasing in of yard debris recycling. Mixed solid waste recycling as proposed cannot be phased in. Once constructed, this facility will dump thousands of yards of garbage compost into a market which is currently saturated.

I have been told that the proposed facility will become a reality because it is politically popular. Having worked closely with your department over the last several years, I feel confident that your decision will be based upon that which is best for our environment and not some politically popular ideal.

Respectfully,

A handwritten signature in cursive script that reads "Rod Grimm".

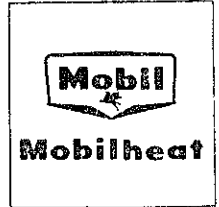
Rod Grimm  
President  
Grimm's Fuel Company

MOBILHEAT  
FURNACE & STOVE  
OILS  
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DECORATIVE ROCK  
GARDEN SAWDUST  
GROUND BARK

# GRIMM'S FUEL CO.

DOING BUSINESS SINCE 1929

1631 South Shore Blvd., Lake Oswego, Oregon 97034



Phone 636-3623

Rena Cusma  
Executive Director  
METRO  
2000 SW First Avenue  
Portland, Oregon 97201-5398

7-27-88

Dear Mrs. Cusma,

In 1982 Grimm's Fuel Company was contacted by the Metropolitan Service District (METRO) and asked to participate in a demonstration project. The purpose of this project was to test the feasibility of converting yard debris into a high quality compost for ground cover and/or soil amendments. Portland's yard debris recycling program has been tremendously successful and today is a model for other programs throughout the United States and around the world. Soon 75% of the yard debris in the Portland area waste stream will be recycled. This represents a substantial savings in valuable landfill space since yard debris is the single largest component in our waste stream. However, this highly successful program is currently in jeopardy. By constructing a Mixed Solid Waste composting facility that gives away the final product, METRO will destroy yard debris recycling in Portland.

## I. Background

Grimm's Fuel Company and other similar companies have been asked repeatedly over the last 40 years to help solve the waste stream problem and we have. In the 1940's we were asked to develop a market for waste sawdust and we did - for fuel, ground cover and nursery stock. In the 1950's large sawdust piles were left in our forests and after many years the piles began to catch on fire as a result of spontaneous combustion. As these fires spread into our forests, the U.S. Forest Service asked us to help. Again we developed new markets and new products to help solve this problem. In the late 50's and 60's air pollution became a major concern and the wigwam burners at sawmills throughout the state were made illegal. As these burners were phased out over the next 5 to 10 years, the material



that was once burned began to accumulate. Again Grimm's Fuel Company was a leader in developing equipment capable of processing this waste into barkdust. In the late 70's and early 80's, large volumes of bark and wood waste began accumulating at sawmill sorting yards and log decks. Leachate from these piles began to pollute the streams, causing DEQ to put more and more pressure on the sawmills to clean up this problem. The material at these sawmills is too high in moisture and too contaminated with rock to be used for fuel. Over the last five years millions of dollars have been spent by the sawmills to develop equipment to separate the rock, wood, and bark. However, 2/3 of this material is fine and very wet and can only be used as ground cover and soil amendments. This fine material cannot be used by the nursery industry as it is normally contaminated with a fungus that is very harmful to nursery stock. Grimm's Fuel Company is in the process of developing equipment that will pasteurize this material so that it can be used by the nursery industry.

Five years ago it became obvious that there was too much material available as ground cover and soil amendments. So we have set out to develop products from yard debris that would replace imported peat moss from Canada. We are very pleased with our progress to date but it will take at least another 5 years to penetrate this market. Grimm's Fuel Company has developed and is marketing 6 products from yard debris. We will have 2 more products coming on in 1989.

Grimm's Fuel Company and Plant Health Lab in Corvallis are committed on a long term basis to developing container mixes that are economical and of the highest quality to help make Oregon nursery stock the best in the world. The majority of the container mix will be materials from the waste stream.

In 1987 Grimm's Fuel Company spent \$5,000 in research and \$120,000 in equipment and plant design to develop new products. In 1988 Grimm's Fuel will spend \$4,000 in research and \$200,000 in new equipment.

In 1982 Grimm's Fuel Company began construction of a facility capable of processing both log deck waste and yard debris. At that time METRO explained that the Department of Energy had about \$10,000 available for a yard debris demonstration project. Grimm's Fuel proceeded with the project and at the end of one year had spent about \$200,000 on the demonstration project when they were informed that the money from the Department of

Energy would not be coming. Then, at one of the METRO consulting sessions we were asked if we would be continuing with the project without their financial support. My answer was that we were too financially committed to stop the project. A year and a half later we received \$9,500 from METRO for our participation in the demonstration project. By this time we had spent nearly half a million dollars on the project ourselves.

The project has been under way for 6 1/2 years now and both METRO and DEQ have been very helpful and supportive. They have been instrumental in increasing public awareness and education with regards to the yard debris and landfill issues and they have protected the public by running tests on yard debris compost for weed seeds, herbicides, toxicants, nutrient content, etc.

## II. Yard Debris as a Principal Recyclable

Over the last 2 1/2 years there have been public hearings on making yard debris a principal recyclable. At these hearings I have been very positive of the fact that all the yard debris produced in the area could be consumed in the Portland marketplace if we were given enough time to develop new markets and new products. However, the market place must control the removal of yard debris from the landfills. Both METRO and DEQ have been supportive of this until now.

On July 13, 1988 I attended a public hearing held by DEQ and testified to the fact that I can no longer support the yard debris program due to the overwhelming problems presented by the proposed Mixed Solid Waste Composting Plant. First, their marketing plan is to give away their product until someone will buy it. This will further saturate markets which are already flooded. Secondly, METRO is paying them enough money so that they can distribute and give away the product. With this kind of subsidy there is no way the private yard debris processors can compete. Not only will this affect the yard debris processors, but the proposed facility will also be in direct competition with the many barkdust suppliers, the sawmills that manufacture barkdust, the composters of animal manure, and the City of Portland's 18 million dollar Sewage Sludge Composting Facility. This sludge composting plant has only marketed about 1/2 the product produced over the last 3 years and is a perfect example of what can happen when a government bureaucracy tries to solve a problem by

throwing money at it. The policy of subsidizing one facility to compete directly with existing small businesses is unethical and possibly unlawful.

If there is to be a mixed solid waste composting facility they should go out and develop new markets outside of those markets developed by Grimm's Fuel and other private companies without subsidies.

I truly wonder why there needs to be a subsidy from METRO or any Government agency. We have gotten along fine without subsidies for 40 years. Also, composting seems to be the only area of recycling in which METRO wants to interfere. First they attempt to build a processing plant at St. John's, then they lower the yard debris tipping fees at the landfills below the tipping fees for the other components of the waste stream. The tipping fee for source separated yard debris at St. John's is lower than the rate charged by the local processors. Such a rate structure actually diverts yard debris away from the processors and back to the landfill. Now METRO wants to subsidize a mixed solid waste composting facility that would compete directly with small business. METRO does not subsidize paper, glass, or ferrous and non-ferrous materials, then why subsidize mixed solid waste?

The "Opportunity to Recycle Act" gave us the necessary tools to reduce the amount of material going into the landfills. In that Act I see nothing that indicates that a Government agency must subsidize recycling. I read it as saying that recycling is to happen below the cost of landfilling. You now have a long term landfill and you know what the costs are going to be. Let the system work as it is designed to work, without subsidies and within the scope of the markets.

### III. Yard Debris Recycling in Portland

Through the efforts of METRO, DEQ, yard debris processors, and the small retail bark distributors, Portland has accomplished something that no one else in the U.S. or in the world has accomplished: 1. We sell 100% of our processed yard debris to the general public. None of it is going into landfills or mine reclamation projects as in other parts of the world. 2. Yard debris compost is of the highest quality. 3. Yard debris recycling is done entirely with private money - no subsidies. 4. We have the most reasonable tipping fees. In most areas, charges run from \$6.50 and up. Our average charge is \$3.00. By phasing in yard debris recycling over the

next 5 years, markets will continue to grow and the entire 1 million yards of Portland's yard debris will be recycled.

Wise people learn from their mistakes and through the observation of other people's mistakes. We are fortunate in that we have 3 examples right here in Oregon to observe: 1. The Lane County Plant that ran for a short time and shut down. 2. The City of Portland's Sewage Sludge Composting Plant. This plant started producing their product at the rate of 8,000 yards a month without any markets. At this time only about 1/2 the product has been sold and there is a large accumulation of this product on sight. 3. McFarlane's started taking yard debris 8 1/2 years ago and at first could not develop markets fast enough to keep up with the volume of material coming in. They have built up a large stockpile that has caused themselves, METRO, DEQ, and Clackamas County many problems. At this time they are gaining on the backlog of material, but it is going to take several years for the problem to be corrected. If it had not been for the minor success of the yard debris program, I question whether METRO would even consider mixed waste composting.

People who are not extremely familiar with composting may say it is easier to process and compost yard debris than mixed solid waste. This is not true. Most mixed solid waste composting facilities cannot process logs, stumps, or long tree limbs, materials which we receive at our facility in large quantities. To assure a quality product and to protect the public, extreme care must be taken to pasteurize the compost against plant diseases, weed seeds, herbicides, and other toxic materials.

I have not questioned the quality of the mixed solid waste compost as none is available to see. I am assuming it will be of the same or near the same quality as existing compost products. I trust that DEQ and METRO will assure the compost's quality before the plant is OK'd.

#### IV. Conclusion

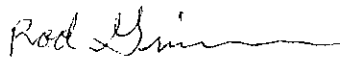
Over the last 6 years I have read hundreds of articles on composting. The most impressive of these was garbage management in Japan where they recycle 50% of their waste stream but only 2% is composted and this is declining. From all these articles the only conclusion I have come to is that every place and every situation is different. What works in one area does not always work in another. I feel that each area is unique and our

own local examples are the best. The yard debris composters here in Portland must be doing something right as Grimm's Fuel and McFarlane's have had representatives from nearly every state in the U.S. and every province in Canada through our plants.

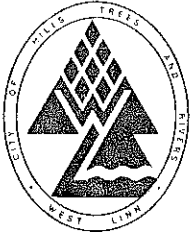
Timing of any project is essential and if a Mixed Solid Waste Composting Plant was to go into operation within the next 7 years it would only damage or destroy the true potential of composting in Oregon. I have been told repeatedly that the Mixed Solid Waste Plant is politically popular and that the plant will go in. I am confident that if the METRO Council studies the findings in the upcoming market study that METRO is conducting, they will find that there is no place for a mixed solid waste compost in our marketplace.

If you have any questions or if I can be of further assistance, please do not hesitate to contact me at 692-3756.

Respectfully,



Rod Grimm  
President  
Grimm's Fuel Company



The City of  
**West Linn**

2042 8th Avenue  
West Linn, Oregon 97068

Development Services (503) 656-4211

July 13, 1988

Department of Environmental Quality  
Hazardous and Solid Waste Division  
811 S. W. Sixth Avenue  
Portland, Oregon 97204

RE: PROPOSED AMENDMENTS TO OREGON ADMINISTRATIVE RULES  
DIVISION 340. SECTION 60 RELATING TO THE RECYCLING OF  
YARD DEBRIS.

Gentlemen:

In 1984, when the Environmental Quality Commission adopted a ban on outdoor burning for the Portland Metropolitan region, the City of West Linn took steps to make yard debris a recyclable commodity. In the fall of 1984, a demonstration curbside collection program funded equally by the participants and the City was instituted. In the spring of 1984, a demonstration yard debris drop-off center with on-site composting was opened. Due to strong public support, the drop-off center was continued and in October of last year, the operation moved to a permanent site.

West Linn's municipal program operates much like other local processors. Residents may drop off their source separated yard debris any Saturday for a nominal charge. The material received is shredded and aerobically composted. The final product is screened and sold or used by the City.

The operation is not self-supporting. As the volume of materials received has increased, so has the need to tap additional sums from the City general fund for both capital improvements and operational expenses. This is true despite the fact that other City departments participate in operations by providing personnel and equipment and a significant amount of labor has been provided by using community corrections workers.

In general terms, the City's Solid Waste and Recycling staff and our citizen's advisory committee agree with the intent of the proposed rules. There is, however, one very specific concern.

This concern lies within proposed rule 340-60-125, paragraphs (2)(B) and (2)(C), which state acceptable alternative methods, such as:

"A biweekly or more often yard debris collection depot within one mile of the yard debris generators, or,

A monthly or more often yard debris collection depot, supplemented by a weekly or more often yard debris depot during the months of March, April, May, and September, October, November, both within one mile of the yard debris generators." (emphasis added)

The requirement that depots be provided "within one mile of the yard debris generators" is totally unreasonable. The intent of the provision is acceptable -- that enough depots be provided to conveniently serve the potential users. A more acceptable alternative accomplishing the same intent would be "conveniently located to serve a population not to exceed 25,000," or some other more realistic qualifier. In reality, given the performance standards set forth in 340-6-120 (4), such a specific qualifier may not even be necessary.

Sincerely yours,



Edward J. Druback, Jr.  
Solid Waste and Recycling  
Program Coordinator  
CITY OF WEST LINN

/cb  
/ed3



**METRO**

2000 S.W. First Avenue  
Portland, OR 97201-5398  
503/221-1646

# Memorandum

Date: July 13, 1988

To: Department of Environmental Quality

From: *Rich Owings*  
Rich Owings, Solid Waste Director

Regarding: Testimony on Yard Debris Rules

Attached for the record is my testimony on the proposed rule.

RDO:aey

cc: Rena Cusma, Executive Officer  
Solid Waste Management Plan Policy Committee  
Solid Waste Management Plan Technical Committee



Testimony before the Department of Environmental Quality

on

Proposed Rules Related to  
Providing the Opportunity to Recycle  
Source Separated Yard Debris

July 13, 1988  
Public Hearing

by the

METROPOLITAN SERVICE DISTRICT

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**EXECUTIVE SUMMARY:** Metropolitan Service District (Metro) endorses the concept of the proposed rules related to providing the opportunity to recycle source separated yard debris except with respect to the minimum standards for recovery specified in OAR 340-60-120(4). In lieu of the minimum standards, Metro proposes to serve as the agent responsible for phased implementation of the rules based upon analysis of the capacity of yard debris processors and the market demand for compost. This means that we support phased implementation, rather than the schedule of implementation as currently identified in the minimum standards.

**BACKGROUND:** The Metropolitan Service District became involved in yard debris program development in 1981 with the implementation of the "Portland Area Open Burning Demonstration Project."

In 1986 the Oregon State Legislature directed Metro to "achieve maximum feasible reduction of the yard debris currently being landfilled through the use of regional processing facilities and on-route collection of source separated yard debris," as part of its Solid Waste Reduction Program.

Also in 1986 a 6-year Yard Debris Market Plan was prepared by Metro, which emphasized Metro's role in providing compost product development information, public information and technical assistance relative to yard debris. Implementation of the Plan began in Fall 1987.

As part of the Market Plan, Metro provides market development information relative to yard debris compost and maintains a data base on the processing capacities of yard debris processors in the region. These are: East County Recycling, Grimm's Fuel Company, and McFarlane's Bark, Inc.

Based upon staff analysis of the facts, while Grimm's Fuel Company may have developed the capacity to process one million cubic yards of yard debris in 1989, they will not possess the capacity to market the equivalent amount of yard debris compost by July 1, 1989, which is the initial proposed minimum standards implementation date.

Uncertainties with regard to product competition require resolution. In an effort to address this issue, Metro is presently conducting a study to determine the market viability of three compost materials: yard debris compost, sewage sludge compost, and municipal solid waste compost. Conclusions from this study will not be available until September of this year and will provide an indication of the impact of competitive compost products upon yard debris compost markets. Even if the competition issues can be satisfactorily resolved, development of product quality and stable market niches for yard debris alone will require a minimum of two to three years.

In a letter to the Environmental Quality Commission dated January 30, 1987, Metro declined to support placing yard debris on the list of recyclable materials. The reason for non-support was that the collection, processing and compost marketing elements of the yard debris system could not handle the increased flow of yard debris. The letter held that premature adoption of opportunity to recycle yard debris rules could result in a loss of flexibility with respect to developing workable solutions to the problems of the yard debris system.

Workable solutions would include the following conditions: conveniently located processing and transfer centers, reasonable and predictable tipping fees, a planned system of deliveries, stable markets for yard debris compost, and consensus in the collection industry regarding costs to the public and credits for avoided solid waste disposal. To date, these conditions have not been met.

Metro makes two recommendations:

First, that solutions for removing yard debris from the waste stream be market driven in terms of yard debris processing capacity and market demand for yard debris compost.

Second, that jurisdictions accountable for collection of yard debris also be made responsible for developing program alternatives and time frames with regard to implementation of yard debris rules.

CONCLUSION: Metro recommends deletion of the minimum standards OAR 340-60-12D(4) from the opportunity to recycle yard debris rules. Based upon the fledgling conditions in the developing yard debris system, attempted implementation of these standards would cause more problems than it might solve.

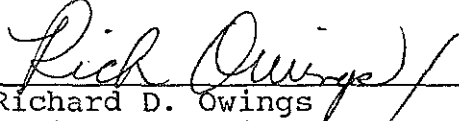
Solutions to regional solid waste problems demand regional consensus. Metro has established a planning process for the purpose of obtaining consensus and establishing accountability with respect to this region's solid waste problems. Yard debris recycling is one of this region's solid waste problems. Therefore, issues surrounding time frames for implementation of the rules should be subject to the planning processes which have been established for resolving regional solid waste problems.

Based upon direct experience with markets and processor capacities, Metro is prepared to provide for continued market development and to be the lead coordinating agency assisting in market development for the region. The information attached outlines current market development activities.

Although the collection industry participates fully in Metro's solid waste planning process, authority for the collection industry rests at the local level. Metro, therefore, considers coordination of the collection industry at the local level to be the appropriate means for overcoming obstacles within the collection industry to full implementation of the rules.

A plan outlining collection strategies developed by local governments for the collection industry, together with a plan developed by Metro outlining processing and marketing strategies, would lay the necessary groundwork for yard debris rule implementation.

In summary, Metro's position is: Reasonable and prudent implementation of the rules demands regional planning and coordination, which Metro is prepared to provide. The minimum standards outlined in OAR 340-60-120(4) do not allow for planning and coordination at the level appropriate for laying the necessary groundwork in the yard debris system for rule implementation. Phased implementation will provide for necessary adjustments and flexibility while the collection, processing and marketing elements of the system are developing.

  
Richard D. Owings  
Solid Waste Director

A survey of the nursery industry was conducted in January 1988 for purposes of determining (1) the main concerns of the industry relative to chemical composition of compost; (2) the awareness of the nursery industry of recycled waste compost, namely sewage sludge compost and yard debris compost; and (3) marketing prospects for recycled waste compost.

Representative, random samples of retail nurseries and wholesale nurseries in the Portland area were drawn from the Pacific Northwest Bell-U.S. West Direct Yellow Pages.

Highlights of the survey are as follows:

The majority of retail and wholesale respondents considered the chemical composition of compost vital to their business.

Although the majority of respondents had considered using recycled waste compost, more wholesalers (79%) had considered it than retailers (60%). Of those respondents who had considered using compost from recycled waste, all retailers had considered using both sewage sludge and yard debris compost; most wholesalers had considered using sewage sludge but less than half had considered using yard debris compost.

Four times as many wholesalers were aware of McFarlane's yard debris compost than were aware of Grimm's, whereas the retailers were equally aware of both processors.

Both wholesalers and retailers were satisfied with the soil mixes they now use. Concern about harmful substances was ruled out by: (1) retailers bought pre-mixed soils, and (2) wholesalers mixed their own soils, relying heavily upon plant and soil specifications provided by experts and suppliers.

Both retailers and wholesalers voiced strong resistance to change. This resistance seems to be based, in part, upon the fact that a single change in a soil mix and/or environmental condition can have a compounding effect upon a crop, particularly if the crop were planted in small containers.

The majority of respondents voiced strong reservations about using recycled waste compost. They had negative perceptions about potential adverse effects upon people and unknowns regarding product contents and applications. In terms of

chemical properties, they were most concerned about the potential presence of heavy metals and herbicides, imbalance of nutrients and acidity, and contamination by anything.

Experimentation with recycled waste compost products did not resolve concerns about the chemical properties, competitiveness and deliverability. Competitive products, such as peat moss and fir bark, were viewed as having fewer negative effects, cheaper, in some cases, and more consistent in quality. Half the wholesalers who had tried sewage sludge compost did not like it, and another 20 percent were never delivered the product they had committed to using.

Wholesalers and retailers used alternative organic products to varying degrees. Their usage and willingness to substitute recycled waste compost was as follows:

Most retailers did not use sawdust; only half used bulk bark, bagged bark and top soil. The majority of retailers used peat moss and mushroom compost. Thirty percent of retailers were willing to substitute recycled waste compost for peat moss, and 40 percent were willing to substitute for mushroom compost. Based upon usage, the numbers of retailers willing to substitute recycled waste compost for other organic products was marginal.

Most wholesalers did not use mushroom compost, bagged bark or top soil. The majority did use bulk bark, peat moss and sawdust. Half the wholesalers were willing to substitute recycled waste compost for bulk bark and sawdust and 43 percent were willing to substitute for peat moss.

Nurseries could be convinced to substitute recycled waste compost for other organic products by positive information on contents, how to mix it with other products, competitive prices, superior quality, product consistency, deliverability and ready availability of product. Forty percent of retailers refused to try it.

Reliable sources of information for nurseries were suppliers, Agricultural Experiment Station experts, private consultants and other nurseries.

Commitment to using yard debris compost would depend upon personal experimentation with it. On a trial basis wholesalers and retailers would require different amounts of product. Fifty percent of wholesalers would require between one and 10 cubic yards, while 43 percent would require between 40 and 100 cubic yards. Thirty percent of retailers would require between one and 10 cubic yards; another 30 percent would require between 10 and 20 cubic yards. Most nurseries would consider between one growing season and two years to be an adequate trial period.

## YARD DEBRIS COMPOST TESTING PROGRAM

July 6, 1988

### Quarterly Testing

1. OREGON STATE UNIVERSITY SEED LABORATORY conducts tests to determine the presence of:

- a. Toxicity: measured by the percentage of Timothy seeds that germinate in YDC. Low percentage of germination indicates microelement(s) in a range that would be undesirable for plant growth.
- b. Weed seed identification: determines presence of seeds. If the seeds indicate an aggressive species that could threaten desirable plant growth, further testing is done to determine viability. Living seeds provide an indication of anaerobic or incomplete composting.

UPDATE: June quarterly test analyses of Grimm's and McFarlane's composts showed no viable weed seeds and 96% and 97% germination of seeds, respectively, which are very positive results with respect to plant growth.

2. SOIL AND PLANT LABORATORY, INC. conducts quarterly soil fertility and micronutrient analysis of the following:

- a. Nutrients
- b. pH
- c. Particle size
- d. Percent organic content
- e. Bulk density
- f. Soluble salts
- g. Field moisture capacity

UPDATE: Based upon June test analyses, no problems were anticipated with use of either Grimm's or McFarlane's compost products for mulching, organic matter enhancement or container mixes, assuming that nitrogen is added during composting or end use. Due to high levels of potassium, no more than 20% to 25% volume of compost should be used in container mixes.

3. ANTECH ANALYSIS/TECHNOLOGY provides quarterly analysis of the presence and levels of:

- a. Herbicides
- b. Pesticides

UPDATE: Re-evaluation of herbicide testing methodology resulted in a new contract. Compounds were selected for testing based on cost, dangerousness, likelihood of detection in compost, longevity of residues, and frequency of usage. While previously we had tested 10 herbicides, we will now be testing 8 herbicides and 10 pesticides. As a test of lab reliability two samples will be provided from each processor, where previously one sample each had been provided. Analyses pending.

#### Referee Testing For Herbicides/Pesticides

The following labs will participate in a test for laboratory reliability concerning herbicide/pesticide testing procedures:

1. ANTECH ANALYSIS/TECHNOLOGY
2. NEILSON RESEARCH CORPORATION
3. STATE DEPARTMENT OF AGRICULTURE, LABORATORY SERVICES DIVISION

UPDATE: The State Laboratory will serve as a "referee" on a one-time basis comparing the results of herbicide/pesticide tests conducted by Neilson and Antech. If there is little or no variation among laboratories, we can be fairly certain that specific levels of herbicides have been detected. If there is variation, we have two choices: (a) to investigate laboratory procedures and provide technical assistance to Antech on quarterly testing with respect to appropriate testing procedures, or (b) to discontinue trying to test the impossible. Antech and Neilson test results being sent to State Laboratory for analysis. State labs hampered by a one-month backlog. Results should be available within the month.

#### Demonstration Plots

1. ROBERT TICHNOR, NORTH WILLAMETTE EXPERIMENT STATION and AGRICULTURAL RESEARCH FOUNDATION, OSU, will answer the following questions with a combination of field and laboratory experiments:

- a. How do you get the most beneficial potting mix mixing YDC with other organic products?
- b. Which plants grow best in YDC?
- c. How does YDC compare with sewage sludge?
- d. Is YDC harmful to plants?
- e. Is one composting methodology better than another?
- f. How much porosity, water retention, pH, specific conductance does YDC have?

UPDATE: Initial laboratory tests and planting of bedding and ornamental plants has been accomplished. Final results, together with publishable report, are expected in January.

2. FRED ZEITOUN and BOB LINDERMAN, PLANT HEALTH, INC., and ROD GRIMM, GRIMM'S FUEL, will answer the following questions with a combination of field and laboratory experiments:

- a. Does YDC have beneficial effects upon plant health?
- b. Can the composting process be refined to overcome potentially detrimental effects from residues of herbicides and anaerobic composting upon plants?

UPDATE: Awaiting final proposal.

#### Comparative Market Study

1. Labs not identified. As part of a market study comparing municipal solid waste compost, sewage sludge compost and YDC, we will be conducting one-time testing of the following substances:

- a. Heavy metals
- b. Pesticides
- c. Herbicides
- e. Bacteria
- f. Protozoa
- g. Parasites
- h. Nutrients

UPDATE: Testing in process.

#### Contract Amendment

1. SOIL AND PLANT LABORATORY, INC. will review their test results over the past two years and provide:

- a. Summary analysis from 4/86 to 4/88 of soil fertility and micronutrients including recommendations for end uses
- b. Analysis of decomposition and recommendations for composting procedures and chemical additions to compost

UPDATE: Analysis undergoing review by Metro.



# 1987 production of sewage sludge and yard debris compost


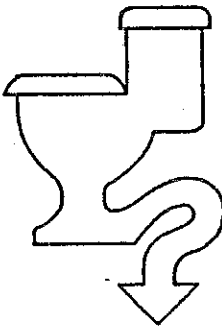
	<b>Yard debris</b>		<b>Sewage sludge</b>		
		+		=	<b>Total</b>
Cubic yards per year	48,000		84,000	=	<b>132,000</b>
Tons per year	21,300		42,000	=	<b>63,300</b>

Figure 1

# 1991 projected production of Portland area compost products

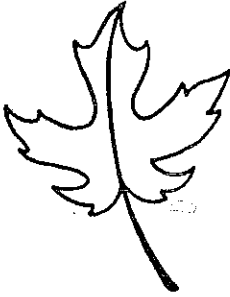
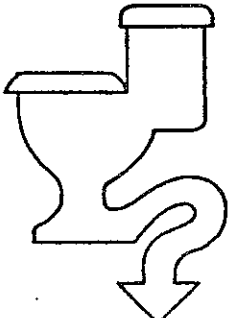
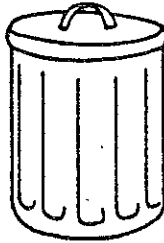
	<b>Yard debris</b>	<b>Sewage sludge</b>	<b>MSW</b>		
		+		+	
				=	<b>Total</b>
<b>Cubic yards per year</b>	97,000	84,000	204,000	=	<b>385,000</b>
<b>Tons per year</b>	43,000	42,000	102,000	=	<b>187,000</b>

Figure 2

# Projected increase in total compost production from 1987-1991

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1987	1991	Increase
132,000 cubic yards per year	385,000 cubic yards per year	3x
63,300 tons per year	187,000 tons per year	

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Figure 3

## METRO'S YARD DEBRIS SYSTEM

The Metropolitan Service District (Metro) is the solid waste management planning authority for an area comprised of three counties--Washington, Multnomah and Clackamas--and 24 cities, of which Portland is the largest.

Metro established a yard debris recycling program in 1981 with a matched grant for \$354,928 from a local regulatory agency, the city of Portland and Metro. The purpose of the grant was to develop disposal alternatives to burning yard debris.

Processing, marketing and collection alternatives to burning yard debris were demonstrated. Promotional campaigns involving newspaper, radio, television, posters, brochures and Metro's Recycling Switchboard informed the public about the processing and collection alternatives.

Six yard debris collection alternatives explored under the grant were as follows: (1) on-route curbside collection by city crews in Oregon City, (2) on-call curbside collection by franchised hauler in Lake Oswego, (3) on-call curbside collection by city crews in West Linn, (4) neighborhood clean-ups in Portland, (5) city-wide clean-ups by city crews and franchised haulers in Beaverton, (6) on-route curbside collection by non-franchised hauler in Southeast Portland.

The yard debris processing facilities established under the 1981 grant included: Shredding Systems, Inc., a processing service, demonstrated that a mobile shredder could produce a marketable "hog" fuel product; Waste-By-Products, Inc., a waste recovery firm, showed that a Medallion 910 Grinder could process all types of yard waste into salable fuel; McFarlane's Bark, Inc., a bark and wood products firm, improved their existing receiving site and purchased a hammermill for purposes of processing yard debris compost; and Grimm's Fuel Co., another bark and wood products firm, started receiving yard debris and producing yard debris compost.

In 1985 the Oregon State Legislature directed Metro to prepare a Solid Waste Reduction Program to "substantially reduce the volume of solid waste that would otherwise be disposed of in the land disposal sites." As part of this Program, Metro set a goal "to achieve maximum feasible reduction of yard debris currently being landfilled through the use of regional processing facilities and on-route collection of source separated yard debris."

Approximately 104,860 tons of yard debris is landfilled each year, which is 10.5% of the total waste disposed at landfills in the region. It is estimated that 75% of the yard debris disposed

at landfills (78,645 tons) is recoverable. In 1987, approximately 34,022 tons of yard debris was recovered and recycled. Grimm's Fuel Co. and McFarlane's Bark, Inc., two of the private processors involved in the 1981 yard debris burning alternatives project, recovered nearly 92% of this amount. (See Grimm's and McFarlane's Yard Debris Flow attached.)

Between 1981 and 1986 Metro provided market research, technical assistance and public information for regional yard debris program development. However, in 1986 a Yard Debris Market Plan was developed by consultants, which provided the basis for hiring a staff person in September 1987 to carry out these activities on a full-time basis.

The Yard Debris Market Plan is a 6-year program emphasizing public and private cooperation: Metro assists private processors in developing compost markets, and the processors assist Metro in keeping yard debris out of the landfill.

Although Grimm's Fuel Co. and McFarlane's Bark, Inc., process most of the yard debris being processed in the region, other processors in the region receive yard debris on a smaller scale. The largest of these, East County Recycling, is a full-service recycling center which also receives yard debris for a tipping fee of \$3.50 per cubic yard. In 1987 East County Recycling received 16,387 cubic yards of yard debris and distributed 6,825 cubic yards of free ground mulch to customers who paid tipping fees.

Several cities in the region have innovative yard debris recycling programs. For example, Milwaukie conducts an annual cleanup campaign involving all recyclables, including yard debris. Oregon City and Gladstone provide weekly curbside pickup for yard debris.

West Linn has its own full-service recycling center, which also receives yard debris, and which is open on Saturdays. Tipping fees vary for carload from \$.50 per bag to \$3 and for truckload from \$3 to \$7.50. The material is chipped and screened and made available as compost to parks and the city free and to citizens at \$5.00 per cubic yard on a pick up basis. In 1987 the facility received approximately 11,000 cubic yards of yard debris and sold approximately 750 cubic yards of compost.

In Beaverton, compactors receive yard debris from self-hauling citizens for \$3 for the first cubic yard and \$2 for each additional yard on a monthly basis. Two or three compactors alternate receiving yard debris and disposing of it at a yard debris processing facility. Approximately 200 cubic yards of yard debris is recycled per month.

The following information describes the methods of operation by this region's two primary processors, Grimm's Fuel and McFarlane's Bark:

1. YARD WASTE COMPOSITION AND GENERATION FOR REGION

a. Yard Waste Composition: 20% to 50% grass and leaves, 50% to 80% wood fibers (with some seasonal variation).

b. Compost Composition: See Grimm's and McFarlane's Yard Debris Flow attached.

2. COLLECTION METHODS

Yard debris processors receive most of their yard debris from landscaper and homeowner self-haulers. Metro advertises yard debris recycling alternatives in a variety of media. By calling Metro's Recycling Information Center, the public can also receive information on yard debris processors, home composting methods, chipping services and yard debris campaigns or community cleanup events.

Several communities and neighborhood associations sponsor annual or biannual cleanup campaigns, in which yard debris is delivered to the processing facilities in compactor trucks or drop boxes. A few independent haulers and two municipalities provide curbside pickup and recycling of yard debris utilizing compactor trucks on a weekly or on-call basis.

In early 1988 the Environmental Quality Commission declared yard debris a "principle recyclable material." Local communities are now required to provide programs for curbside recycling of yard debris. Guidelines for acceptable collection methods and goals are being developed by the State Department of Environmental Quality.

In the Metro District collection services are offered by private companies either licensed or franchised by a city or county government.

Multnomah County: Haulers in the city of Portland and unincorporated areas of Multnomah County are not franchised and have no distinct service areas. There are 115 private hauling companies ranging from one-person operations to large corporations. Rates are set by individual haulers on a competitive basis. Haulers must pay for a business license and observe standards of collection.

Clackamas County: Clackamas County has 26 franchised haulers. The county sets rates and standards.

Washington County: The county franchises 27 haulers in the

unincorporated areas and establishes standards and rates. Cities in the county administer their own franchises.

### 3. COMPOSTING STRATEGIES

Grimm's Fuel: Yard debris is dropped off at the processor by commercial and residential customers and ground within 16 days. It is then stored in a large pile (approximately 40 feet high by 100 feet in diameter) for three to five months, during which time it is turned twice. At that point, it is sized by a trommel screen, and any residue that does not go through a one-half inch screen is ground further. The yard debris goes back into the pile for three weeks to two months and turned twice more. It is then loaded and delivered.

In early Fall 1988 they anticipate completion of an aeration facility, which will alter their composting strategy substantially. (See Equipment.)

McFarlane's Bark: A variety of concerns surrounding McFarlane's facility including odor from the yard debris pile, the size of the pile, traffic congestion and location in a prime industrial/commercial area have caused the State Department of Environmental Quality to restrict the amount of yard debris McFarlane's can receive to 140,000 cubic yards per year. McFarlane's must also process what they receive each year plus 15,000 more cubic yards of yard debris accumulated from previous years.

Currently, McFarlane's grind both the accumulated and the newly disposed yard debris into large pieces (12" minus). It is then allowed to compost for three to six months longer, at which time it is ground to between five-eighths inch to two inches and sold.

### 4. PRODUCT UTILIZATION AND MARKETING STRATEGIES

The yard debris product specifications for Grimm's and McFarlane's are as follows:

<u>Product</u>	<u>Supplier</u>	<u>Size</u>	<u>Composition</u>
Blended Soil	Grimm's	5/8"	50% sandy loam 50% garden fine mulch
Garden Fine Mulch	"	5/8"	100% yard debris

Hemlock Mulch	"		
Fine		5/8"	50% yard debris 50% barkdust
Medium		2 1/2"	50% yard debris 50% barkdust
Fine Compo-Stuff	McFarlane's	5/8"-dust	10% sawdust 90% yard debris
Medium Compo-Stuff	"	1" some fines	10% sawdust 90% yard debris
Coarse Compo-Stuff	"	1"-4" 1 1/2' - 1' 1 1/2' rocks	10% sawdust 90% yard debris

Both fine and medium compost may be utilized for:

1. Top Dressing: soil cover that is not plowed under.
2. Soil Amendment: added material that improves the condition of the soil chemistry or pH.
3. Soil Conditioner: an addition to soil which results in an improvement to the soil structure. It could improve soil aeration or water holding capacity.
4. Potting Mix: a mix of organic products used as a growing medium in pots.

Fine compost would be applied to flower beds, pots, vegetable gardens, raised flower beds and landscaped and sodding areas.

Medium compost would be applied to root balls, field crops, pots for some plants, play areas, landscape areas, dog runs, walkways, horse stalls, and areas for parking, erosion control, and berming.

Coarse compost would be applied to riding arenas, dog runs, and areas for erosion control, mud control, landscaping and berming.

Grimm's Fuel: In addition to the above-mentioned products, Grimm's are experimenting with yard debris compost blended with mushroom compost and cow manure. In 1988-1989, Grimm's also plan to produce yard debris potting mixes.



Grimm's focus is on high-quality products. They are conducting experiments with compost in conjunction with a plant consultant and several nurseries. When the aeration facility is built, they plan to devote more of the energies to marketing to nurseries. (See Equipment.)

McFarlane's Bark: McFarlane's plan to add bulk and bagged potting mixes to their product line within the next two years.

In order to move product faster, McFarlane's have been running a two-for-one sale through newspaper coupons and radio advertising from August 1987 through March 1988. Within the next year, McFarlane's plan to introduce soil mixes for wholesale nurseries and bagged potting mix for retail nurseries.

Both Grimm's and McFarlane's have targeted three primary markets: residential customers, landscapers and nurseries.

Residential customers are reached through yellow page and newspaper advertising, direct mail to customers and target markets, and trade shows. Landscapers are reached in this way in addition to seeing the product when they drop off yard debris. Nurseries are reached through trade shows, trade journals, individual contact and direct mail campaigns. Most deliveries are within a 50-mile radius of the processors.

#### 5. CAPITAL AND O & M COSTS

Grimm's and McFarlane's are private businesses and, except for the following information, their financial statements are not public record.

Grimm's: Including the installed aeration slab, Grimm's capital costs are approximately \$900,000. They estimate that to build a new plant would require a \$1.5 million investment.

Grimm's Fuel is an established fuel and organic products company, which allocates costs to four divisions. One division includes bark and yard debris. They estimate their operational costs, not counting distribution, for yard debris to be \$2.50 per cubic yard in 1987. One-third of the cost comes from sale of yard debris compost and two-thirds from tipping fees (\$2.50 per cubic yard).

Estimates for electrical costs for yard debris processing were approximately \$24,000 for 1987. Although volume will go up with the addition of the supplemental grinder and aeration slab, the cost of electricity is expected to remain about the same because processing time will go down. Grimm's estimate their advertising costs for yard debris to be approximately \$10,000 but anticipate a \$35,000 budget for promotion in 1989.

Based upon their experience, Rod Grimm, the owner, believes that the business of yard debris is best started by a company already dealing in the organic products, for which yard debris is an add-on product, and processing a minimum of 200,000 cubic yards of yard debris.

McFarlane's Bark: As with Grimm's, yard debris is only one part of the total organic products McFarlane's sell. McFarlane's capital costs are approximately \$500,000.

McFarlane's estimate their cost per yard to be \$3.40, based upon incoming yard debris. One-third of cost comes from sale of compost and two-thirds from tipping fees (\$3.00 per cubic yard). In 1987 yard debris costs exceeded revenues by \$20,352.

McFarlane's spent approximately half of their total business advertising budget on yard debris. In 1987 they spent \$31,500 on advertising. This represents approximately 19% of yard debris sales.

An estimated \$14,700 was spent on electricity for 1987: \$5,300 for the brush grinder and \$9,400 for half-time on the bark grinder to finish the compost products.

## 6. SIZE OF OPERATION

Grimm's: In 1987 Grimm's received approximately 152,000\* cubic yards of yard debris and sold approximately 23,000 cubic yards of compost. By Fall 1988, upon completion of the aeration slab, Grimm's expect to process 250,000 cubic yards of yard debris and sell 50,000 cubic yards of compost.

By 1989, upon installation of an additional hammerhog, they expect to cut the processing hours in half. The plant at that point, operating five days a week eight hours per day, will have a one million cubic yards capacity.

Grimm's run their yard debris processing operation approximately 28 hours per week during the busy season. Plant operation requires three people. Currently, it processes between 250 to 400 cubic yards per hour, or approximately 3000 cubic yards in an eight-hour shift.

McFarlane's Bark: In 1987 McFarlane's received approximately 161,000 cubic yards of yard debris and sold 25,000 cubic yards of compost. Currently, McFarlane's is meeting the regulations imposed upon them by increasing processing and reducing yard debris received. Their yard debris processing capacity is unknown is approximately 280,000 cubic yards.

McFarlane's yard debris plant operation has two parts: one requiring three men 30 hours per week, the second part involving

two men 30 hours per week. Both phases of the operation move approximately 225 cubic yards per hour. Finished product between 5/8" and 1" must pass through both phases.

\*10 cubic yards of yard debris = 1 ton

## 7. EQUIPMENT

Both Grimm's and McFarlane's have acquired used equipment, built, rebuilt and adapted most of them on site to their specific uses.

Grimm's: Equipment includes: (1) loading equipment (two front-end loaders), (2) 18 to 20 year old Jeffries Hammerhog customized and rebuilt, (3) six year old 60 foot trommel built on the premises, (4) five year old conveyor system built on site, and (5) D9 bulldozer.

Grimm's are currently building an aeration slab that is approximately 40 feet high by 300 feet long and 60 feet wide, which aerates the compost from top and bottom and reduces moisture content. Installation of a back-up hammerhog will double screening capacity. Once the yard debris is ground and passed through a trommel, it will go back through the new hog, cutting processing time in half.

McFarlane's Bark: Equipment includes: (1) two 11 year old John Deer 644 front-end loaders, (2) two 8 year old John Deer 310 backhoes, (3) one Jeffries Hammerhog customized and rebuilt with a clam infeed and scalper (takes fines out before coarse material goes through), (4) one finished material grinder fabricated on site with conveyor and 20' by 3' screen, (5) one two year old John Deer 855 Crawler with a clam instead of a bucket to grab the material.

McFarlane's have recently invested \$75,000 in an irrigation and fire hydrant system required by the fire department. Another \$70,000 has been invested in paving and other improvements related to their yard debris business. Recently, they purchased a bagger for the development of bagged container mixes. In the next few years they plan to pave an access road, put in an aeration slab and acquire a mixer for container mix production.

## PAST, PRESENT AND FUTURE

Both Grimm's and McFarlane's were well-established family businesses dealing in organic products, such as sawdust and barkdust, prior to developing yard debris processing. McFarlane's began processing yard debris in 1956. In 1973 they moved to their present location and began adding it to "old sawdust" as mulch. It was not until 1983 when a second grinder was in full operation that yard debris compost became available

for sale. Grimm's began processing yard debris and selling compost in 1984.

Grimm's and McFarlane's have made a substantial investment in yard debris processing and plan to incur considerably more expense in the near future for promotion and capital equipment. Although their approaches to yard debris development have been different, both have taken several years to break-even, even when tipping fees are considered.

One regulation that promises a larger supply of yard debris to the processors is the designation by the Environmental Quality Commission of yard debris as a "principle recyclable" material. In anticipation of large increases in yard debris, the processors are continuing to make capital improvements and otherwise expand their processing capacities. Simultaneously, other processors are beginning to appear on the scene.

Another specter on the horizon is a municipal solid waste facility. Compost production from this facility is expected to be approximately 204,000 cubic yards annually. Sewage sludge compost production is expected to be 84,000 cubic yards annually. Whether yard debris compost can carve out a reliable market niche amidst such competition remains to be determined. Results of a comparative market analysis of the three compost products is expected by Fall 1988.

Considerable product development needs to take place to guarantee product safety, quality and consistency. Within a 75-mile radius of Portland are approximately 800 nurseries and 300 landscape contractors. They represent large potential markets once the quality and consistency of product can be assured. New products and product specifications will need to be developed for specific uses by nurserymen, landscapers and homeowner. Health standards are only now being established by governmental agencies that will affect product specifications and production methodologies.

Metro has been testing yard debris compost for nutrients, herbicides, weed seeds and toxicity over the past two years. Test results of the compost over time are currently being evaluated for consistency relative to nutrients and fertility and degree of decomposition. The evaluation will provide recommendations for compost product end uses and improving composting technology.

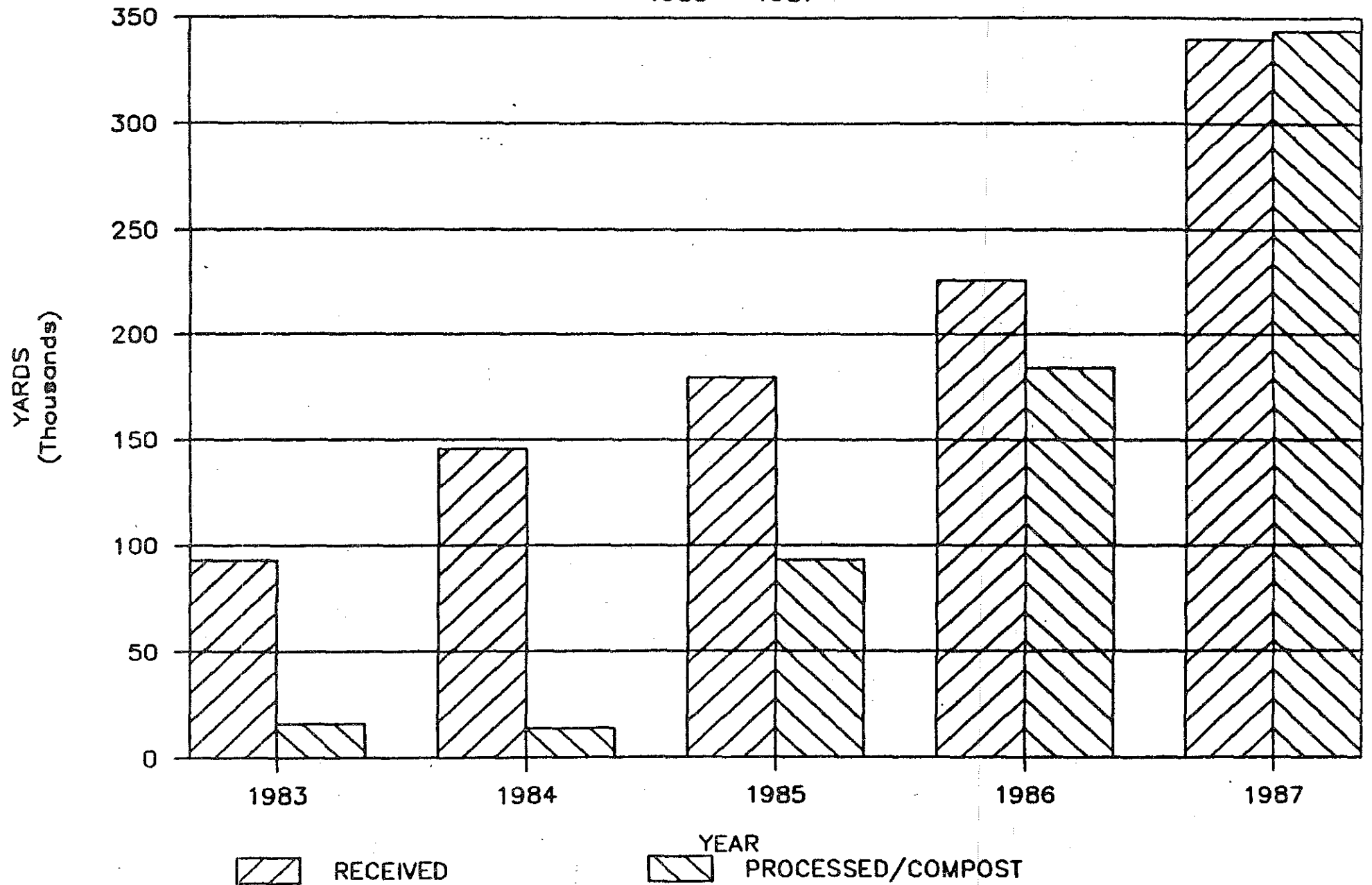
In addition to laboratory testing, Metro is conducting field experiments aimed at determining: (a) which plants grow best in yard debris compost, (b) what other organic products can be mixed with yard debris compost to provide the best growing medium, (c) whether anaerobic and herbicide residues in compost are harmful to plants, and (d) how yard debris compost differs from sewage

sludge compost. Answers to these questions will help define yard debris compost market niches and provide a basis for developing soil mixes and product specifications.

HSS 6/29/88

# METRO REGION: YARD DEBRIS RECYCLING

1983 - 1987



GRIMM'S AND MCFARLANE'S

YARD DEBRIS FLOW

(CUBIC YARDS)

YEAR	PROCESSOR	YARD DEBRIS INPUT	%INC- DEC	YARD DEBRIS COMPOST PROCESSED AND SOLD	%INC DEC
1981	GRIMM'S	0	0	0 ( 0) *	0
	MCFARLANE'S	<u>79,191</u>	0	<u>1,080</u> ( 7,557)	0
	TOTAL	79,191	0	1,080 ( 7,557)	0
1982	GRIMM'S	0	0	0 ( 0)	0
	MCFARLANE'S	<u>39,881</u>	-50	<u>2,089</u> ( 14,625)	94
	TOTAL	39,881	-50	2,089 ( 14,625)	94
1983	GRIMM'S	20,704	0	0 ( 0)	0
	MCFARLANE'S	<u>72,312</u>	81	<u>2,298</u> ( 16,089)	10
	TOTAL	93,016	133	2,298 ( 16,089)	10
1984	GRIMM'S	49,066	137	799 ( 5,594)	0
	MCFARLANE'S	<u>96,280</u>	33	<u>1,152</u> ( 8,061)	-50
	TOTAL	145,346	56	1,951 ( 13,655)	-15
1985	GRIMM'S	60,119	23	7,267 ( 50,868)	809
	MCFARLANE'S	<u>115,178</u>	20	<u>6,018</u> ( 42,124)	423
	TOTAL	175,297	21	13,285 ( 92,992)	581
1986	GRIMM'S	68,178	13	15,022 (105,157)	107
	MCFARLANE'S	<u>147,156</u>	28	<u>11,179</u> ( 78,256)	86
	TOTAL	215,334	23	26,201 (183,413)	97
1987	GRIMM'S	151,523	122	22,895 (160,263)	52
	MCFARLANE'S	<u>161,306</u>	10	<u>25,137</u> (175,956)	125
	TOTAL	312,829	45	48,032 (336,219)	83

\*Output converted to input. Processing reduces volume by a factor of 7.  
10 cubic yards of yard debris input = 1 ton

Summary Testimony of Oral Testimony  
Forest Soth  
City of Beaverton

I am Forrest Soth a member of the Beaverton City Council and also chair of the Beaverton Recycling Task Force. I have been on the task force for several years. I do represent the City of Beaverton in this testimony here.

We like to think that Beaverton has been a leader in this effort. The participation of our people has been quite good. I appeared before you about a year and a half ago. At that time yard debris recycling in Beaverton had just begun. I now have some updated information I would like to share with you. The only city participation extends to the use of the city parking lot for the pick up by the West Beaverton Sanitary Service. This has been authorized at the council level. I have participated in this every month since it has been in operation, including the handling of the debris and being assistance in any way I could.

In Beaverton we also have one clean sweep Saturday where people can bring all of the yard junk to a clean up. We were twice a year until West Beaverton started the yard debris only and we found that with that and a once a year clean up day we can get along very well.

In our opinion the recycling of yard debris needs to be left to the local jurisdictions in cooperation with the collectors and the haulers. The reason for that is the cost if it were publicly funded would be exorbitant for almost any local jurisdiction. We are having some difficulty with tax dollars at the present time. The city of Beaverton's experience has been that with those who bring the recycling yard debris in and pay for it at that time, it cost them much less than hauling the same material to one of the landfills. At the same time it provides a recycling service because West Beaverton takes the material to either to Grimms or Grabhorns for the chipping and then recycling.

In January of this year, which was mostly christmas trees for which \$1 was charged, we had well over 200 cars and pickups. In Feb. we had about 150 cars and pickups for which the minimum charge was \$3 and, depending upon the load in the pickup, it was \$3 minimum and \$2 per yard after that. In March 136 cars and trucks, April, because of bad weather, we had 101. Then May with 107, June with 230, July, even though it was the fourth of July weekend, 192 participants. We filled, in June and July both, four compactor trucks. (We ran) from 9 am to a little after 3 pm. The people are very appreciative of the service. We have people there to help them unload and to do the necessary dirty work of course. It is nice paved lot so people don't have to go through the dirt and mud like they do in some other places.

Because of the variation within Washington County and the metropolitan area in the collectors and the different kinds of franchising arrangement or non



franchising as the case may be, we feel that it is much better to leave these kinds of arrangements to the jurisdictions involved rather than try to mandate the same thing for every one. Local jurisdiction know the local conditions better. They know their local haulers and those people have worked very well together.

We do not recommend drop boxes unattended. The reason for that is that they attract all kinds of other waste including tires and some other undesirable material if they are unattended or even if they are overnight. They need to be attended in order to monitor what going into them. We do not recommend curbside yard debris recycling because material is piled along the curbs in most cases. The people picking it up, unless they take time to sweep, will leave a lot of leaves and things of that minor small stuff that can wash down into storm drains. Then that leads to an excess cost to city as well.

So, all of these things need to be attended, monitored and hauled to the processor chipping machine as soon as possible either at the end of the day or when that container is full. This then eliminates the possibility for the undesirable kinds of garbage being dumped.

The cities of the local jurisdictions can work out the sites where these things can take place. Such as in our case, the city owned parking lot or perhaps a school yard on a Saturday when there are not a lot of kids out or perhaps other public facilities and that would work better than drop boxes.

The charges for this, we feel, should be left to the jurisdiction and the haulers involved because cost can vary and in our case we see this as a break even on the part of the hauler. In order to do that, the charges must be as small as possible in order for the convenience of the public but at the same time must enable the hauler to recover his costs.

We don't believe that an arbitrary one mile radius is realistic. The reason for that is that on an attended basis you are going to cause a great deal of heavy overhead for monitoring as well as for the trucks.

One of the things we don't know, and I don't think anybody does, is the situation with the landscaping people. Where do they haul, how much they haul or when do they do it? We don't have many of those people, if any, using our once per month pick up. So that is one of the practices that we needed some sort of handle on. We need to know the volume in order to determine the total volume we are speaking of in the Portland Wasteshed. I have never seen any thing that gives a good estimate. In the City of Beaverton right now we are about 50:50 multifamily and single family. Multiple family, for the most part, do not produce yard debris. If they do it is handles by a landscaping service.

We strongly urge that people pay at the time they deliver. If you do it that way people who use the service will pay for it. Perhaps as volume increases then costs can go down but that is one of the things which is best left to local jurisdictions.

The processors, such as Grimms, McFarlane's and Grabhorn need to be consulted as to the volumes. I don't know at this point whether any

reports are required from them regarding volumes but they need to be consulted as to the volumes that they are capable of processing as well as the volumes that they are now receiving. I suppose if the volume does pick up they would be able to install another chipper or something of that sort. With the local haulers, we feel we can use the city newsletter for publicity. The publicity and reminders are all important. We found that out from the other recycling efforts. We think that rather than mandate the how why to local jurisdiction it needs to be left to them to determine the how and with whom these efforts will be implemented .

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# RECYCLING ADVOCATES

2420 S. W. Boundary Street  
Portland, Oregon 97201  
July 15, 1988

Department Of Environmental Quality  
811 S. W. Sixth Ave.  
Portland, Oregon 97204

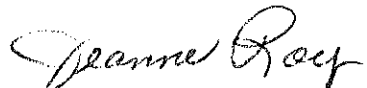
Subject: Yard debris rules

Dear Hearings Officer:

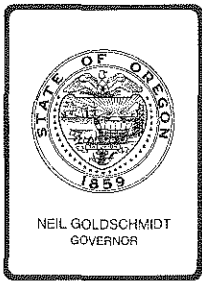
Recycling Advocates is very supportive of the yard debris rules. We have suggestions for only two changes. We think that collection or depots must include the summer months which are the highest in terms of yard debris generated. Also we do not think depots need to be within one mile of generators. We suggest at least one depot for every 20,000 residents. That would mean Portland would have a minimum of 20, West Linn would have 1, Beaverton would have 2.

We have one question on p. 6. Do you intend that the recovery standards be percentages of yard debris generated or "in the waste stream." Does "in the waste stream" include yard debris now being self-hauled to processors?

Yours truly,

  
Jeanne Roy, Chairman  
Recycling Advocates

Department of Environmental Quality  
Division of Environmental Quality  
RECEIVED JUL 18 1988



**Department of Environmental Quality** Attachment V  
9/9/88 EQC Meeting  
Agenda Item L  
811 SW SIXTH AVENUE, PORTLAND, OREGON 97204-1390 PHONE (503) 229-5696

**TO:** Environmental Quality Commission **DATE:** August 15, 1988

**FROM:** David K. Rozell  
Waste Reduction Manager

**SUBJECT:** Response to Comment Summary

Proposed Amendments and New Rules Relating to the Opportunity to Recycle Yard Debris, OAR 340-60-015 through 125.

**NOTE:** References to OAR sections in the "Comments" are based on the proposed rules as presented to the public hearing. References to OAR in the "Department's Responses" are based on the "new" proposed rules which have been modified as a result of the public hearing.

**COMMENT:** The recovery level for yard debris and the recovery performance standards as set out in OAR 340-60-120(4) should be linked to the yard debris processors capability to both process source separated yard debris and to market processed yard debris products.

**DEPARTMENT'S RESPONSE:** The Department agrees that the required level of recovery should not exceed either the ability of the processors to process the source separated yard debris or to market the products from the yard debris. OAR 340-60-120(7) links the minimum standard for recovery to the processors' capability to utilize source separated yard debris.

**COMMENT:** There is not a market for yard debris products. There should be a demonstrated long term market for yard debris products before collection is required.

**DEPARTMENT'S RESPONSE:** Both of the major yard debris processor have been marketing and distributing yard debris products for several years. Their market place has been increasing each year. Both major processor have marketed all of the yard debris product which they have produced. Neither processor has a surplus of composted yard debris product. Since the processor can not market more yard debris than they have available it is impossible for them to demonstrate that the actual market is larger than their actual production. However, it is reasonable to project market place growth based upon past growth and projected product demand. These rules do not require yard debris to be collected in quantities greater than the processors' capability to utilize source separated yard debris.(OAR 340-60-120(7)).

COMMENT: The performance standards in OAR 340-60-120 (4) are not necessary because of the yard debris processors capability exception in OAR 340-60-120 (5).

DEPARTMENT'S RESPONSE: The standards in OAR 340-60-125 (5) are intended to be minimum standards. If the processor's are not capable of utilizing material up to that minimum then OAR 340-60-120 (6) would apply. However, if there were an excess processor capability, programs would only required to achieve the minimum standard. The standard in OAR 340-60-125(5) are also intended to be used as goals for local or regional yard debris planning.

COMMENT: Recovery rate and market "demand" needs to be coordinated on a regional rather than local basis. Each jurisdiction can not determine or project the processor's capability to utilize yard debris when other jurisdictions will also be directing material to the same processor.

DEPARTMENT'S RESPONSE: Unless the jurisdiction obtains a commitment from the processor or is one of a limited number of suppliers to a processor it will be difficult to project actual processor capability to utilized yard debris directed from an individual jurisdiction. There is definitely a need for coordination between the processors and the jurisdictions on a regional basis. The rules address this issue by requiring yard debris recycling plans. These plans can be done individually, however, local governments are encouraged to plan and implement yard debris recycling as a joint, county, regional or single processor, effort. Provision for such planning is made in OAR 340-60-120(1) and (2).

The intent of the rules is, within the processors' capability to utilize source separated yard debris, to get as much yard debris as possible recycled as soon as possible using locally chosen planning and implementing units and methods.

COMMENT: Metro should coordinate the collection programs with the processors' capability to utilize the material. Metro should determine market demand and set the collection performance standards.

DEPARTMENT'S RESPONSE: The Department did not feel that it should identify Metro as the sole determiner of processors' capability to utilize yard debris or sole agency to establish recovery rate standards. The Department does not have the authority in these rules to force local governments to meet Metro's market demand levels or collection recovery rate standards without a commitment from local governments. The Department has provided for this in the new rules in OAR 340-60-120 (2).

Metro may have the authority to implement yard debris recycling programs or to force local governments to implement these programs through its waste reduction program and functional planning authority. The Department has forwarded this issue directly to the Commission.

COMMENT: In lieu of minimum standards, Metro proposes to serve as the agent responsible for phased implementation of the rules based upon analysis of the capacity of yard debris processors and market demand for compost.

DEPARTMENT'S RESPONSE: Metro is proposing to address yard debris recycling through a planning process to lay the necessary groundwork in the yard debris system for rule implementation. New language has been added to the rules in OAR 340-60-120(2) to clarify Metro's planning authority under these rules. Metro should also be considering yard debris recycling in its waste reduction program. This issue is being forwarded directly to the Commission for their consideration.

COMMENT: Several individuals testified and provided examples of how yard debris recycling programs work or do not work in specific situations.

DEPARTMENT'S RESPONSE: All of the programs discussed could be proposed as alternative methods under OAR 340-60-125(3). Some service providers and local governments have a strong preference for one type of yard debris recycling program or funding mechanism over another. There are also significant differences in the cost and effectiveness of different yard debris recycling programs. The rules allow for each local government to plan and implement their preferred program as long as it is linked to the processors' capability to utilize source separated yard debris and will meet the minimum performance standards set out in these rules.

COMMENT: Local governments will not be able to find the resources to pay for yard debris collection programs. There are problems associated with tax base funding and with charge for service funding.

DEPARTMENT'S RESPONSE: The Recycling Opportunity Act does not specify any funding mechanism for recycling services. It does not authorize the Department to designate or require a specific funding method. Different yard debris recycling programs will require different level of funding and will be better adapted to different funding mechanisms. At the request of the Department's yard debris advisory group, these rules do not address specific funding methods. There is a potential for local government to use any funding method available to them. Some methods which have been discussed include, tax base, service charge, solid waste collection rate increase, franchise fee adjustment, and curb tax. There is also the possibility for some form of regional funding source through tipping fee tax or payback, certification rebate or a tipping fee subsidy at yard debris processors.

COMMENT: It will not be possible to phase in yard debris collection programs. Once the collection program are offered they will jump to 60%-80% and flood the markets.

DEPARTMENT'S RESPONSE: Each local government should plan and implement a yard debris recycling program. The plan will describe how the program is linked to the processors' capability to utilize source separated yard

debris and how the program will meet the minimum performance standards. Local governments may not wish to implement programs which recover 80% of the yard debris until the processors are ready for the material. In that case they may want to implement lower service level programs or hold off implementation until it can be linked with the processors' capability. The yard debris recycling plan should indicate whether there are interim yard debris recycling programs. These choices will be identified and documented in the yard debris recycling plans. These plans can be for each individual jurisdiction, multiple jurisdictions, wastesheds or the entire region.

COMMENT: Yard debris is not a recyclable material because it decomposes naturally. If yard debris recycling is required people will not be able to have backyard compost piles.

DEPARTMENT'S RESPONSE: The fact that yard debris will decompose in nature does not exempt it from the definition of a recyclable material. Yard debris is a component of the solid waste stream and source separated yard debris can be collected and sent to a recycling facility. The determination of whether yard debris is a recyclable material is made by comparison of the cost of collection and disposal of yard debris to the cost of collection and recycling of yard debris.

There will be no prohibition of home composting. To the contrary, home composting activities should be encouraged. Yard debris which is home composted does not enter the solid waste stream, and should be considered the same as yard debris which is collected and sent to a processor. Therefore, home composting programs could be part of a community's yard debris recycling plan.

COMMENT: The word "utilize" as used in OAR 340-60-015 and OAR 340-60-120 is not defined.

DEPARTMENT'S RESPONSE: There is considerable confusion over the use of the word "utilize", "processor capacity", "market demand", "demand". The wording in the rules has been changed to clarify this issue. New language has been added to the rules, OAR 340-60-120 (3) states " As used in this rule and in OAR 340-60-125, the term "Processors capability to utilize source separated yard debris" means the ability of a processor or group of processors to accept, handle, store, and process source separated yard debris into a product and to sell or distribute that product within one year or on a schedule approved or set by the Department."

COMMENT: The proposed Metro municipal solid waste composting plant will flood the compost market and the yard debris processors will not be able to sell their product and will be forced to stop accepting yard debris from the public.

DEPARTMENT'S RESPONSE: The impact of the Metro municipal solid waste (MSW) composting facility remains unknown. Metro testified that the present yard debris compost production is less than 50,000 cubic yards. They project

that in 1991 there will be 84,000 cubic yards of sewage sludge compost and over 200,000 cubic yards of MSW compost produced. Yard debris processors are concerned that both of these products will be subsidized at the front end and may be dumped into the existing yard debris compost market place.

If the yard debris processors are forced to close, the yard debris they have been processing might end up being composted through the MSW facility at a much higher tipping fee than is presently being charged at the yard debris processors. If there is a market for over 200,000 cubic yards of msw compost there should have been a market for an additional 50,000 to 100,000 yards of yard debris compost. This is a regional issue which Metro needs to address in its regional waste reduction plan.

COMMENT: There is no factual basis that the 80% performance standard can be achieved.

DEPARTMENT'S RESPONSE: The 80% level was set as the top performance standard because it has been reported by local governments and the solid waste collection industry as the recovery level for the present weekly source separated yard debris on-route collection programs. It also relates closely to the regional yard debris waste reduction rate set by Metro in their regional waste reduction plans.

COMMENT: Postpone adoption of the rules until more information is available from Metro or until the jurisdictions can get together with Metro to work out a regional approach to yard debris recycling.

DEPARTMENT'S RESPONSE: The Department is referring this issue directly to the Commission. Metro has done extensive work on yard debris compost marketing and planning for yard debris recycling. However, Metro has limited ability to deal with collection of yard debris. Metro has been developing waste reduction plans since 1980. Yard debris recycling has been both included and excluded from different plans and implementation programs.

Metro is now working on a market study for yard debris, sewage sludge and MSW compost products. They have proposed to develop a planning process to solve the yard debris collection, processing and product marketing situation. The Department has clarified Metro's role in yard debris planning under these rules in OAR 340-60-120 (2). Metro's role in yard debris recycling may well be best addressed in a discussion of the implementation of their waste reduction program.

COMMENT: Data collection to prepare the yard debris recycling plans will be a burden on local governments.

DEPARTMENT'S RESPONSE: The Department feels that the data requested is only that which would be necessary to implement a yard debris recycling program. Local governments which do not wish to prepare their own plans can join together with other jurisdictions or with Metro in a combined or regional plan.



COMMENT: The one mile radius for recycling depot coverage is too restrictive. It should be based on population served. One depot per 20,000 or 25,000 people has been suggested.

DEPARTMENT'S RESPONSE: A population based service area will be forwarded to the Commission as an alternative to the one mile service area. It should be noted that with fewer collection centers it will be more difficult to meet recovery rate performance standards. If the one mile radius is not appropriate to a particular jurisdiction they can propose their own arrangement under OAR 340-60-125(3).

COMMENT: What is the basis for the performance standards.

DEPARTMENT'S RESPONSE: The performance standards would be based on the total yard debris generation rate for the area. Present recovery and home composting efforts would be included in the recovery rate. The Department or Metro could develop a general per capita yard debris generation rate to use as a starting point for the planning process.

COMMENT: Metro should be the agency responsible for the phased implementation of yard debris recycling. Metro could develop a plan outlining collection strategies developed by local governments for the collection industry.

DEPARTMENT'S RESPONSE: The Department would need a much more specific proposal from Metro as to how they would be responsible for implementation. There would need to be commitments from the local governments which covered the funding and collection authority issues. There would also need to be a clear commitment from Metro to be responsible for the implementation of yard debris recycling programs and meeting the performance standards. The Department does not have the authority to require local governments to coordinate with Metro on this issue. It is possible, however, that if local governments or affected persons in a watershed failed to provide the opportunity to recycle yard debris the Department could require a joint program with Metro. The Department has clarified Metro's role in yard debris recycling planning in OAR 340-60-120 (2).

RULEMAKING STATEMENTS

for

Amendments and Proposed New Rules Pertaining to the Opportunity to Recycle

OAR Chapter 340, Division 60, Sections 015 through 125

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

STATEMENT OF NEED:

Legal Authority

ORS 459.170 requires the Commission to adopt rules and guidelines necessary to carry out the provisions of ORS 459.165 to 459.200. Yard debris has been identified as a principal recyclable material in five wastesheds. The Commission is amending rules and adopting new rules which are necessary to carry out the provisions of the Act relating to providing the opportunity to recycle yard debris.

Need for the Rule

Yard debris represents a significant portion of the solid waste stream presently going to disposal in the Portland metropolitan area. The Environmental Quality Commission has identified source separated yard debris as a principal recyclable material in the five Portland area wastesheds. Local governments and other affected persons are now required to determine if yard debris meets the definition of a recyclable material at the specific locations where on-route or depot collection systems for recyclable materials are required. Additional rules from the Commission will clarify the responsibility of each of the affected persons, provide a mechanism to balance the level of collection of yard debris to the potential demand for yard debris at processing facilities, and clarify the range of acceptable alternative methods for providing the opportunity to recycle yard debris. The yard debris recycling programs which will be developed under these rules would result in a significant reduction in waste disposal at land disposal sites.

Principal Documents Relied Upon

- a. Oregon Revised Statutes, Chapter 459.
- b. Oregon Administrative Rules, Chapter 340, Division 60.
- c. Technical Report: Feasibility Analysis of Yard Debris Collection Alternatives, Metropolitan Service District, January 1988.
- d. Metro Marketing Plan for Yard Debris Compost, Metropolitan Service District, November 1986.
- e. Market Analysis of Portland Metropolitan Area Yard Debris, Metropolitan Service District, September 1986.

- g. "Economics of On-Route Collection of Yard Debris," Metropolitan Service District, December 1985.
- h. "A Demonstration Project for Recycling Yard Debris," Metropolitan Service District, March 1983.

FISCAL AND ECONOMIC IMPACT STATEMENT:

This action will have no significant fiscal impact on the Department. It will have an economic impact on local government, private businesses and the public.

Separate systems for the collection of source separated yard debris will have costs associated with them. These costs will have to be paid by the yard debris generator, solid waste generator or appropriate local government. The amount of cost will vary depending on the system of collection and the type of regulation and rate control exercised by local government. Ultimately, the public will pay additional costs of new yard debris collection systems.

In many cases the collection and recycling of yard debris can be provided at less cost to the generator of that material than collection and disposal of the same material as solid waste. These savings over the cost of disposal should be experienced by the public in lower solid waste collection and disposal costs.

Small businesses will also be affected by any change in the collection system for yard debris. Competition between small businesses for this new level of service will cause some companies to benefit, potentially at the expense of others. There should be a significant net increase in business activity in the collection of yard debris.

Yard debris processors should also benefit from the increased levels of material recovery. Finally, there should be an increase in the availability of processed yard debris products. This may result in a price reduction on this material to the public.

LAND USE CONSISTENCY STATEMENT:

The proposed rules appear to affect land use and appear to be consistent with statewide planning goals.

With regard to Goal 6 (air, water and land resources quality), the rules provide for recycling of solid waste in a manner that encourages the reduction, recovery and recycling of material which would otherwise be solid waste, and thereby provide protection for air, water and land resource quality.

With regard to Goal 11 (public facilities and services), the rules provide for solid waste disposal needs by promoting waste reduction at the point of generation, through beneficial use and recycling. The rules also intend to assure that current and long-range waste disposal needs will be reduced by the provision of the opportunity to recycle. The rules do not appear to conflict with other goals.

Public comment on any land use issue involved is invited and may be submitted in the manner described in the accompanying NOTICE OF PUBLIC HEARING.

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

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

WRB:b  
YB5173.R  
6/10/88

*Oregon Department of Environmental Quality*

## **A CHANCE TO COMMENT ON...**

Proposed Rules Related to Providing the Opportunity  
to Recycle Source Separated Yard Debris

Date Prepared: 5/12/88

Hearing Date : 7/13/88

Comments Due : 7/14/88

**WHO IS** Owners and operators of solid waste collection and disposal  
**AFFECTED:** businesses and their customers. Operators of yard maintenance services. Operators of yard debris processing facilities. Local governments. The public who generate yard debris. Individuals involved in the implementation of the Oregon Recycling Opportunity Act (ORS 459.005 to 459.285).

**WHAT IS** The Department proposes to amend Oregon Administrative Rules, Division 340, Section 60 to set standards for yard debris recycling programs, initiating a process for the collection of source separated yard debris from generators. Implementation would begin January 1, 1989.  
**PROPOSED**

**WHAT ARE THE** These rules assign the responsibility for yard debris recycling to local government. They set criteria for determining when an alternative method of providing the opportunity to recycle is acceptable. They also outline a planning and implementation process for yard debris recycling programs. The rules contain an enforcement procedure for jurisdictions which fail to provide the opportunity to recycle yard debris.  
**HIGHLIGHTS:**

**HOW TO** Public hearings will be held before a hearings officer at:  
**COMMENT:**

2:00 p.m. and 7:00 p.m.  
Wednesday July 13, 1988  
Hearing Room - 2nd Floor  
Portland Building  
1120 S.W. 5th Avenue  
Portland, Oregon

Written or oral comments can be presented at the hearing. Written comments can also be sent to the Department of Environmental Quality, Hazardous and Solid Waste Division, 811 S.W. 6th Avenue, Portland, Oregon 97204, but must be received no later than 5:00 p.m., Thursday, July 14, 1988.

(OVER)



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

11/1/88

**FOR FURTHER INFORMATION:**

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

Copies of the complete proposed rule package may be obtained from the DEQ Hazardous and Solid Waste Division in Portland (811 S.W. 6th Avenue). For further information contact William R. Bree at 229-6975.

**WHAT IS THE  
NEXT STEP:**

The Environmental Quality Commission may adopt the amendments and new rules identical to the ones proposed, adopt modified amendments and rules as a result of testimony received or may decline to adopt any changes to the existing rules. The Commission may consider the proposed amendments and new rules at its meeting on August 19, 1988.

YF3027.D

DIRECTOR'S PARAGRAPH

Agenda Item No. M:

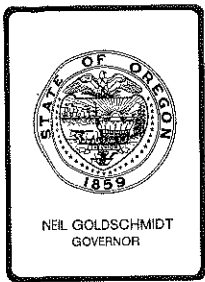
Request for Approval of Portland  
Wasteshed Recycling Report, Proposed  
Recommendations, and Cancellation of  
EQC Order No. WR-87-01.

On March 13, 1987 the EQC directed the City of Portland to provide the opportunity to recycle by June 1, 1987 and report back to the Commission by July 1, 1988. The City has submitted a report which has been reviewed by the Department and several external reviewers. This agenda item recommends approval of the Portland Wasteshed Recycling Report and proposed recommendations, and cancellation of EQC Order No. WR-87-01.

A public hearing on this item was held on August 3, 1988. The hearings officer's report is attached to the staff report on this item.

David Rozell, Waste Reduction Manager is present at the meeting to answer any questions which you might have.

David K. Rozell:adk  
229-6165  
8/19/88  
portland report



## Environmental Quality Commission

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

### EXECUTIVE SUMMARY

To: Environmental Quality Commission  
From: Director *Rupcia Taylor*  
Subject: Agenda Item M, September 9, 1988 , EQC Meeting

Request for Approval of Portland Wasteshed  
Recycling Report, Proposed Recommendations,  
and Cancellation of EQC Order No. WR-87-01.

### BACKGROUND

The Recycling Opportunity Act, adopted by the 1983 Legislature, requires that the opportunity to recycle be provided to all persons in Oregon by July 1, 1986. On September 12, 1986 the City requested, and the Environmental Quality Commission granted a City of Portland compliance extension to January 31, 1987. In January, 1987 the City requested a second extension which was denied by the EQC. At that time the EQC also directed the Department to begin enforcement proceedings.

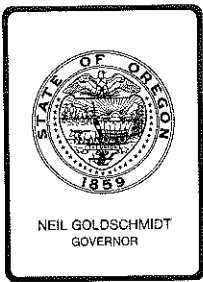
The Department prepared a report on February 9, 1987 disapproving the Portland Wasteshed Recycling Report. A public hearing held on February 17, 1987 produced testimony confirming the Department's findings. On March 13, 1987 the EQC issued Order No. WR-87-01 directing the City of Portland to provide the opportunity to recycle by June 1, 1987. The Order required the City to submit a written report by July 1, 1988 responding to the stipulations in the EQC Order. The City has submitted this report and the Department has reviewed it and conducted a public hearing on our analysis.

### SUMMARY OF KEY ISSUES

The primary issues before the EQC are:

- a) Is the City of Portland currently providing the opportunity to recycle as statutorially required?
- b) Has the City of Portland complied with the stipulations in EQC Order No. WR-87-01?
- c) Will the City address the program recommendations delineated by the Department without the use of a stipulated order?





## Environmental Quality Commission

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

### MEMORANDUM

To: Environmental Quality Commission

From: Director *Rydeco Taylor*

Subject: Agenda Item M, September 9, 1988 , EQC Meeting

Request for Approval of Portland Wasteshed Recycling Report, Proposed Recommendations, and Cancellation of EQC Order No. WR-87-01.

### Background and Problem Statement

The Recycling Opportunity Act, adopted by the 1983 Legislature, requires that the opportunity to recycle be provided to all persons in Oregon by July 1, 1986. ORS 459.005 through 459.385 and OAR 340-60-005 through 340-60-085 delineate the specific requirements for implementation of this program.

On September 12, 1986 the City of Portland requested and the Environmental Quality Commission granted a compliance extension to January 31, 1987. The City was considering a contract option which would have used three to six contractors to provide monthly curbside collection of recyclables. In October, 1986, after hearing arguments from the garbage haulers who favored a permit option, the City Council decided not to authorize issuance of the request for bids.

In January, 1987 Portland requested a second extension in order to restudy the City's recycling options. The EQC denied that request on January 23, 1987 and directed the Department to begin enforcement proceedings.

The Department prepared a report on February 9, 1987 disapproving the Portland Wasteshed Recycling Report. The Department found that the opportunity to recycle was being provided at the disposal sites and within the City of Maywood Park, but it was not being provided to all persons within the City of Portland and its urban service boundary. A hearing was held on February 17, 1987 to accept public comment on the Department's determination. The hearing testimony confirmed the Department's findings.

On March 13, 1987 the EQC issued Order No. WR-87-01 (Attachment I) ordering the City of Portland to provide the opportunity to recycle by June 1, 1987. The Order required the City to submit a written report (Attachment II) by July 1, 1988 responding to the ten stipulations in the EQC Order.

Department staff analyzed the City's report in relation to statutory requirements for providing the opportunity to recycle and in relation to the stipulations of EQC Order WR-87-01. The Department found the City to be in compliance with statutory requirements and with the stipulations of the EQC Order. Specific comments on the order stipulations are found in Attachment III.

A Public Hearing was held on August 3, 1988, with written comments due on August 5, 1988. The City of Portland and Cloudburst Recycling were the only two interested parties attending the public hearing. Written comments were received from the City of Portland, Jeanne Roy, Oregon Sanitary Service Institute and the Oregon Environmental Council. The Hearings Officer Report and Analysis of Comments Summary are included as Attachments IV and V.

#### ALTERNATIVES AND EVALUATION

The EQC may wish to take one of the following alternative actions.

1. Disapprove the June 30, 1988 Portland Wasteshed Recycling Report for not providing the opportunity to recycle as defined is ORS 459, and leave EQC Order No. WR-87-01 in place.

The Department believes the opportunity to recycle is being provided, that the stipulation of EQC Order No. WR-87-01 have been met and that it has served the intended purpose in getting the City of Portland's recycling program started.

2. Approve the Portland Wasteshed Recycling Report, as submitted, with no recommendations for program improvement and cancel the EQC Order.

The Department believes that, although the opportunity to recycle is being provided, there is room to improve the existing program, but that the EQC Order is not necessary or appropriate.

3. Approve the Portland Wasteshed Recycling Report, with recommendations for program improvement and cancel the EQC Order.

The Department believes this approach is warranted because the stipulations of ORS 459 and EQC Order No. WR-87-01 are being met, and the City of Portland has expressed a willingness to work on the suggested recommendations (see Item 3 in "Summation").

SUMMATION

1. The City of Portland is now offering the opportunity to recycle, as defined in ORS 459, to Portland residents.
2. The stipulations of EQC Order No. WR-87-01 have been met by the City of Portland.
3. The current system being used by the City to deliver the opportunity to recycle is somewhat complicated. The City shall respond to the five program recommendations delineated below in its written report due to the Department on February 15, 1989.
  - a. Maintain the current practice of requiring all permittees to submit customer lists, including names and addresses, to the City. These lists shall be updated annually.
  - b. While the City is spending a substantial amount of money on promotional and educational activities, there is no indication that the approaches being used have been evaluated in terms of public impact. The City should also make an effort to dovetail promotional/educational activities with Metro in order to maximize the impact of promotional dollars.
  - c. City staff should work with DEQ staff to analyze Portland's participation rates and tonnages recovered in comparison with other programs nationally. While the household participation percentage and the tonnage recovered figure for the first year of this program exceeded preliminary estimates, the City of Portland is now in a position to establish specific goals in these areas and delineate how the program direction will achieve those goals. The City should set program goals in terms of percent reduction in the waste stream or tonnage of materials recovered, and not just participation rate.

The City should evaluate a variety of program options to determine the approach with the best potential for improving participation and tonnage recovered. The City's publicly stated goal for this next year is 40 percent participation, yet one hauler (Alpine Disposal) has already achieved a 56 percent participation, due partly to offering weekly pick-up. The City should specifically evaluate the option of requiring a weekly recyclables pick-up program, under the existing permit system, to improve participation percentage and tonnage recovered.

d. The City should evaluate how to best deliver the opportunity to recycle to multi-family residences and commercial solid waste generators. The Department will work with the City on this effort over the next year.

e. The City should re-evaluate its enforcement program to ensure that problems with delivering the opportunity to recycle are corrected quickly.

In summary, the Department desires to work cooperatively with the City of Portland in maximizing the effectiveness of their recycling program. EQC Order No. WR-87-01 was necessary and effective in getting the program started, however, the Department believes that the City has made a firm commitment to work with DEQ on recommendations for program improvement and that the EQC Order is no longer necessary.

**DIRECTOR'S RECOMMENDATION**

Based on the summation, it is recommended that the Commission approve the June 30, 1988 Portland Wasteshed Recycling Report with the delineated program recommendations to be addressed in the City's next required report, and cancel EQC Order No. WR-87-01.

Fred Hansen  
Director

Attachments

- I. EQC Order No. WR-87-01
- II. Portland Recycling Report
- III. Department Analysis of City's Compliance with EQC Order
- IV. Hearings Officer Report and Written Comments
- V. Analysis of Comments Summary

Alan Kiphut  
229-6823  
8/19/88

6

ATTACHMENT I

1 ENVIRONMENTAL QUALITY COMMISSION, ) ENVIRONMENTAL QUALITY  
OF THE STATE OF OREGON, (Commission) ) COMMISSION ORDER  
2 ) No. WR-87-01  
3 v. )  
4 )  
5 CITY OF PORTLAND (City) )  
6 )

I

7 Pursuant to ORS 459.185(6), the Commission makes the following  
8 findings:

9 1. ORS 459.180 requires that the affected persons within a wasteshed  
10 shall implement the opportunity to recycle within the wasteshed not later  
11 than July 1, 1986.

12 2. The City is an affected person within the Portland wasteshed.

13 3. The City received an extension to January 31, 1987 for providing  
14 the opportunity to recycle. The conditions of the extension were not met  
15 and the opportunity to recycle is still not provided to every person in the  
16 wasteshed.

17 4. On February 9, 1987 the Department disapproved the Portland  
18 Wasteshed Recycling Report based on the findings that (a) the opportunity  
19 to recycle is not being provided to all persons within the City's urban  
20 services boundary; and (b) an effective public education and promotion  
21 program which meets the requirements of OAR 340-60-040 has not been  
22 implemented within the City's urban services boundary.

23 5. Pursuant to ORS 459.185(5) which requires the Commission to hold  
24 a public hearing within the affected area of the wasteshed, EQC Hearings  
25 Officer Linda Zucker held a public hearing on February 17, 1987 at  
26 811 S. W. Sixth Avenue, Portland. The testimony verified the

1 Department's findings that the opportunity to recycle is not provided to  
2 every person within the Portland wasteshed.

3 6. Based on the Department's findings as stated in the Disapproval  
4 of Wasteshed Recycling Report dated February 9, 1987 and upon the hearing  
5 record, the Commission has determined that the opportunity to recycle is  
6 not being provided within the Portland urban services boundary.

7 7. Ordinance No. 159457, adopted by the City on February 26, 1987,  
8 does not require a recycling program which provides recycling collection  
9 service and notification to every garbage collection customer within the  
10 City's urban services boundary. The program has not yet been implemented,  
11 and even if it were, it would not provide the opportunity to recycle as  
12 required by law.

13 II.

14 Based on these findings, it is hereby ordered that:

15 1. By June 1, 1987, the City shall ensure that at least monthly  
16 recycling collection service is provided to every garbage service customer  
17 within the Portland urban services boundary.

18 2. The City shall manage the recycling promotion and education  
19 program. The City shall design and produce, or hire a contractor to design  
20 and produce, promotional materials as required by OAR 340-60-040. The City  
21 shall also provide educational and promotional materials to local media and  
22 community organizations. The City shall mail promotional materials to each  
23 garbage service customer within the Portland urban services boundary, and  
24 require each permittee to deliver promotional materials to his or her  
25 customers.

26 ///

1           3. By May 13, 1987, the City shall mail an announcement of the  
2 beginning of the City's recycling program and cause the contractor(s) or  
3 permittees to distribute to their customers' doors the initial notification  
4 of recycling service which will be available to that customer beginning in  
5 June. The notice shall include:

6           a. reasons why people should recycle;

7           b. the name, address and telephone number of the person providing  
8 on-route collection;

9           c. a list of the materials that can be recycled and instructions  
10 for preparation of those materials;

11          d. a listing of depots for recyclable materials serving the area;  
12 and

13          e. a City telephone number for customer information and complaints.

14          4. By June 1, 1987, the City shall design and produce additional  
15 educational materials, including but not limited to a notice for customers  
16 who have improperly prepared recyclable materials.

17          If the City requires each garbage hauler permittee to provide  
18 recycling collection service, then it is also ordered that:

19          5. The City shall require all permittees to submit to the City,  
20 customer lists, including names and addresses. These lists shall be  
21 required to be updated at least quarterly.

22          6. By May 13, 1987, the City shall establish a hotline telephone  
23 number for customer information and complaints. The telephone number shall  
24 be listed on all promotional materials distributed to each garbage service  
25 customer.

26          7. The City shall establish requirements for generator preparation

1 of recyclable materials. Permittees shall be required to collect and  
2 recycle all recyclable materials that are prepared according to the City  
3 specifications.

4 8. By June 1, 1987, the City shall establish an enforcement program  
5 that ensures that all permittees are providing the required recycling  
6 collection service and distributing promotional materials as directed by  
7 the City. The enforcement program shall not rely entirely on customer  
8 complaints. The City shall institute a continuous system of random checks  
9 to verify permittee compliance.

10 9. The City shall require permittees to submit monthly reports on  
11 volumes of material recycled and number of setouts by generator.

12 10. By July 1, 1988, the City shall submit a report to the Commission  
13 on the first year of the recycling program. The report shall include an  
14 explanation of all program features, including but not limited to number of  
15 collectors, the types and number of collection vehicles, all promotional  
16 activities, number of complaints, enforcement procedures and actions,  
17 volumes recycled and number of setouts. The Commission reserves the right  
18 to revise its order if, upon review of the Portland recycling program's  
19 performance over the first year, the Commission determines that the program  
20 does not achieve recycling rates at least comparable to recycling rates  
21 elsewhere in the state and the nation.

22 ///

23 ///

24 ///

25 ///

26 ///



1 IT IS SO ORDERED:

2

3

ENVIRONMENTAL QUALITY COMMISSION

4

5

MAR 13 1987

*James E. Petersen*  
James E. Petersen, Chairman

6

Date

8

9

3/13/87

*Mary V. Bishop*  
Mary V. Bishop, Member

10

Date

12

13

MAR 13 1987

*Wallace B. Brill*  
Wallace B. Brill, Member

14

Date

16

17

MAR 13 1987

*Arno H. Denecke*  
Arno H. Denecke, Member

18

Date

20

21

MAR 13 1987

*A. Sonia Buist*  
A. Sonia Buist, M.D., Member

22

Date

24

25

26

Page



Hazardous & Solid Waste Division  
Dept. of Environmental Quality

RECEIVED  
JUN 30 1988

June 30, 1988

Michael Downs, Administrator  
Hazardous and Solid Waste Division  
Department of Environmental Quality  
811 SW 6th Avenue  
Portland, OR 97204

1120 S.W. 5th Avenue  
Room 400  
Portland, Oregon  
97204-1972  
(503) 796-7740

Dear Mike:

Enclosed please find a report on the first year of the City of Portland recycling program. This report responds to Environmental Quality Commission Order No. WR-87-01 and follows the outline of items provided in rule No. 10 of the Order.

The City of Portland is pleased at the level of progress in our recycling program as we have exceeded projections with a 20.5 percent participation rate and 16,444 tons recycled. We believe further progress can be achieved and have increased the FY 1988-89 recycling program budget by more than 32 percent to include several innovative projects.

In addition, we request your attention to the Environmental Quality Commission requirement that Portland waste haulers update their customer lists on a quarterly basis. The City of Portland requests a change to an annual reporting process for customer lists and discusses this subject on page 4 of the enclosed report.

I also want to recognize two of our employees, Delyn Kies and Bruce Walker for their excellent work in our recycling program. Delyn's role in helping develop the program was especially valuable and Bruce's management of our recycling activities during the past year has been a major factor in the programs success.

We look forward to working with you in the future and would be pleased to answer any questions you may have regarding our recycling program.

Sincerely,

John Lang, P.E.  
Administrator

JML:BW/11d  
167:letter(deq/eqc)

c: Commissioner Bob Koch

CITY OF PORTLAND  
ENVIRONMENTAL SERVICES



City of Portland Recycling Program  
First Year Report  
June 30, 1988

Executive Summary

The City of Portland implemented a multi-material recycling collection program on June 1, 1987. Waste hauler permits are issued by the City and require haulers to offer recycling collection service to their customers. In the first year of the program, 16,444 tons of recyclables were collected and an average of 20.5 percent of Portland households participated every month, both of which exceed projections for the program.

The City undertakes monitoring, enforcement and promotion activities, which are funded by a tonnage fee that is billed to solid waste collected by Portland waste haulers. The City recycling program has two full-time staff and a first year budget of \$250,000. Next year's recycling budget has been increased over 32 percent to nearly \$332,000.

The City has undertaken a major promotion effort to increase recycling participation at households and businesses. Over \$143,000 was spent on recycling promotion, including the purchase of television, radio and print advertising. The City mailed a recycling brochure to all Portland residences and waste haulers delivered two recycling notices to their customers. Promotion events, particularly a recycling reward contest, received substantial media coverage this past year.

The City requests a minor modification to the rule requiring quarterly submission of waste hauler customer lists. The City requires waste haulers to submit customer lists as part of the annual permit process and requests continuation of the annual reporting process from the State.

Recycling operations, promotion activities, enforcement procedures, recovery levels, program funding and future activities are addressed in this report. Additional information pertinent to the recycling program is included in an appendix.

### Operations

Portland waste haulers are required to offer their customers a minimum service level of weekly collection of newspaper and monthly curbside collection of glass bottles, tin cans, corrugated cardboard, aluminum, ferrous metals, other non-ferrous metals and used motor oil. Office paper is also collected from commercial accounts. The recycling requirements for waste haulers, including data reporting, telephone system and public promotion requirements, are provided in the appendix.

There are 125 waste haulers that are issued permits by the City of Portland. Of these companies, 109 waste haulers provide garbage and recycling service to residential customers (the 16 remaining companies are drop box haulers that provide service to commercial customers). The recycling collection schedules for residential waste haulers are included in the appendix.

The most common vehicles used for recycling collection within the City of Portland are garbage trucks and pickup trucks. Waste haulers use side racks and/or front bumper boxes on their garbage trucks to collect newspaper on a weekly basis from their customers. The 33 waste haulers providing weekly multi-material recycling collection service also use racks or boxes on their garbage trucks for on-route storage. The 76 waste haulers providing monthly multi-material recycling collection service use separate vehicles. Pickup trucks are used by 43 waste haulers, 14 of which also pull a trailer for additional capacity. There are 9 specialized recycling vehicles, 2 vans and one flatbed truck used for recycling collection.

### Promotion

The most important component of the City's efforts to increase recycling participation is a diverse and sustained promotion program. The City has utilized promotional events, media advertising, distribution of printed materials and presentations at citizen group meetings. The City allocated \$85,000 to a promotion contractor and spent an additional \$58,000 on printing and mailing costs.

The City has delivered its recycling message to the public through a variety of promotion approaches that are tied together by the "Yes We Can Can" theme. Two television spots were produced and aired in the past year. Radio and print advertising was also purchased by the City. A recycling brochure was mailed to all households and waste haulers deliver City-printed recycling notices to their customers twice per year. The City also staged a unique contest where a \$1,000 reward was given to a randomly selected resident who was found to have the least amount of recyclables in her trash. A detailed listing of all promotion activities is included in the appendix along with a video-cassette recording of the television spots.

#### Enforcement

The City enforces recycling requirements to assure that waste haulers offer recycling service to their customers. In the first year, two waste haulers have received notices of violation and have paid a total of \$700 in fines to the City. The City undertakes random checks of waste hauler recycling operations and follows up on complaint calls.

An efficient telephone system has been established to answer calls from citizens regarding the City's curbside program. Besides handling calls to the City recycling office, a special arrangement allows the Metro Recycling Information Office to transfer callers directly to the City. In addition, haulers are required to provide a phone answering system to answer customer calls regarding recycling.

Complaints from citizens regarding recycling service are handled by City staff for prompt resolution and are maintained in monthly records. During the program's first year, the City received 327 complaint calls from citizens, most commonly for missed recycling collections or not receiving recycling information from their waste hauler. Recurring complaints concerning particular permittees or complaints of a serious nature are investigated for the possibility of enforcement action. A summary of complaint calls received by the City and the City recycling enforcement policy are included in the appendix.

The City requires waste haulers to submit customer lists as part of the annual permit process. The Environmental Quality Commission has required that the City obtain hauler customer lists on a quarterly basis. The present system requiring annual submittal of customer lists works well and it appears that quarterly updates will not assist regulation of refuse collection or recycling collection. Therefore, the City requests a review of this quarterly reporting requirement and seeks a finding in favor of the annual process.

#### Recovery Levels

Portland waste haulers recovered 16,444 tons of recyclable materials and 24,574 gallons of used motor oil during the first year of the program. These quantities are verified by sales receipts submitted to the City after haulers market the materials. Newspaper and corrugated cardboard were the materials collected in the largest quantities. A detailed breakdown of monthly recovery levels for each material is included in the appendix.

During the program's first year, an average of 20.5 percent of Portland households participated every month. This figure exceeds the 15 percent participation rate projected by the City's private consultant prior to the onset of the program. Waste haulers are required to report the number of recycling setouts each month and the City calculates an overall participation rate for the program. Of the 145,100 garbage customers in Portland, an average of 29,717 households set out recyclables each month. The highest monthly participation rate achieved was 22 percent in March.

#### Program Funding

The City recycling program budget during the first year was \$250,097 and includes two full time staff. To make further gains in the recycling program, the FY 1988-89 budget has been approved for \$331,821, a 32.7 percent increase. The tonnage fee billed to Portland waste haulers for the purpose of funding the program will increase from \$0.73 per ton to \$0.99 per ton effective July 1, 1988.

### Future Activities

The City will be undertaking activities during the upcoming year to substantially boost recycling participation rates. A sign-up campaign will be launched in July with postage-paid reply cards delivered by waste haulers to their customers and sign-up coupons run in newspaper advertisements. A community outreach project will canvass Portland households to explain and promote curbside recycling. Modeled after successful programs in other cities, this project will make personal contacts at households by trained citizens. An apartment recycling youth project will be aimed specifically at increasing recycling participation in apartment buildings. The project will use six teenagers to survey building managers, inform tenants of recycling opportunities and monitor recycling rates at selected apartments. The City will also increase the number of presentations made to schools and civic groups.

174:report  
(1styeareqc)

City of Portland Recycling Program  
First Year Report

June 30, 1988

**APPENDIX**

1. Waste Hauler Recycling Requirements
2. Recycling Collection Schedules
3. Education, Promotion and Notification
4. Recycling Enforcement Policy
5. Complaint Call Summary
6. Recovery Levels



REFUSE COLLECTION PERMIT  
REQUIREMENTS AND CONDITIONS  
Imposed per City Code Chapter 17.102.085(1)

Recycling Collection Requirements

1. Service Area. The Permittee shall drive by and provide recycling collection service to all solid waste customers. Recyclable material set out by Permittee's own customers shall be picked up at least monthly. In addition, Permittees shall collect newspapers for recycling from their solid waste customers residing in four-plex and smaller residences when making the regularly scheduled collection of their customer's solid waste. No customer will be deleted from a recycling route list because of infrequent participation.
2. Collection Hours. Recycling collection service by all vehicles will begin no earlier than 8:00 am. All collections for each scheduled day shall be completed by 5:00 pm. Customers shall be asked to set out recyclable materials by 8:00 am on the scheduled day of collection. In the case of weekly newspaper and weekly multi-material recycling collection on the solid waste collection route, collection and set-out may be allowed prior to 8:00 a.m.
3. Frequency of Collection. Collection schedules shall have a frequency of at least once per month on a day-certain basis for all materials and once a week on the day of garbage pick up for newspapers from residents in four-plexes or smaller units.
4. Compliance with Driving and Hauling Laws. Collection and transportation of all recyclable material shall be accomplished in accordance with all existing laws and ordinances and future amendments thereto, of the regulatory agencies of the State of Oregon and local governing bodies and departments.
5. Point of Collection. Collection shall be made at a location determined by the Permittee or, at the request of the Customer, arrangement shall be made for a more convenient location. If at curbside that shall mean within five feet of the sidewalk side of the curb or edge of the street.
6. Data Collection and Reporting. The Permittee shall collect and report to the City the following information:
  - A. A list of solid waste customers by name (if available) and address shall be submitted each year by June 1, and any deletions and additions shall be reported as requested.
  - B. Information on any changes in recycling service, frequency and location of collection, storage and marketing procedure, and contact information for the Permittee and subcontractor as they occur.

- C. Number of customers setting out any materials, the dates of set out, and tonnage for each of the recyclable materials sold for recycling, computed on a monthly basis. Copies of receipts of sale of materials shall also be submitted.

This data shall be submitted in a monthly report on forms supplied by the City and submitted to the City by the 15th day of the following month. Documentation of the information submitted in the monthly reports shall be available to the City on request.

All data and program information shall be retained for period of three (3) years. The City has the right to request any additional relevant information from the Permittee as may be desired for the program.

7. Collection of Source Separated Recyclable Material. The Permittee shall pick up the following materials set out for collection:
- A. Newspapers. Consists of bagged, boxed or securely twined dry newspapers, not sunburned, and not contaminated with other materials or other types of paper.
  - B. Glass Bottles. Consists of rinsed whole bottles and jars, color separated. Cookingware, plate glass, safety glass, light bulbs, ceramics and non-glass materials shall be excluded. Caps, lids, rings and labels may remain on the bottles. Individual Permittees may waive the color separation requirement for their customers.
  - C. Tin cans. Cans must have labels and organics removed, both ends removed if possible, and be flattened.
  - D. Corrugated Containers. Flattened. Includes brown paper bags.
  - E. Aluminum. Including aluminum cans, containers and foil with organics removed.
  - F. Ferrous Scrap. Limited to 30" in size in any direction. Appliances, car parts, and bicycles are not required.
  - G. Non-Ferrous Scrap. Limited to 30" in size in any direction.
  - H. Used Motor Oil. In a leak proof plastic or metal container with a screw on cap.

- I. Hi-grade office paper. Consists of sorted white and colored ledger and computer print-out, free from contaminants such as self-stick labels, blue prints, envelope windows, and food wrappers. Kept clean and dry in bags, boxes or barrels. Collection from non-commercial sources not required.
8. Principal Recyclable Materials List. Should the Oregon Department of Environmental Quality determine any of the above items to be non recyclable or determine new recyclable materials subject to the provisions of ORS 459 for monthly collection of source separated recyclable materials, the City shall determine a method for terminating or adding collection of those items.
9. Ownership of Recyclable Materials. All recyclable materials placed for collection shall be owned by and be the responsibility of the customer until the materials are collected by the Permittee. The material then becomes the property and responsibility of the Permittee. The Permittee is responsible for transporting, processing and marketing of collected materials for recycling. Any non-recyclable material collected shall be disposed of by and at the expense of the Permittee in accordance with state and local law, rules and regulations.
10. Containers. The Permittee shall leave at the point of collection any reusable containers and any protective covers used to keep material dry. Used motor oil containers do not have to be left. The Permittee shall be responsible for any damage caused to reusable containers and protective covers by the Permittee, except from weather or normal wear and tear.
11. Improperly Prepared Recyclable Materials. When the Permittee encounters improperly prepared material or nonrecyclable items, the following procedure shall be followed:
  - A. For the first occurrence, the Permittee shall pick up all materials except putrescibles or items containing putrescibles, and process them for recycling or dispose of them properly. The Permittee shall complete a City provided notice noting the problems and leave it with the customer. The address and date shall be documented.
  - B. Upon the second and ensuing occurrences by the same customer, the Permittee shall leave the improperly prepared or nonrecyclable material, collect any properly prepared recyclable material, complete a notice, and leave it with the customer. The date and address shall again be documented.
  - C. The Permittee shall supply the required documentation to the City as requested.

12. Missed Collection. The Permittee shall establish and publicize a procedure for receiving and responding to customer complaints of missed collections. A complaint of missed collection received from the Customer or the City by 10:00 am on the day following the regularly scheduled collection day shall be remedied by collecting the recyclable material by 5:00 pm that day. Complaints of missed collections received by the Permittee after 10:00 am on the day following the scheduled day for collection shall be remedied by collecting the recyclable material by 5:00 pm on the following day.
13. Customer Information and Complaint Resolution. The Permittee shall establish and maintain a method for accepting and responding to customer calls and complaints. Staff shall be knowledgeable and courteous in answering customer information requests and resolving customer complaints regarding the recycling collection service. Calls must be returned by the same day if received by noon or by noon of the following business day if received later. All calls must be recorded in a log noting date, time, address, request or complaint and method of resolution. The log shall be made available to the City on request. The Permittee shall meet with the City as often as needed to review customer complaints and resolutions.
14. Cleanup on Route. The Permittee shall pick up all material blown, littered and broken subsequent to being set out by the customer. Each vehicle shall be equipped with at least one broom and one shovel for use in cleaning up material.
15. Collections on Holidays. When the regularly scheduled recycling collection day falls on New Years Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, or Christmas Day, the Permittee shall either collect the materials on the holiday or on a day no more than five working days before or after the regular collection day. Notice shall be given the customer of the change in schedule at least by the collection day of the preceding month.
16. Ice and Snow Policy. Permittees shall, when weather conditions make driving or recycling collection hazardous, delay any collections to have been made on these hazardous days until the first day, excluding Sundays and Holidays, that conditions return to normal. Normally, any day on which Public Schools are closed due to weather is considered sufficiently hazardous to preclude solid waste and recycling collections.

#### Equipment Requirements

1. Safety and Maintenance. All recycling and solid waste collection equipment must be maintained and operated in compliance with all local and state statutes, ordinances and regulations and to assure the safety of the collection crew and residents of the City. All collection equipment shall be covered and secure to prevent material blowing, leaking or falling out during transit.

2. Identification. All collection equipment shall be clearly identified by affixing the following items prominently and conspicuously to both sides of the equipment:

- Permittee's (or Permittee's subcontractor's) Name
- Permittee's (or Permittee's subcontractor's) Telephone Number

#### Processing and Storage Yard Requirements

1. Compliance with Zoning Ordinances. Any processing and storage of recyclable materials shall be undertaken in a location suitable and adequate for such activity. Processing and storage facilities shall comply with all local zoning ordinances and any other applicable local and state statutes, ordinances and regulations.
2. Materials Flow Plan. Permittees shall establish a materials flow plan for any storage and processing yard established by the Permittee and make the plan available to the City on request. This plan shall take into consideration yard capacities for the safe and legal processing, storing and marketing of recyclable materials collected.

#### Personnel Requirements

1. Employee Training. The Permittee shall be responsible for training collection crews, processing and storage yard employees, and office staff before initiating recycling collection.
2. Compliance with Applicable Ordinances and Laws. The Permittee shall comply with all applicable federal, state and local laws, ordinances, rules and regulations relating to employment.

#### Permittee Requirements

1. Office. The Permittee shall establish and maintain a method for accepting customer calls and complaints that shall be in service from 8:00 am to 5:00 pm Monday through Friday. Equipment to record messages shall be available during periods of time when staff is unavailable and during non-office hours. The office may be used for both Solid Waste and Recycling operations.
2. Records and Reports. The Permittee shall maintain records and reports required by the City as noted herein and promptly respond to periodic requests for such records and reports which are directly pertinent to the permit requirements and conditions.
3. Program Coordination. As scheduled by the City or at the Permittee's request, the Permittee or Permittee's authorized representative shall attend program status meetings. The City will provide advance notice of required meetings.

4. Promotion and Education. The Permittee shall participate in City directed promotion and education efforts as outlined below:
- A. Distribution of initial notice of service availability to all solid waste customers and reminder notice every six months. Materials will be provided by the City and must have Permittee's service information added to them.
  - B. Distribution of notices of improperly prepared materials, which will be provided by the City. Notice of collection schedule changes, or any other pertinent information shall be provided to customers by the Permittee.
  - C. When advertising, information of recycling service availability shall be included.
  - D. Training of employees to deal courteously with customers on the telephone and on-route to promote the collection service and explain proper material preparation.
  - E. Advice to the City on promotion and education material content and presentation.

The City is responsible for promotion and education for City-wide distribution and for materials preparation notices and initial notice of program start up.

Permittees are responsible for adding to City provided materials individual service information detailing exact day, location and method of recycling collection for each customer. Permittees shall provide the City with copies of all promotion materials distributed.

Permittees are requested to review their individual planned promotion materials and activities with the City in order to assure consistency and coordination of information to customers.

#### Sub-Contracting

A Permittee must either provide the service set forth herein, or sub-contract such service and all requirements thereunder. Notice of such subcontract shall be made to the City. A Permittee shall remain ultimately responsible for the service requirements set forth herein.

#### Enforcement

Violations. A violation shall be deemed to have occurred when a Permittee commits any one of the following acts:

1. Violating the regulations and requirements as set forth in the Code or in the requirements or conditions of the permit or the provisions of ORS Chapter 459 or the rules or regulations promulgated thereunder; or
2. Misrepresenting material facts or information required by the City herein; or
3. Failing to remedy missed collections as required by 17.102.085(g) and substantiated by three occurrences which have been verified as to their validity by the City.

Penalties. Violations of City Code Chapter 17.102 may result in assessment of civil penalties against permittees as described below:

1. A fine not exceeding \$500 for the first violation in a one year period.
2. A fine not exceeding \$1,000 for the second violation in a one year period.
3. A fine not exceeding \$1,500 for the third violation in a one year period and revocation of permit for a twelve month period.

The phrase "a one year period" as used in 1), 2) and 3) above means a period of time beginning on the date of the occurrence of the first violation and ending 365 days later. The twelve month period revocation in 3) shall commence from date of revocation and end 365 days later.

Permittees may appeal the above fines or revocation of permit to the Code Hearings Officer for a hearing as set out in Title 22 of the City Code.

Notice of Violation. The Bureau of Environmental Services Administrator, upon determination that a violation has occurred, shall issue a written notice of violation by certified mail to the permittee which specifies the violation and states the penalty.

Payment of Penalty. Permittees shall, upon receipt of a notice of violation, pay to the City the stated penalty or appeal the finding of violation and/or the penalty to the Code Hearings Officer for a hearing as set out in Title 22 of this Code within fifteen days of receipt of the notice. The finding of the Code Hearings Officer may only be reviewed as provided in Code section 22.10.060, and the payment of any penalty which is assessed shall be paid to the City within fifteen days of the finding. Failure to pay any penalty within fifteen days following the assessment becoming final shall be grounds for revocation of the Permittee's permit for a twelve month period.

### Fees Required

A fee of \$60.00 for Solid Waste and Recycling Permits shall be charged annually and is payable to the City as a part of the application for permit. A fee of \$0.99 per ton of solid waste collected within the Portland Urban Service Boundary and deposited in disposal facilities operated by the Metropolitan Service District will be charged and is to be paid quarterly to the City within 15 days of receipt of billing. This fee is for the purpose of administering and promoting the recycling collection services provided by permittees. Permittees who collect a portion of their total solid waste tonnage outside the Urban Service Boundary may, with proper documentation, request a proportionate reduction in the \$0.99 per ton fee. The City will determine what constitutes proper documentation and will aid permittees in calculating the appropriate reduction.

124:rfp-2



Phone Number	Schedule	Company Name	Responsible Official
287-6616	1st Mon and Tue	Alberta Sanitary Service, Inc.	William R. Helzer
661-3967	Weekly	Alpine Disposal & Recycling	Paul A. Truttman
775-3997	PRROS	Amato Sanitary Service, Inc.	Ronald S. Amato
284-2147	semi-monthly	American Property Management	Steven L. Blank
665-8476	Last collection day	American Sanitary Service, Inc.	Leonard L. Webster
654-2524	1st Wed	Argay Disposal Service	Richard L. Cereghino
289-6874	PRROS	Arrow Sanitary Service	Dennis Giusto
760-8442	PRROS	Associated Waste Systems, Inc.	Joe W. Cancilla, Jr.
288-7381	Weekly	Baldwin Sanitary Service, Inc.	Seona Baldwin
286-4015	1st Fri/weekly	Blaine's Sanitary Service, Inc.	Blaine Myers
654-9854	PRROS	Borgens Disposal Service	Wallace Borgens
232-4084	Weekly	Burns Sanitary	David R. Burns
232-8104	last Wed/Thurs	C & S Refuse Service, Inc.	Laura Cozzetto
282-2764	PRROS	Calabrese Sanitary Service	Jim N. Calabrese
659-9162	last Thurs	Cargni Sanitary Service, Inc.	Dave Cargni
292-5687	Weekly	Catalan Sanitary Service	Anthony Catalan
644-6634	1st collection day	Cedar Mill Disposal	Robert H. Peterson
760-2412	PRROS	City Sanitary Service	Joe Boitano
281-8075	monthly-on porch	Cloudburst Recycling Collection Svc	David L. McMahon
665-2316	PRROS	Columbia Sanitary Service	Richard W. Flury
287-3815	PRROS	Dave's Sanitary Service	David N. Weir
	see Salvi	De Matteo Sanitary Service	
287-3314	3rd Sat	De Young Sanitary Service	Janice De Young
645-2397	1st collec. day	Dee's Sanitary Service, Inc.	Drew S. Ryan, Jr.
654-0632	last Wed	Deines (Mel) Sanitary Service, Inc.	Melvin Deines
654-0632	last Wed	Deines (P.) Sanitary Service, Inc.	Melvin Deines
654-1449	last Wed	Deines Brothers Sanitary Service	Jack W. Deines
774-4935	weekly	Diane's Disposal & Recycling	Diane Viviano

Phone Number	Schedule	Company Name	Responsible Official
659-2081	PRROS	Dollowitch Disposal	William L. Dollowitch
636-6850	weekly	Dunthorpe Sanitary Service, Inc.	Louie H. Scates
692-1392	3rd & last Sat	Eastport Sanitary Service	Robert L. Garbarino
286-6395	weekly	Eckert (Fred) Sanitary Svc., Inc.	Fred J. Eckert
	see Robert Eckert	Eckert (Robert) Sanitary, Inc.	
254-1676	1st collection day	Egger Garbage Service	James J. Egger
287-3068	PRROS	Elmer's Sanitary Service	Elmer L. Andre'
288-3342	3rd collection day	Fink Sanitary Service Inc.	William J. Fink
287-4454	weekly	Fleming Sanitary Service	Jack Fleming
254-0301	Weekly	Gateway Sanitary Service	Ralph Schlunegger
657-4551	1st collection day	Gatto Sanitary Service	Dick Gatto
621-3411	Weekly	Gruetter Disposal Service, Inc.	Greg Gruetter
285-9279	Weekly	Gruetter Sanitary Service, Inc.	Mildred Gruetter
281-7480	PRROS	Hanke Bros Sanitary Service	Gary R. Hanke
231-9949	1st coll. day/weekly	Heiberg Garbage Service	Brian Heiberg
253-8209	Weekly	Helzer (Delbert) Sanitary Service	Delbert L. Helzer
253-1945	Weekly	Helzer (Wm.) Sanitary Service	William Helzer, Jr.
285-7171	Weekly	Hoffman Sanitation	Budd Hoffman
663-6782	Weekly	Hohnstein Garbage and Recycling	Kenneth Hohnsein, Jr.
284-8076	weekly	Hood Sanitary Service	Leon Hood
	see Heiberg	Hunt Sanitary Service	
282-6443	PRROS	Irvington Sanitary Collectors	David K. Hohnstein *
239-2788	weekly	John's Landing Disposal & Recycling	Allen G. Walker
293-0593	weekly	Kampfer's Sanitary Service, Inc.	Dean A. Kampfer
281-4604	PRROS	Kiltow Sanitary Service	Gaylen Kiltow
658-5498	PRROS	Krening, Inc.	Don Krening
695-5238	last garb. day	Lehl Disposal, Inc.	Steven H. Lehl
641-4735	first garb. day	Loffink Sanitary Service	Larry E. Loffink

Phone Number	Schedule	Company Name	Responsible Official
292-1630	1st Sat/weekly	Luchs Garbage Service	William H. Luchs
653-6514	PRROS	Mantia Sanitary Service	Charles Mantia
253-1429	Fri: W-1 & 2; E-3 & L	McInnis & Son Sanitary Service	S. J. McInnis
252-5209	first garb. day	Mel's Sanitary Service	Mel Barlow
285-0571	weekly	Metropolitan Disposal Corporation	John C. Glanz
256-4385	first Sat	Midland Disposal Service	William K. Garbarino
644-6161	first garb. day	Miller's Sanitary Service, Inc.	Thomas C. Miller
285-5245	weekly	Milton's Disposal	Patricia Yeager
283-3861	third Fri	Mohr Refuse Service	Keith W. Mohr
232-8104	last Thurs	Montavilla Refuse Service	Jean Salvi
665-2316	PRROS	Moreland Sanitary Service, Inc.	Richard W. Flury
222-9330	first garb. day	Multnomah Disposal & Recycling	Michael G. Kniss
775-2882	daily	Multnomah Garbage Service	Max Hohenstein
256-2600	weekly	Northeast Sanitary, Inc.	Gerald J. Maykut
761-1873	last garb. day	OK Sanitary Service	Mark A. Ortmayer
359-0483	garb day-2nd full wk	Pacific Garbage Service	Ambrose Calcagno, Jr.
760-3995	weekly	Pacific Waste & Refuse, Inc.	Charles E. Lewis
287-3170	first Wed	Parkrose Sanitary Service	Leo J. Codino
658-8600	last Wed	Pioneer Sanitary Service, Inc.	Nancy C. Walker
665-8476	last garb. day	Powell Valley Sanitary Service	Leonard L. Webster
282-1527	last Fri	Rae's Sanitary Service	Arvell R. Rae
288-7447	1st collection day	Refuse Removal, Inc.	R. B. Kuhnau
	Now Mult. Disposal	Rich's Sanitary Service, Inc.	
287-4700	1st collection day	Rose City Sanitary Service, Inc.	Paul Guenther
	Now Arrow (PRRO's)	Rosegate Enterprises	
636-3011	2nd Wed/Thurs-call	Rossman Sanitary Service, Inc.	Lloyd F. Hodge
244-7175	weekly	Roy's Sanitary Service	Roy W. Troudt
232-8104	last Thurs	Salvi Sanitary Service, Inc.	Jean C. Salvi

Phone Number	Schedule	Company Name	Responsible Official
282-4112	weekly	Schield Sanitary Service	Willard Shield
256-3511	last Fri	Schleiger Waste Service	Kenneth J. Schleiger
659-6918	PRROS	Schnell, Inc.	Lillian Schnell
287-0262	last Sat	Sevier & Son	Lilian Sevier
636-8874	first Sat	Southwest Sanitary Service	Marlene Wagner
281-2205	weekly	Sturm Sanitary	Ted, Gary, Rick Sturm
246-2660	last Sat	Sunde Sanitary Service	Howard Sunde
238-1640	complex	Sunflower Recycling, Inc.	John Garofalo
774-4122	weekly	Sunset Garbage Collection, Inc.	John F. Schwab
667-0763	first Thurs	Tom's Sanitary Service	Jean Turcol
246-1706	2nd Sat	Troudt Bros. Sanitary & Recycling	Ronald E. Tunstall
252-5223	Weekly	Truttman Sanitary	Frank L. Truttman
667-5887	daily	Vogel Brothers, Inc.	Alan J. Craddock
284-7937	weekly	Walker & Son, P.	Kurt R. Walker
281-0841	weekly	Walker Refuse Hauling, M.	Melvin Walker
292-4283	1st/2nd Thurs	Walker Garbage Service, Inc.	John Walker III
249-8078	1st garb. day	Waste Management of Oregon	Doug Ogden
284-2679	1st Tu, Fri or wkly	Waste-Go Services, Inc.	Dale N. Yuckert
255-2821	last Sat	Wayne's Midway Sanitary, Inc.	Wayne J. Garbarino
287-5780	first Sat	Weber Disposal Service	Philip R. Weber
646-0972	weekly	Weisenfluh Sanitary Service	Jim Weisenfluh
285-7020	last Wed/Thurs	Weitzel & Son Refuse Service	Steven W. Weitzel
234-6113	first Wed	Wirth's Refuse, Inc.	Charles L. Wirth
246-5391	PRROS	Wooten Sanitary Service	Ralph Wooten
284-8651	PRROS	Wunsch Sanitary Service	Fred Wunsch
255-9995	first Sat	Young, Inc.	Jack J. Young

# PRROS

Portland Recycling Refuse Operator S, inc.

Look for the  
garbage company  
displaying the  
"CAN MAN"



TO SIGN UP OR  
FOR MORE  
INFORMATION, CALL



775-3941

FIND your zipcode and boundaries — follow the line to the right to determine your recycling pickup day, or call the office for assistance.

**RECYCLABLES MUST BE ON CURB BY 8:00 A.M.**

ZIPCODE	BOUNDARY	DAY
97201	ALL	2nd TUE ✓
97202	*Division to Steele	2nd FRI ✓
	*Steele South & EAST of and including Reed College Pl.	3rd TUE ✓
	*Steele South & WEST of Reed College Pl.	3rd FRI ✓
97203	ALL	Last THU ✓
97206	*Division to Powell	1st FRI ✓
	*Powell and South to Steele	1st WED ✓
	*Steele and South	1st TUE ✓
97211	ALL	<del>2nd WED</del> 1st THURS.
97212	*West of 33rd Ave.	2nd WED ✓
	*33rd Ave. & East	3rd WED ✓
97213	ALL	2nd THU ✓
97214	ALL	3rd THU ✓
97215	*WEST of 60th	Last TUE ✓
	*60th & EAST	Last FRI ✓
97216	ALL	Last FRI ✓
97217	ALL	Last THU ✓
97218	ALL	3rd WED ✓
97220	ALL	Last WED ✓
97227	ALL	Last THU ✓
97230	ALL	Last WED ✓
97232	ALL	3rd THU ✓
97266	ALL	1st FRI ✓
97023	ALL	Last WED ✓
97060	ALL	Last WED ✓

Hazardous driving conditions will cancel route. No pickups July 4th, Thanksgiving, Christmas or New Year's. Recyclables will be picked up the following month.

City of Portland Recycling Program  
First Year Report  
June 30, 1988

**EDUCATION, PROMOTION AND NOTIFICATION**

Description of Activity/Item: Initial Notice Brochure ("Can Can")  
Date: May 13, 1987  
Quantity or Audience: 220,000 addresses  
Area of Wasteshed: All

Description of Activity/Item: Hauler's Notice to Customers  
Date: Late May 1987  
Quantity or Audience: 150,000 customers  
Area of Wasteshed: All

Description of Activity/Item: Material Preparation Notice  
Date: June 1987, on-going  
Quantity or Audience: supply mailed to all permitted haulers  
Area of Wasteshed: All

Description of Activity/Item: Rolodex Card  
Date: August 1987  
Quantity or Audience: all media contacts  
Area of Wasteshed: All

Description of Activity/Item: "Clean for Green" newsletter  
Date: November 1987 - January 1988  
Quantity or Audience: 110,000  
Area of Wasteshed: All customers of City water & sewer service

Description of Activity/Item: "Can Can News"  
Date: October 1987, January 1988, April 1988  
Quantity or Audience: All permitted haulers  
Area of Wasteshed: All

Description of Activity/Item: Hauler's Reminder Notice "Trash into Cash"  
Date: October - November 1987  
Quantity or Audience: 150,000 customers  
Area of Wasteshed: All

Description of Activity/Item: Report to Interested Parties  
Date: August 7, 1987 and January 8, 1988  
Quantity or Audience: List of 80 individuals and agencies  
Area of Wasteshed: All

Description of Activity/Item: Media Releases  
Date: April 1987 - June 1988  
Quantity or Audience: Portland Metro Area  
Area of Wasteshed: All

Description of Activity/Item: Apartment Recycling Info Sheets  
Date: November 1987  
Quantity or Audience: Apartment Owners Trade Show  
Area of Wasteshed: All

Description of Activity/Item: Filming of Commercial  
Date: April 1987  
Quantity or Audience: Media Event  
Area of Wasteshed: All

Description of Activity/Item: Kick-off of Program  
Date: June 1, 1987  
Quantity or Audience: City Wide Event  
Area of Wasteshed: All

Description of Activity/Item: "Glass, Tin & Paper Chase"  
Date: November 2, 1987  
Quantity or Audience: City  
Area of Wasteshed: All

Description of Activity/Item: Reward Event  
Date: November 16, 1987  
Quantity or Audience: City  
Area of Wasteshed: All

Description of Activity/Item: Filming of PSA featuring Walt Disney's  
Goofy  
Date: March 24, 1988  
Quantity or Audience: City  
Area of Wasteshed: All

Description of Activity/Item: PSA distributed ("Goofy Goes Recycling")  
Date: May 6, 1988  
Quantity or Audience: All TV stations  
Area of Wasteshed: All

Description of Activity/Item: Bureau display for use at fairs and  
events; 5 panels - one features recycling.

Date: March - June 1988  
Quantity or Audience: Set up for 6 events, 45 days total  
Area of Wasteshed: All

Description of Activity/Item: Essay contest sponsored by Bureau  
& Walt Disney World

Date: March 1988

Quantity or Audience: Metro area 6th to 8th grade students

Area of Wasteshed: All

174:educa/promo



**CITY OF PORTLAND RECYCLING PROGRAM  
ENFORCEMENT POLICY**

**GOAL:** Attain and maintain 100 percent waste hauler compliance with recycling requirements of City Code.

Enforcement of the City Recycling Program requirements [pursuant to City Code Chapter 17.102.085(1)] shall be guided by the following principles:

1. Responsibility for compliance rests with permitted Portland waste haulers.
2. The City shall seek to attain and maintain compliance through discussion and persuasion prior to and following issuance of enforcement action.
3. Enforcement actions shall be appropriate to the gravity of the circumstances, pursued to resolution in a timely manner, and applied consistently in all instances.
4. All enforcement actions shall clearly identify each and every documented violation, establish compliance schedules if appropriate and require the violator's certification that compliance is achieved.
5. When compliance schedules are deemed appropriate, they will be established for the shortest practicable time and enforcement action shall be escalated when violators fail to comply with established compliance schedules.

**ENFORCEMENT SCHEDULE:**

When appropriate, the Bureau of Environmental Services shall issue verbal and/or written warnings to waste haulers who are not in compliance with the recycling requirements. Repeated offenses or serious violations demanding immediate action shall result in a fine. The schedule of fines follows:

<u>VIOLATION</u>	<u>1ST OFFENSE</u>	<u>2ND OFFENSE</u>	<u>3RD OFFENSE</u>
Failure to Obtain a Permit	\$500	\$1,000	\$1,500
Failure to Provide Recycling Collection Service to all customers	\$500	\$1,000	\$1,500
Failure to Collect Recyclables at Least Once Per Month	\$500	\$1,000	\$1,500
Failure to Provide a Solid Waste Customer List	\$500	\$1,000	\$1,500
Failure to Collect All Principal Recyclable Materials	\$500	\$1,000	\$1,500
Disposal of Source Separated Recyclables in Trash	\$500	\$1,000	\$1,500
Failure to Properly Remedy Missed Collections including Holiday Collections (three occurrences)	\$400	\$900	\$1,400
Failure to Provide Promotional and Educational Materials to Customers	\$400	\$900	\$1,400
Failure to Maintain a Method for Accepting Customer Calls and Complaints	\$400	\$900	\$1,400
Failure to Handle Improperly Prepared Materials in the Prescribed Manner	\$300	\$800	\$1,300
Failure to Submit a Complete Monthly Report	\$300	\$800	\$1,300
Failure to Clean-up on Route	\$200	\$700	\$1,200

Three violations within a one year period (beginning on the date of the occurrence of the first violation and ending 365 days later) shall result in revocation of a refuse collection permit for one year.

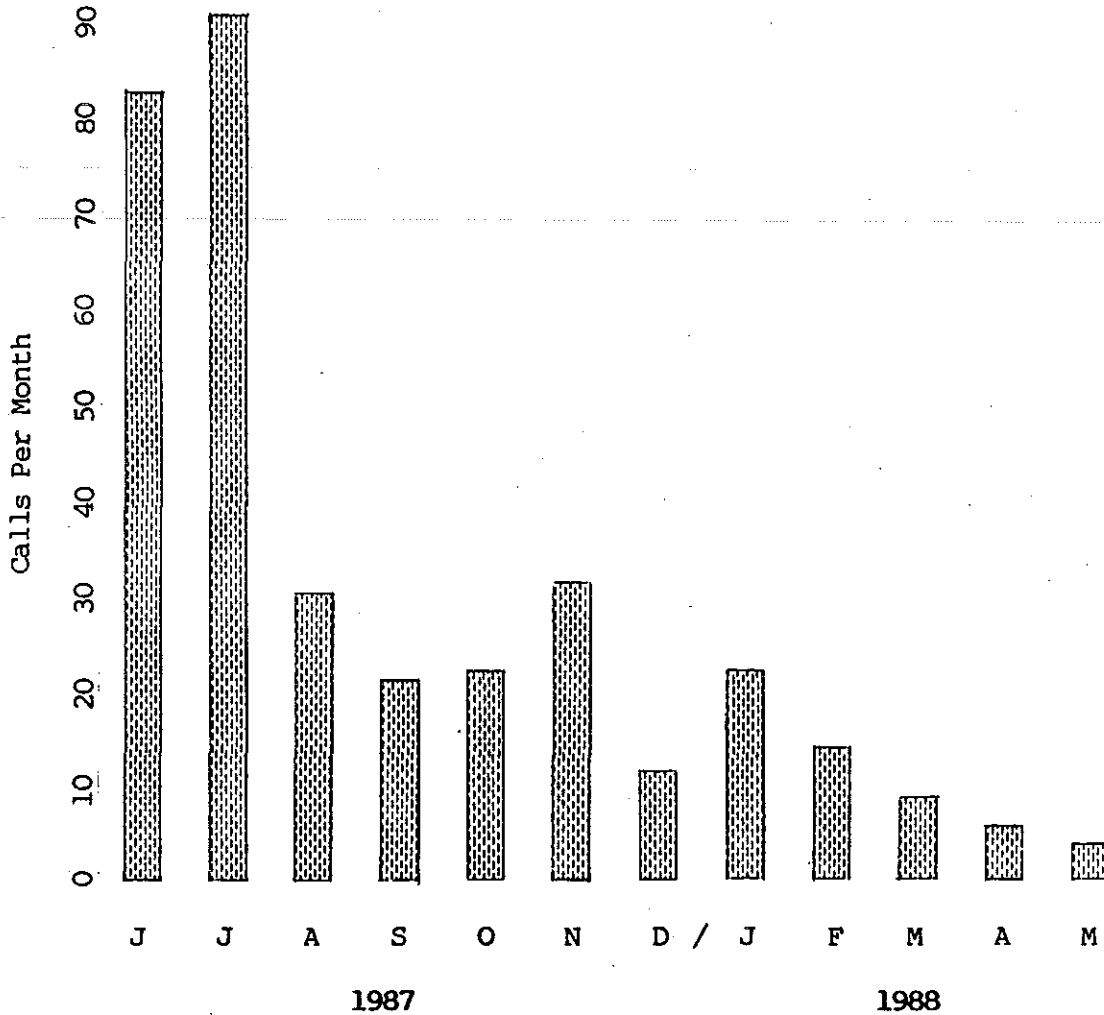
Failure to pay any penalty within 15 days following the assessment becoming final shall be grounds for revocation of the permittee's refuse collection permit for one year.

Revocation of a refuse collection permit will result in denial of disposal privileges at Metro disposal facilities.

**City of Portland Recycling Program  
First Year Report**

June 30, 1988

**COMPLAINT PHONE CALLS**



Total Per Month

June 1987	79
July 1987	87
August 1987	29
September 1987	20
October 1987	21
November 1987	30
December 1987	11
January 1988	21
February 1988	13
March 1988	8
April 1988	5
May 1988	3
<u>327</u>	

Total By Type

Lack of Information	128
Missed Collection	111
Telephone Problem	38
Apartment	5
Other	45
<u>327</u>	

Month:		News	Glass	Oil (Gal.)	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade	Totals
6/87	Tons	653.46	101.82	2810	505.46	22.93	.26	22.87	21.77	808.10	2136.66
7/87	Tons	470.98	119.39	2190	407.78	27.95	.10	25.81	1.48	96.00	1149.48
8/87	Tons	448.95	138.16	2315	335.76	28.21	.65	10.68	.72	112.63	1075.76
9/87	Tons	885.40	171.68	1998	513.78	26.67	.78	113.94	3.88	131.88	1848.00
10/87	Tons	486.85	150.89	1609	359.29	30.59	.06	14.47	2.32	134.03	1178.50
11/87	Tons	418.90	329.48	1214	318.72	34.72	3.05	76.73	17.31	123.13	1322.04
12/87	Tons	478.35	134.53	1695	409.48	34.31	2.44	19.09	47.76	118.61	1244.57
1/88	Tons	453.31	170.89	1581	328.95	40.35	1.18	13.11	1.59	120.66	1130.04
2/88	Tons	406.39	140.30	2177	189.68	44.12	.46	20.35	5.38	119.15	925.84
3/88	Tons	419.79	172.07	2290	517.98	33.24	.34	69.07	17.51	114.65	1344.63
4/88	Tons	505.04	169.19	2351	594.91	38.08	.16	36.29	58.84	99.16	1501.66
5/88	Tons	848.12	144.68	2344	480.15	35.31	1.32	62.67	9.22	5.27	1586.73

Average number of customers represented per month: 150,936

Y E A R - T O - D A T E				
News:	6,475.55 Tons	Alum:	10.79 Tons	YTD Total: 16,443.91 Tons Oil: 24,574 Gallons
Glass:	1,943.07 Tons	FScrap:	485.08 Tons	
Corr/Kraft:	4,961.93 Tons	NFScrap:	187.75 Tons	
Tin:	396.47 Tons	Hi-Grade:	1,983.27 Tons	

## SUMMARY RECYCLING REPORT

Source Table: Summary

Page 1

## Alberta Sanitary Service, Inc.

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
75.36	22.45	625	6.33	7.27	0.00	.25	.25	0.00

## Alpine Disposal &amp; Recycling

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
102.46	39.24	645	55.60	5.90	.08	.67	.36	0.00

## American Property Management

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
75.78	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00

## American Sanitary Service, Inc.

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
48.75	25.92	1289	27.84	8.35	0.00	.19	.68	0.00

## Argay Disposal Service

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
34.93	12.95	483	1.94	3.97	.02	0.00	.07	0.00

## Blaine's Sanitary Service, Inc.

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
38.72	6.11	137	3.11	2.39	.00	0.00	.01	0.00

## Burns Sanitary

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
42.23	7.27	0	4.06	1.69	0.00	0.00	0.00	0.00

## C &amp; S Refuse Service, Inc.

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
1.71	2.55	6	.30	.55	0.00	0.00	0.00	0.00

## Casciato Garbage Service

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
0.00	0.00	2	.25	0.00	0.00	0.00	0.00	0.00

Catalan Sanitary Service									
News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade	
38.14	16.06	0	143.09	.94	0.00	0.00	0.00	2.72	
Cedar Mill Disposal									
News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade	
14.37	4.31	51	1.68	1.03	.01	0.00	0.00	0.00	
Cloudburst Recycling Collection Svc									
News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade	
179.64	74.75	491	170.57	11.47	.51	0.00	0.00	.12	
De Matteo Sanitary Service									
News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade	
3.02	.55	19	.24	.02	0.00	0.00	0.00	0.00	
De Young Sanitary Service									
News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade	
8.89	1.34	0	2.33	.13	0.00	0.00	0.00	0.00	
Dee's Sanitary Service, Inc.									
News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade	
36.81	6.54	129	0.00	.47	0.00	0.00	0.00	0.00	
Deines (Mel) Sanitary Service, Inc.									
News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade	
3.92	2.18	60	1.31	.70	0.00	0.00	0.00	0.00	
Deines Brothers Sanitary Service									
News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade	
8.04	5.44	184	.24	2.70	.02	0.00	0.00	0.00	
Deines Sanitary Service, Inc.									
News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade	
6.54	2.94	56	1.31	.74	.03	0.00	.01	0.00	
Diane's Disposal & Recycling									
News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade	
22.20	7.13	224	7.56	2.42	.03	6.67	0.00	2.31	

## Dunthorpe Sanitary Service, Inc.

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
37.96	.32	2	0.00	.09	0.00	0.00	0.00	0.00

## Eastport Sanitary Service

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
16.88	8.22	195	4.12	3.56	.01	0.00	0.00	.02

## Eckert Sanitary Service, Inc.

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
5.20	10.06	0	0.00	.15	.01	0.00	.09	.09

## Eckert Sanitary, Inc.

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
9.02	1.70	0	0.00	.21	0.00	0.00	0.00	0.00

## Egger Garbage Service

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
19.52	6.47	49	13.58	3.76	0.00	.10	.31	0.00

## Eltzroth Enterprises

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00

## Fink Sanitary Service Inc.

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
24.63	13.10	167	6.50	1.28	.01	.26	.03	0.00

## Fleming Sanitary Service

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
49.67	11.03	326	2.38	6.59	0.00	0.00	0.00	0.00

## Full Circle Recycling

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
68.67	220.37	0	122.69	.59	0.00	107.32	0.00	.22

## Gateway Sanitary Service

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
61.76	7.24	306	1.16	3.84	.47	2.65	1.09	0.00

## Gatto Sanitary Service

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
7.17	4.10	19	.04	1.67	0.00	0.00	0.00	0.00

## Gruetter Disposal Service, Inc.

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
39.55	5.44	20	1.95	2.25	0.00	0.00	0.00	0.00

## Gruetter Sanitary Service, Inc.

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
70.69	18.14	176	10.41	5.21	0.00	0.00	0.00	0.00

## Heiberg Garbage Service

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
109.47	30.87	829	18.86	9.31	.03	.01	0.00	0.00

## Helzer Sanitary Service

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
46.08	24.03	499	24.52	8.98	.01	.02	0.00	.23

## Hoffmann Sanitation

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
18.38	3.00	71	10.46	1.46	0.00	4.20	5.45	.11

## Hohnstein Garbage &amp; Recycling

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
38.05	13.38	182	2.13	2.35	.02	.24	.79	.02

## Hood Sanitary Service

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
17.67	4.28	0	.22	2.30	0.00	0.00	0.00	0.00

## Housing Authority of Portland

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
7.88	2.28	0	2.15	.90	0.00	0.00	0.00	.32

## Hunt Sanitary Service

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
4.54	1.55	0	1.72	0.00	0.00	0.00	0.00	0.00



John's Landing Disposal & Recycling

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
62.03	9.06	76	119.02	1.42	0.00	.54	0.00	.88

Kampfer's Sanitary Service, Inc.

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
43.80	13.73	204	5.57	3.96	0.00	0.00	0.00	0.00

Lehl Disposal, Inc.

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
155.09	38.91	287	8.62	6.11	.04	.57	.20	.36

Loffink Sanitary Service

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
32.93	2.92	0	15.94	1.79	0.00	0.00	.00	0.00

Luchs Garbage Service

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
46.00	16.11	0	1.06	2.49	.44	3.29	0.00	0.00

Marine Drop Box

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
0.00	0.00	0	12.02	0.00	0.00	0.00	0.00	0.00

Marine Drop Box Service

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
0.00	0.00	0	28.08	0.00	0.00	14.12	0.00	0.00

Marine Drop Box Service, Inc.

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
0.00	8.93	0	4.87	0.00	0.00	4.87	0.00	0.00

Marine Drox Box

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
0.00	0.00	0	7.77	0.00	0.00	0.00	0.00	0.00

McInnis & Son Sanitary Service

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
74.45	12.96	160	394.56	0.00	5.09	12.40	151.10	16.02

## Mel's Sanitary Service

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
2.90	.43	187	0.00	.19	0.00	0.00	0.00	0.00

## Metropolitan Disposal Corporation

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
618.31	66.00	299	277.95	3.97	0.00	97.39	0.00	775.20

## Midland Disposal Service

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
21.44	5.58	285	.92	1.84	0.00	0.00	0.00	0.00

## Miller's Sanitary Service, Inc.

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
93.89	30.56	1069	13.59	8.00	.64	.01	0.00	0.00

## Mohr Refuse Service

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
17.94	7.17	109	.30	2.87	0.00	0.00	0.00	.00

## Multnomah Disposal &amp; Recycling

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
71.66	187.50	1077	8.27	7.04	.04	0.00	0.00	0.00

## Multnomah Garbage Service

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
1.45	1.75	0	1.95	.02	0.00	0.00	0.00	0.00

## Northeast Sanitary, Inc.

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
27.11	4.97	10	1.35	1.20	0.00	0.00	0.00	0.00

## OK Sanitary Service

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
8.24	7.68	276	3.49	3.76	.02	.38	0.00	0.00

## Oregon Paper Fiber

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
894.20	0.00	0	2105.90	0.00	0.00	104.97	0.00	0.00

PRROS, Inc.

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
1371.43	468.43	6135	106.54	127.08	1.61	61.54	3.02	0.00

Pacific Garbage Service

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
42.22	12.12	648	73.04	5.56	.03	4.94	21.77	.39

Pacific Waste & Refuse, Inc.

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
1.09	.02	0	.03	.07	0.00	0.00	0.00	0.00

Parkrose Sanitary Service

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
29.61	13.92	187	7.65	9.70	0.00	0.00	0.00	0.00

Pioneer Sanitary Service, Inc.

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
.91	.32	0	.94	.29	0.00	0.00	0.00	.20

Powell Valley Sanitary Service

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00

Rae's Sanitary Service

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
.31	1.87	64	1.00	.51	.03	.05	0.00	0.00

Recycle Salvage

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
18.35	2.09	0	141.50	.23	.55	7.86	.74	.43

Refuse Removal, Inc.

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
29.13	1.10	0	0.00	0.00	0.00	0.00	0.00	0.00

Rich's Sanitary Service, Inc.

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
38.22	10.28	200	3.85	2.77	.02	0.00	0.00	0.00

Rosegate Enterprises

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
0.00	0.00	0	39.40	0.00	0.00	0.00	0.00	0.00

Rossman Sanitary Service, Inc.

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
16.60	2.92	276	5.29	.43	.00	.47	0.00	0.00

Roy's Sanitary Service

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
107.10	31.32	305	13.57	3.61	0.00	0.00	0.00	0.00

Salvi Sanitary Service, Inc.

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
28.41	16.68	56	2.74	6.18	0.00	0.00	0.00	0.00

Schild Sanitary Service

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
44.98	16.42	191	2.43	2.57	0.00	0.00	0.00	0.00

Schleiger Waste Service

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
17.42	7.62	205	115.91	2.59	.07	.10	.23	.14

Sevier & Son

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
10.07	9.04	91	2.59	2.49	.01	0.00	0.00	1151.09

Southwest Sanitary Service

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
17.45	2.45	46	.09	.16	.01	0.00	0.00	0.00

Sturm Sanitary

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
20.23	12.75	259	2.33	1.86	.01	.00	1.05	.02

Sunde Sanitary Service

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
33.53	1.68	0	.56	.10	0.00	0.00	0.00	0.00

## Sunflower Recycling, Inc.

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
448.23	125.74	700	109.87	25.63	.45	24.57	.40	32.24

## Sunset Garbage Collection, Inc.

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
29.62	9.92	277	17.42	3.13	.01	.03	.01	.13

## Tom's Sanitary Service

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
62.47	4.26	40	.93	.80	0.00	0.00	0.00	0.00

## Troutd Bros. Sanitary &amp; Recycling

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
152.07	33.07	359	6.51	6.77	.11	.02	0.00	0.00

## Truttman Sanitary Service

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00

## Vogel Brothers, Inc.

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
0.00	0.00	0	264.24	0.00	0.00	0.00	0.00	0.00

## Walker &amp; Son

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
4.39	0.00	39	15.06	0.00	0.00	0.00	0.00	0.00

## Walker Garbage Service, Inc.

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
10.23	1.05	7	.80	.06	.00	0.00	0.00	0.00

## Walker Refuse Hauling

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
9.04	.69	25	.06	.24	0.00	0.00	0.00	0.00

## Waste Management of Oregon

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
160.56	47.23	1998	182.48	18.63	0.00	9.91	0.00	0.00

Waste-Go Services, Inc.

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
37.08	13.31	330	119.52	5.09	.06	7.82	0.00	0.00

Wayne's Midway Sanitary, Inc.

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
7.38	5.81	0	1.65	1.86	0.00	0.00	0.00	0.00

Weber Disposal Service

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
39.90	12.58	134	2.07	4.95	.02	0.00	0.00	0.00

Weisenfluh Sanitary Service

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
72.01	16.45	289	4.56	6.75	0.00	0.00	0.00	0.00

Wirth's Refuse, Inc.

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
14.49	3.77	28	.58	0.00	0.00	0.00	0.00	0.00

Wunsch Sanitary Service

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
5.00	4.75	136	.66	2.06	0.00	0.00	0.00	0.00

Young, Inc.

News	Glass	Oil	Corr/Kraft	Tin	Alum	FScrap	NFScrap	Hi-Grade
29.90	10.83	268	53.73	4.13	.30	6.64	.11	.02

EQC Agenda Item M  
September 9, 1988  
Attachment III

STATE OF OREGON

DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE MEMORANDUM

To: Environmental Quality Commission

From: David K. Rozell  
Waste Reduction Manager

Subject: Department Analysis of City of Portland Compliance  
with EQC Order No. WR-87-01

Approval of Portland Wasteshed Recycling Report,  
Proposed Recommendations and Cancellation of  
EQC Order No. WR-87-01.

On March 13, 1987 the EQC issued Order No. WR-87-01, ordering the City of Portland to provide the opportunity to recycle by June 1, 1987. The specific directives from this order and DEQ staff analysis as of their implementation are listed below.

1. By June 1, 1987, the City shall ensure that at least monthly recycling collection service is provided to every garbage service customer within the Portland urban services boundary.

Department Analysis: Requirement met. The City publicized the program prior to its implementation and did, in fact, ensure the start-up of the program on June 1, 1987.

2. The City shall manage the recycling promotion and education program. The City shall design and produce, or hire a contractor to design and produce, promotional materials as required by OAR 340-60-040. The City shall also provide educational and promotional materials to local media and community organizations. The City shall mail promotional materials to each garbage service customer within the Portland urban services boundary, and require each permittee to deliver promotional materials to his or her customers.

Department Analysis: Requirement met. The City is managing the promotion and education program and has allocated \$85,000 to a promotion contractor and spent an additional \$58,000 on printing and mailing costs. They do require each permittee to deliver

promotional materials to his or her customers and have a schedule of fines for those who don't.

3. By May 13, 1987, the City shall mail an announcement of the beginning of the City's recycling program and cause the contractor(s) or permittees to distribute to their customers' doors the initial notification of recycling service which will be available to that customer beginning in June. The notice shall include:

- a. reasons why people should recycle;
- b. the name, address and telephone number of the person providing on-route collection;
- c. a list of the materials that can be recycled and instructions for preparation of those materials;
- d. a listing of depots for recyclable materials serving the area; and
- e. a City telephone number for customer information and complaints.

Department Analysis: Requirement met. The City did mail an announcement of the beginning of the program on May 13, 1987, meeting the requirements described above.

4. By June 1, 1987, the City shall design and produce additional educational materials including, but not limited to a notice for customers who have improperly prepared recyclable materials.

Department Analysis: Requirement met.

5. The City shall require all permittees to submit to the City, customer lists, including names and addresses. These lists shall be required to be updated at least quarterly.

Department Analysis: The City has requested that this item be modified so that the customer lists are updated annually. The City currently requires waste haulers to submit customer lists as part of the annual permit process. If EQC Order No. WR-87-01 is cancelled, DEQ staff recommends the continuation of this annual updating.

6. By May 13, 1987, the City shall establish a hotline telephone number for customer information and complaints. The telephone number shall be listed on all promotional materials distributed to each garbage service customer.

Department Analysis: Requirement met. The City has worked out a cooperative agreement with Metro to use the number at Metro's



Recycling Information Center, and has established a line from which calls can be directly transferred to the City.

7. The City shall establish requirements for generator preparation of recyclable materials. Permittees shall be required to collect and recycle all recyclable materials that are prepared according to the City specifications.

Department Analysis: Requirement met. Notice developed for hauler to leave with customer if recyclable materials not prepared properly. Fine schedule established if hauler does not pick up properly prepared recyclable materials.

8. By June 1, 1987, the City shall establish an enforcement program that ensures that all permittees are providing the required recycling collection service and distributing promotional materials as directed by the City. The enforcement program shall not rely entirely on customer complaints. The City shall institute a continuous system of random checks to verify permittee compliance.

Department Analysis: Requirement met.

9. The City shall require permittees to submit monthly reports on volumes of material recycled and number of setouts by generator.

Department Analysis: Requirement met. If EQC Order No. WR-87-01 is cancelled, this requirement will revert to quarterly reports, as required for all other jurisdictions.

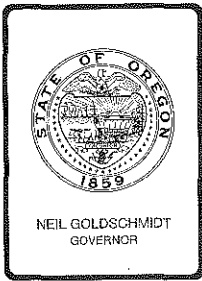
10. By July 1, 1988, the City shall submit a report to the Commission on the first year of the recycling program. The report shall include an explanation of all program features, including but not limited to number of collectors, the types and number of collection vehicles, all promotional activities, number of complaints, enforcement procedures and actions, volumes recycled and number of setouts. The Commission reserves the right to revise its order if, upon review of the Portland recycling program's performance over the first year, the Commission determines that the program does not achieve recycling rates at least comparable to recycling rates elsewhere in the state and the nation.

Department Analysis: Requirement Met. The required report was submitted on July 1, 1988, and explains the program, provides a list of collectors and their pick-up schedules, the types and number of collection vehicles, the promotional activities, the number of complaints, enforcement procedures and actions, volumes recycled and number of setouts.

EQC Agenda Item M  
September 9, 1988  
Attachment III  
Page 4

City staff are to be commended for the substantial reduction of complaint phone calls over the first year of the program. Understandably, there were many calls during the first two months of the program, mostly to obtain information about the program or because a pick-up was missed. Complaints went from an average of 83 per month during the first two months to an average of 4 per month during April and May, 1988.

An important requirement of EQC Order No. WR-87-01 was that the City of Portland's program "achieve recycling rates at least comparable to recycling rates elsewhere in the state and the nation". In the report, the City indicates that an average of 20.5 percent of Portland households participated every month, and that 16,444 tons of recyclable materials and 24,574 gallons of used motor oil were recovered during the first year. However, the City made no attempt to compare those figures with results elsewhere in the state or the nation. DEQ acknowledges that program comparisons of this type are difficult and believes that this comparative analysis should be a cooperative effort between the City of Portland and DEQ. Preliminary analysis by DEQ staff indicates that Portland's program provides comparable participation rates and tonnage recycled when compared with other programs of a similar nature.



## Environmental Quality Commission

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

EQC Agenda Item ~~M~~  
September 9, 1988  
Attachment IV

### MEMORANDUM

To: Environmental Quality Commission

From: David K. Rozell  
Waste Reduction Manager

Subject: Agenda Item L, September 9, 1988 , EQC Meeting  
Hearings Officer's Report on Approval of Portland  
Wasteshed Recycling Report, Proposed  
Recommendations, and Cancellation of EQC Order  
No. WR-87-01.

A public hearing was held at 3:00 p.m. on August 3, 1988 to consider the Department's analysis of the City of Portland's recycling report. Two people attended the hearing and presented oral testimony. Three additional people presented written comments.

Bob Rieck, of the City of Portland, presented oral and written testimony in support of the Department's analysis. He also stated the City's commitment to work with the Department on the recommendations for program improvement. Written comments attached.

David McMahon, of Cloudburst Recycling, presented oral testimony which pointed out problems with Portland's program, but did not specifically challenge the Department's findings. He stated that the design of the program (using 120 haulers to deliver the opportunity to recycle) has inherent problems and limits what the City could accomplish. He stated that he has received many calls from people who a) don't know about or understand the program, and b) have seen haulers throw recyclables in with the garbage. He does not necessarily support weekly pick-ups because the cost of doing so starts to work against the hauler.

EQC Agenda Item M  
September 9, 1988  
Attachment IV

Jeanne Roy, submitted written comments (attached). She felt that two parts of the EQC Order were still needed: a) additional educational materials and b) requiring random checks as part of the enforcement program. She also did not feel that the Portland program was achieving recycling rates at least comparable to rates elsewhere in the nation.

Estle Harlan, of the Oregon Sanitary Service Institute, submitted written comments (attached) supporting Portland's program and advising the Department to focus on the outstanding results rather than the bugs of the program.

Betty McCardle, of the Oregon Environmental Council, submitted written comments (attached) generally critical of the Portland program, and specifically stating that the enforcement program is weak and that the "comparable participation rate" is questionable.



TESTIMONY OF THE CITY OF PORTLAND  
ON DEQ'S REVIEW OF PORTLAND'S RECYCLING PROGRAM

AUGUST 3, 1988

1120 S.W. 5th Avenue  
Room 400  
Portland, Oregon  
97204-1972  
(503) 796-7740

Good afternoon, my name is Bob Rieck and I am the Business Operations Manager for the City of Portland's, Bureau of Environmental Services. I am here to comment on behalf of the City of Portland on the DEQ's draft determination and recommendations in connection with Portland's Recycling Program's compliance with EQC's Order WR-87-01.

Let me begin by saying that implementation of an effective recycling program has been a high priority of the City of Portland during the past year. The City is pleased at the level of progress in our recycling program as we have exceeded projections with a 20.5 percent participation rate and 16,444 tons of material recycled. We believe further progress can be achieved and have increased our current recycling program budget by more than 32 percent to include several innovative projects.

The DEQ review of our recycling program confirms the City's efforts and most importantly, its citizens and waste haulers interest in increasing recycling levels in Portland. We are pleased to be "congratulated on the progress made in the first year" of the program. The DEQ statement that the City "has met all requirements of EQC Order No. WR-87-01" indicates the City's commitment to carrying out the necessary recycling implementation steps.

CITY OF PORTLAND  
ENVIRONMENTAL SERVICES



Page Two

The DEQ makes several recommendations for the City recycling program which the City believes to offer helpful direction for increasing recycling participation and recovery rates. The City pledges to work with DEQ staff to undertake the recommendations. Specifically:

1. The City will continue to require permittees to submit customer lists and to update these lists annually.
2. The recommendation to track public response to promotion activities is a good one and the City is currently doing this. Postage-paid, recycling sign-up cards have been distributed by haulers to their customers and the City is sending out recycling information to the interested citizens and tracking the number of responses. Follow-up calls will be made to selected citizens who signed up for recycling service to assure that adequate service is being provided.

The City and Metro presently communicate regularly regarding promotion activities and a Metro representative participates in our recycling promotion review committee. Further cooperation in future efforts can be expected to help increase recycling participation within the region.

The City's extensive promotion efforts are targeted towards Portland residents but also reach citizens throughout the state due to the widespread broadcast and distribution of Portland media. Because recyclables are collected in Oregon curbside recycling programs by waste haulers, the City's promotion messages can be beneficial to other cities' recycling promotion efforts. Because of this fact, we would recommend that the DEQ consider joining with all jurisdictions providing recycling services to explore ways in which promotional messages and themes can be coordinated state wide leading to even greater efficiencies.

3. City staff looks forward to working with DEQ staff to analyze Portland's recovery rates. We would be very interested to see the recycling data collected by the DEQ for other recycling programs. The City has established specific goals of achieving a 40 percent participation rate by July 1989 and recovering 24,000 tons of recyclables during the program's second year. The methods that will be used to achieve these ambitious goals are described in the Bureau's Rate Increase Proposal that was adopted by City Council in June of this year.

The City will undertake a community outreach program to canvass Portland households and has already initiated a apartment recycling project. The City will evaluate the effectiveness of weekly recycling collection and the use of household recycling containers.

4. The City is now addressing multi-family residential recycling opportunities. We have recently initiated an apartment recycling project which is surveying apartment owners, informing tenants of recycling opportunities and monitoring recycling levels at selected apartments. Results of this project will assist the City in developing a city-wide implementation plan for apartment recycling.

Substantial recovery programs already exist for many commercial establishments however, small to medium businesses could receive more comprehensive recycling service. A direct mail campaign aimed at Portland businesses is being reviewed for implementation.

In conclusion, we would like to thank the DEQ staff for their gracious comments concerning Portland's recycling program, reiterate our willingness to comply with their recommendations and pass your and our congratulations and thanks on to the citizens and waste haulers of Portland who have really made the recycling program successful.



RECEIVED  
AUG 1 1988

Dave Rozell, Waste Reduction Manager  
DEQ  
811 SW 6th Ave.  
Portland, Ore. 97204

Subject: DEQ Review of City of Portland's Recycling Program

Dear Dave:

Two parts of the Environmental Quality Commission Order are still needed:

4. Additional education materials. A City requirement for a Refuse Collection Permit states, "The permittee shall [distribute a] reminder notice every six months. . . Permittees are responsible for adding to City provided materials individual service information detailing exact day, location and method of recycling collection for each customer." (See REFUSE COLLECTION PERMIT REQUIREMENTS AND CONDITIONS, Permittee Requirements, #4.)

Reminder notices come with only the hauler's name and phone number. They do not tell the day of recycling collection. This is no way to get customers to participate. It can be too time consuming to try to reach a hauler by phone to find out the collection day. Most people won't do it. The EQC should order the City to enforce its own code by requiring haulers to print their recycling collection day on the 6-month reminders.

8. Enforcement program. I did not see anything in the City report about a system of random checks to verify permittee compliance. At the beginning of a program, citizens will make complaints, but most won't have the persistence to continue making complaints. Recycling Advocates found that at least one hauler was not distributing 6-month reminders. Such non-compliance can only be verified through random checks. EQC should keep the part of the Order requiring random checks.

It is difficult to compare City tonnage figures with other programs nationally because the City allows haulers to include commercial tonnage in with the residential. One has to make a wild guess of how much tonnage is commercial in order to compare Portland's curbside program with other residential curbside programs. DEQ should recommend to the City to figure out a way of separating residential tonnage from commercial tonnage. This will become even more important when commercial source separation systems expand.

I do not believe this program is achieving recycling rates at least comparable to rates elsewhere in the nation. See attachment.

Yours truly,



Jeanne Roy

Table 8. Participation Rates for Municipal Recycling Programs

Weekly Programs:

<u>Voluntary</u>	<u>Participation (percent)</u>	<u>Mandatory</u>	<u>Participation (percent)</u>
Beaverton, OR	10%	Islip, NY	40
Charlotte, NC	18	Montgomery County, MD	50
Hyde Park, IL	24	Haddonfield, NJ	60
Madison, WI	25	Dover, NJ	70
Albany, OR	26	Longmeadow, MA	80
Ann Arbor, MI	30	Groton, CT	85
Corvallis, OR	40	Woodbury, NJ	90
Austin, TX	50	Berlin, NJ	90
El Cerrito, CA	50	Hamburg, NY	<u>98</u>
Marin County, CA	50	Average	74
Monroe County, PA	52		
San Jose, CA	57		
Sunnyvale, CA	58		
Springfield, PA	65		
Davis, CA	80		
Kitchener, ON	<u>80</u>		
Average	45		

Biweekly or Monthly Programs:

<u>Voluntary</u>	<u>Participation (Percent)</u>	<u>Mandatory</u>	<u>Participation (Percent)</u>
Bend, OR	4	Monroe Township, NJ	25
El Paso, TX	5	Manitowoc County, WI	30
Grand Rapids, MI	10	Barrington, RI	35
Port Townsend, WA	13	St. Cloud, MN	44
Bellingham, WA	19	Montclair, NJ	77
Minneapolis, MN	19	Roxbury, NJ	<u>85</u>
Naperville, IL	28	Average	49
Berkeley, CA	30		
Richfield, MN	35		
Santa Monica, CA	35		
St. Louis Park, MN	40		
Burbank, CA	50		
Boscobel, WI	60		
Los Altos, CA	<u>65</u>		
Average	31		

(source: Resource Conservation Consultants, 1987)



Reply to: 2202 SE Lake Road  
Milwaukie, OR 97227  
654-9533

Hazardous & Solid Waste Division  
Dept. of Environmental Quality  
RECEIVED  
AUG 4 1988

MEMBER  
**NSWMA**  
National Solid Wastes  
Management Association

OREGON SANITARY SERVICE INSTITUTE

August 1, 1988

DEPARTMENT OF ENVIRONMENTAL QUALITY  
811 SW Sixth Avenue  
Portland, OR 97204

Re: Portland Recycling Program - Hearing August 3, 1988

(This written testimony is given on behalf of the Tri-County Council, comprised of representatives from the six solid waste associations in the Metro region: Clackamas County Refuse Disposal Association, Multnomah County Refuse Disposal Association, Oregon Sanitary Service Institute, Portland Association of Sanitary Service Operators, Teamsters Local 281, and Washington County Refuse Disposal Association)

The City of Portland has provided you with statistics that indicate the level of recycling occurring in the city has exceeded the goals set for the first year. This can be attributed to the effective administration of Bruce Walker, Recycling Director, the aggressive effort of the solid waste industry to fully implement the program, and the conscientious desire of the community to reduce the amount of waste being landfilled.

We could all sit back and say, "We've done well. Let's continue status-quo because that will keep us ahead of the rest of the nation." But all parties to this partnership have a commitment to even greater recycling goals, and we have put our dollars up front as proof.

Considering the massive increases in disposal costs that are coming, it was not a glib decision for the solid waste industry to support the increase in fees from 73¢ per ton to 98¢ per ton to pay for a more intense recycling program in the city. But statistics show that increased recycling participation will occur with stepped-up promotion and education, so we testified in support of the increase. To assure this high level of recycling can continue after the disposal fee increases occur, Portland needs to approve rate regulation that has been recommended by a citizens' task force. We would ask the Department of Environmental Quality and the Environmental Quality Commission to make their support known for the resolutions and ordinances that will be considered by the City of Portland later this month.

Portland started late on SB 405 recycling compared to the rest of the region, but their program has become a model in many ways for the rest of the state. In addition, the promotion dollars spent in Portland often have a far-reaching impact because of the state-wide viewing audience, and this has generated recycling awareness well beyond the boundaries of the city.

To be sure, there are a few bugs in the program that are being worked on. But the focus should not be on the bugs - it should be on the outstanding first year results and the aggressive programs that will attain even greater levels of participation in the future.

C: OSSI/Tri-C

*Esther Hansen* Industry Consultant

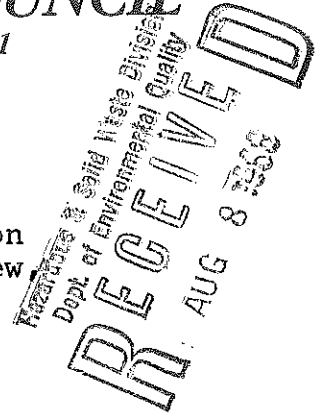
# OREGON ENVIRONMENTAL COUNCIL

2637 S.W. Water Avenue, Portland, Oregon 97201

Phone: 503/222-1963

August 5, 1988

Comments of Oregon Environmental Council on  
Department of Environmental Quality's Review  
City of Portland Recycling Program  
First Year Report



After extensive review of DEQ's analysis, we have come to the conclusion that we are looking at two questions:

1. Is Portland following the minimum letter of the law? The conclusion is yes, the opportunity to recycling is being offered.

2. The more important question is -- Is Portland doing the best possible job of increasing recycling. The conclusion is no.

Therefore, the next question should be what can be done to improve recycling in the city of Portland? There were some good ideas listed in the City of Portland's report and also in DEQ's analysis. Recycling activists could surely think of more.

## IDEAS FROM THE CITY OF PORTLAND REPORT:

The City proposes to conduct "a community outreach project (that) will canvass Portland households to explain and promote curbside recycling." This is an excellent idea. Studies have shown that person-to-person contact brings about the best increase in participation. Questions would center around when will it start, how many households will be reached, and what will be the message. The program should start soon and reach as many homes as possible. Volunteers could be used to spread the message even further. The message should be kept simple and stress what the individual can do to be part of the solution. Canvassing has been done in other cities. The experience of other cities should be utilized in designing Portland's program.

The apartment complexes have been the forgotten element in designing and implementing recycling. It is good to see that the City will be targeting them with a special project.

The statement that the City will increase the number of presentations to schools and civic groups is appropriate. From work in the schools children will become involved. They will take their enthusiasm home which will hopefully translate into behavior change on the part of their parents.

The sign-up promotion that is currently underway is a good way to get people informed. The enticing possibility of winning \$1000 opens minds to information they might not otherwise pay attention to or absorb.

#### IDEAS FROM DEQ'S REPORT:

There should be an evaluation of public impact from the educational and promotional activities. Promotional ideas that look good on paper may not be getting the message across.

The City of Portland and METRO should coordinate their educational and promotional activities to be more efficient and to maximize the impact of promotional dollars.

The City and DEQ should work together to analyze Portland's participation rates and tonnages recovered in comparison with other programs nationally.

The City should evaluate a number of programs that will maximize tonnages recovered. METRO is also in the process of evaluating programs. These efforts should be coordinated where the City would be impacted.

The City should evaluate the option of weekly pick up. Studies and experience in other cities have shown that weekly pick-up recovers much more material for recycling.

The City should design programs for multi-family residences and commercial solid waste generators. Once again, the City should coordinate with METRO.

#### OTHER IDEAS:

The City should re-examine the idea of regional contracts for recyclables pick-up.

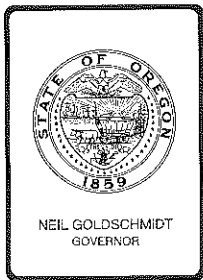
On page 2 of its report the city states that 33 waste haulers are offering weekly multi-material recycling collection service. Studies and experience have shown that there is more material recycled with weekly pick-up. There should be a study of the results and costs of those haulers in Portland offering weekly collection versus the haulers offering monthly collection.

#### QUESTIONS REGARDING DEQ'S REPORT

1. The report is one of ten specific requirements which the City of Portland had to meet. Has the City met the other nine?

2. The DEQ report states that "Preliminary analysis by DEQ staff indicates that Portland's program provides comparable participation rates and tonnage recycled when compared with other programs of a similar nature." What other programs were used in these comparisons? How did DEQ determine that Portland's recycling rate was "comparable to recycling rates elsewhere in the state and the nation" when Portland's report gave no information on comparisons?

3. Portland's enforcement program is weak. Allowing haulers to miss picking up recyclables three times before a fine is levied is too lenient. Each time a pick up is missed the City probably loses a recycler. Making recycling easy and convenient for the customer is one of the most essential elements of a successful program. The enforcement program must reflect that need.



## Environmental Quality Commission

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

EQC Agenda Item M  
September 9, 1988  
Attachment V

### MEMORANDUM

To: Environmental Quality Commission

From: David K. Rozell  
Waste Reduction Manager

Subject: Analysis of Comments Summary

Approval of Portland Wasteshed Recycling Report,  
Proposed Recommendations and Cancellation of  
EQC Order No. WR-87-01.

The following comments are from the oral and written testimony submitted on this issue.

COMMENT: Requiring weekly pick-ups will probably increase participation but will also hurt haulers economically. Some type of regulated system (e.g. franchised areas or contracted program) would result in more participation than weekly pick-ups. The City should re-examine the idea of regional contracts for recyclables pick-up.

DEPARTMENT ANALYSIS: Recommendation No. 3 of the DEQ staff analysis of Portland's report asks the City to evaluate a variety of program options. In that evaluation, we expect to see a comparison of how a given program option will affect haulers as well as how it will affect participation rates. The Department understands the City's decision on how to implement the program, but the City may want to re-examine the regional contract approach.

COMMENT: Evaluating numbers from the program is difficult, and made more so because commercial tonnage is added into residential tonnage. City of Portland and DEQ should figure out a way to correct this problem.

DEPARTMENT ANALYSIS: DEQ staff has recognized the inherent problems in analyzing the participation rates and tonnage numbers associated with recycling programs. Problems of this type are characteristic of all evaluation attempts nationwide. DEQ has recommended that the City work with DEQ staff to develop a better evaluation system in Recommendation No. 3.

COMMENT: This program is not achieving recycling rates at least comparable to rates elsewhere in the nation. How did DEQ determine that it was?

DEPARTMENT ANALYSIS: DEQ staff compared the Portland figures for participation (20.5%) and tonnage (16,444 tons) with preliminary figures we have for other cities in Oregon and with figures for other cities nationwide. For example, Portland's participation rates are comparable with Bellingham, Washington (19%) and Minneapolis, Minnesota (19%); better than Bend, Oregon (4%), Beaverton, Oregon (10%), Charlotte, North Carolina (18%) and other cities. Portland's tonnage (219 pounds per participant) compared favorably with other cities, such as Minneapolis with 123 pounds per participant. As part of Recommendation No.3, DEQ recommends that the City evaluate their program and establish goals in terms of tonnage removed from the waste stream, rather than participation rate.

COMMENT: The EQC should order the City to enforce its own code by requiring haulers to print their recycling collection day on the 6 month reminders.

DEPARTMENT ANALYSIS: This is a requirement in the City's code and the City should make additional efforts to ensure that this requirement is being met.

COMMENT: Portland's enforcement program is weak. Allowing haulers to miss picking up recyclables three times before a fine is levied is too lenient. Each time a pick-up is missed the City probably loses a recycler. The enforcement program must reflect the goal of making recycling easy and convenient for the customer. Hauler non-compliance seems to be verified only through random checks. EQC should keep in place the section of Order WR-87-01 requiring random checks and strengthen the City's enforcement program.

DEPARTMENT ANALYSIS: DEQ staff do not feel it is necessary to keep the EQC order in place, but do strongly recommend, in Recommendation No. 5, that the City re-evaluate its enforcement program and take necessary steps to ensure that the opportunity to recycle is being offered and that it is a convenient, rather than a frustrating, program.



EQC Agenda Item M  
September 9, 1988  
Attachment V  
Page 3

COMMENT: DEQ and the EQC should make their support known for the rate regulation ordinances and resolutions which will be considered by the City of Portland in late August.

DEPARTMENT RESPONSE: This issue is not directly related to the review of Portland's recycling program.

DIRECTOR'S PARAGRAPH

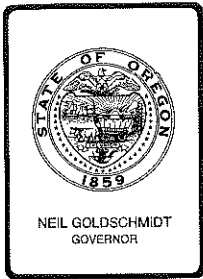
Agenda Item No. N

Commission Action on Review of Metro  
Solid Waste Reduction Program

This item proposes to request Metro to show cause why the EQC should not direct them to implement their approved Solid Waste Reduction Program. Metro submitted a required report on June 30, 1988 which has been reviewed by the Department, with comments from several external reviewers. The Department finds that Metro has not adequately implemented their Solid Waste Reduction Program as required by statute.

David Rozell, Waste Reduction Manager, is present at the meeting to answer any questions which you might have.

David K. Rozell:adk  
229-6165  
8/19/88  
metro report



## Environmental Quality Commission

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

### EXECUTIVE SUMMARY

To: Environmental Quality Commission  
From: Director *JA Wynn*  
Subject: Agenda Item N, September 9, 1988, EQC Meeting

### Commission Action on Review of Metro Solid Waste Reduction Program

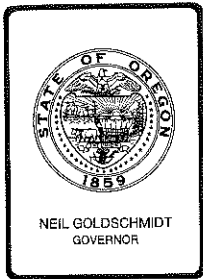
### BACKGROUND

Metro's Solid Waste Reduction Program was approved by the EQC on June 27, 1986. Under ORS 459.345 Metro is required to submit a report on implementation of this program and the EQC is required, under ORS 459.350, to review that report.

The Department has reviewed the report and concluded that Metro has not adequately implemented the Solid Waste Reduction Program. Over half of the program elements are either substantially behind schedule or have not been pursued.

### SUMMARY OF KEY ISSUES

The primary issue before the EQC is how to ensure implementation of Metro's solid waste reduction program. Does the EQC agree that Metro has not adequately implemented the program? Should the EQC defer a decision to the Legislative Assembly or direct Metro to implement the approved program? Does the EQC want to give Metro an opportunity to respond to the Department's analysis and show cause why the EQC should not order implementation of the Solid Waste Reduction Program?



## Environmental Quality Commission

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

### MEMORANDUM

To: Environmental Quality Commission  
From: Director *JH Wymk*  
Subject: Agenda Item N, September 9, 1988, EQC Meeting

### Commission Action on Review of Metro Solid Waste Reduction Program

#### Background and Problem Statement

Metro's Solid Waste Reduction Program, required by Senate Bill 662 (1985), was approved by the EQC on June 27, 1986. House Bill 2619, passed by the 1987 Legislature, requires Metro to submit a report on implementation of the Solid Waste Reduction Program by July 1, 1988 and every two years thereafter (ORS 459.345). The EQC is required, under ORS 459.350 to review the Metro report and determine 1) whether the district's activities related to solid waste disposal comply with the district's solid waste reduction program and any goals established by the district in previous reports; and 2) whether the program and all disposal sites operated by or used by the district continue to meet the criteria established under ORS 459.015.

ORS 459.355 requires the Department to make a preliminary report on Metro's implementation of the Solid Waste Reduction Program to the President of the Senate and the Speaker of the House of Representatives and to the appropriate legislative interim committee by September 1, 1988. The Department must also submit a full report to the Legislative Assembly on or before January 1, 1989 and every two years thereafter, to correspond with Metro's report submitted to the Commission under ORS 459.345.

Department staff, with comments from external reviewers, (Attachment II) evaluated Metro's report submitted June 30, 1988 which describes implementation activities over the past two years. There are eleven distinct program areas and forty-nine action elements in the Metro Solid Waste Reduction Program. Of those action elements 17 (35%) have either been completed or are on schedule, 11 (22%) are substantially behind schedule, 15 (31%) were not pursued, and 6 (12%) contained insufficient or conflicting information from which staff were unable to assess the status (see Attachment I for element-by-element analysis). Of the 17 elements completed or on schedule, 7 are in the Promotion,

Education and Public Involvement program area. There were also many substantial program modifications, none of which were submitted to the Department for review and comment, as required under ORS 459.340 (2). The Metro report is included as Attachment III.

Evaluation of the report indicates that Metro has not adequately implemented their Solid Waste Reduction Program. If the Commission agrees with the Department's findings, the Department will so report to the legislature. That is the only action allowed under these statutes (ORS 459.350, 459.355). Under SB 925 (1979) ORS 459.055, however, the Commission may, by order, direct Metro to implement the program.

As part of the permitting process for the Arlington landfill, in 1987 Metro submitted a Solid Waste Reduction Program as required by ORS 459.055. This program is identical to the program approved by the Department in 1986, which the Department has concluded is not being adequately implemented by Metro. ORS 459.055 (3) states that "if a local government unit has failed to implement the waste reduction program required pursuant to this section, the Commission may, by order, direct such implementation".

Since the programs are identical, the Attorney General has advised the Department that the provisions of ORS 459.055 are applicable to Metro's Solid Waste Reduction Program, and that the Commission may direct Metro to implement the program, over and above the requirement for a report to the legislature under 459.355.

#### ALTERNATIVES AND EVALUATION

The EQC may wish to take one of the following alternative actions.

1. Concur with staff findings and forward this report to the legislative interim committee and full Legislative Assembly for action. As stated above, ORS 459.355 requires the Department to make a preliminary report to the legislative interim committee and a full report to the full Legislative Assembly.
2. Direct Metro to implement the Solid Waste Reduction Program as approved in June, 1986. Under the authority of ORS 459.055 the Commission could issue an order which directs Metro to implement its Solid Waste Reduction Program. This option gives the Commission immediate and direct control over Metro's implementation of the program.

3. Request that Metro show cause why the EQC should not order implementation of the Solid Waste Reduction Program. This option gives Metro an opportunity to explain why certain portions of the program are behind schedule or are not being pursued, as well as providing a forum for clarifying other portions of the program and Metro's general intent in this area. The Commission can then determine the appropriate action if Metro does not satisfactorily explain deficiencies in program implementation.

#### SUMMATION

1. On June 30, 1988 Metro submitted a required report on the implementation of their Solid Waste Reduction Program.
2. The Department has evaluated the report in relation to appropriate statutes.
3. The Department review has concluded that Metro has not adequately implemented the Solid Waste Reduction Program.
4. There are program omissions and modifications which warrant additional information from Metro.

#### DIRECTOR'S RECOMMENDATION

Based on the summation it is recommended that the Commission request that Metro show cause why the EQC should not order the implementation of their Solid Waste Reduction Program.

Fred Hansen  
Director

Attachments: I. Element-By-Element Program Analysis  
II. External Reviewers and Written Comments  
III. Metro Report

Alan D. Kiphut  
229-6823  
8/19/88

EQC Agenda Item N  
September 9, 1988  
Attachment I

**METRO SOLID WASTE REDUCTION PROGRAM  
ELEMENT-BY-ELEMENT ANALYSIS**

**PROGRAM NAME: PROMOTION, EDUCATION AND PUBLIC INVOLVEMENT**

**Purpose: To develop a comprehensive program to reach the general public and special interest groups with information and other opportunities to increase their awareness of the participation in waste reduction activities.**

**A. Market Research**

**Comments:** Opinion Poll and Market Survey have been completed on schedule. In survey results people indicated they needed more information on "how to recycle". Evaluation of effectiveness of promotion/education activities is to be based on market surveys taken at regular intervals.

**B. Theme and Graphic Look**

**Comments:** Completed on schedule.

86/87 - Together We Can Get Out of the Dumps

87/88 - Save the Earth With a Brown Paper Bag

These themes are designed to tie together all elements of Metro's waste reduction promotion and education.

**C. Multi-Year Campaign Plan**

**Comments:** Completed on schedule. Provides detailed plan, schedule and budget to assure coordination of Metro waste reduction promotion and education activities.

**D. Specific Campaigns**

**Comments:** Completed on schedule. Two major promotion campaigns developed for each of the past two years, using radio, television and newsprint.

**E. Recycling Information Center (RIC)**

**Comments:** Ongoing. Phone calls continue to increase substantially each year. The Recycling Information Center serves as a valuable regional resource and Metro should be commended for the service being provided here.

F. Support for Local Jurisdictions

**Comments:** Ongoing. Appears to be an excellent context for Metro and local jurisdictions to work together and use supporting promotional and educational materials. Several local jurisdictions mentioned that they would like Metro to contact them more frequently and let them know when materials are available.

G. Public Involvement

**Comments:** Proceeding on schedule. Ongoing effort to involve the public and special interest groups from the metropolitan area.

**PROGRAM NAME: REDUCE AND REUSE PROGRAMS**

**Purpose:** Develop programs to achieve the maximum feasible reduction of materials that eventually become waste; and the salvage and use of reusable products retrievable from the waste stream.

A. Plastics Reduction Task Force

**Comments:** Completed. Metro participated in DEQ's plastics task force meetings. No legislation resulted from the task force meetings. One of Metro's franchisees, Oregon Processing and Recovery Center (OPRC) is currently purchasing plastics (either source separated or mixed). Five other private dropoff recycling centers in the region also take or purchase plastic material. Metro has prepared and distributed a list of plastic recyclers in the region.

B. Packaging Reduction

**Comments:** Ongoing. Slide show and fliers were done 9/87. Topic has been included into consumer information materials. Metro supported plastics legislation in the 1987 legislative session and has generated information which could be useful in drafting plastics legislation for the 1989 legislative session.

C. Salvageable Building Materials and Items

**Comments:** Not pursued. Metro has not examined the feasibility of programs to promote the reuse of building materials until very recently. A program effort in this area is recommended in their July, 1988 System Measurement Study.



D. Waste Exchange

**Comments:** Not pursued. Metro staff did not attend the conference in 1987. Feasibility study was not done. Recommended that the State (DEQ) should take the lead on this issue. On Page 14, they show Changes in Tasks Schedule, none of which were submitted to DEQ for approval.

**PROGRAM NAME: RECYCLE - 405 MATERIALS**

**Purpose:** Establish and aggressively promote a variety of programs to assist local governments and other parties in developing curbside collection programs as required under the Oregon Opportunity to Recycle Act; to meet standards developed by the Department of Environmental Quality; and to achieve maximum feasible reduction through those programs.

A. Technical Assistance

**Comments:** Not pursued. This effort was primarily tied into the Certification Program and Curbside Container Program, which were not implemented. Metro states that the cooperative planning effort now being implemented is the vehicle through which assistance to local governments will be provided. This is a substantial program modification which should have come to the Department for review and comment.

B. Recycling Information Center Enhancement

**Comments:** Ongoing. On schedule. Good efforts here in making RIC a valuable regional resource.

C. Certification Program

**Comments:** Not pursued.

D. Regional Promotion and Education

**Comments:** Ongoing and on schedule. Four campaigns described in Promotion program are used here.

E. Source Separation Technology Development

**Comments:** Behind schedule. Scheduled for future action, even though it was supposed to be implemented in FY 87-88. Feasibility study and project not implemented, even though budgeted in 1987-88

budget. ORS 459.395 requires Metro to conduct a residential curbside container pilot project sometime before July 1, 1989. RFP has recently gone out to conduct this project. Metro has also produced an Office Paper Recycling handbook but has not implemented a program in this area.

F. Grants and Loans

**Comments:** Behind schedule. Scheduled for future action, even though it was supposed to be implemented in FY 87-88. Metro Council recently (July, 1988) passed a "One Percent for Recycling" grant program. This program will fund innovative resource recovery programs, with a budget of approximately \$306,000.

**PROGRAM NAME: RECYCLE - YARD DEBRIS**

**Purpose:** To achieve maximum feasible reduction of yard debris currently being landfilled through the use of regional processing facilities and on-route collection of source separated yard debris.

A. Material Recovery Centers

**Comments:** Completed. Change in program but end result achieves the same goal. Attempts to establish a yard debris processing facility at the St. Johns Landfill failed and Metro began sending source separated yard debris to Grimm's Fuel Company. All the old contaminated material and yard debris has not been removed from the St. Johns site, as stated. Grimm's Fuel Co. and McFarlane's Bark, Inc. process most of the source separated yard debris in the region. In 1987, Grimm's and McFarlane's processed and sold a total of 312,829 cubic yards of yard debris.

B. Materials Markets Assistance

**Comments:** Behind schedule with some activities not pursued. Metro now has a staff person working specifically in this area. Previous assistance activities (annual market survey, annual supply profile, recycled products survey) were not produced.

C. Diversion Credits

**Comments:** Not pursued. Metro states that this approach is not needed because the processors have all the supply of materials they need.

D. Technical Assistance

**Comments:** Not pursued. This section of the Metro report directs the reader to the Certification and Markets Assistance Programs which contains the same information shown in item B above, namely that for a number of activities the "1987-88 and 1988-89 budget provided for this element to be conducted". Discussions with Metro staff confirmed that the surveys referred to had not been produced.

E. Promotion and Education

**Comments:** Ongoing. Several activities/publications here, most of which also show up under the general Promotion, Education and Public Education program. Most activities/publications are informational and aimed at the general public.

F. Provide Analysis for the Placement of Yard Debris on the list of "Principle Recyclables".

**Comments:** Completed. Metro has been substantially involved in the process of making yard debris one of the principle recyclables. They have also expressed the concern that the pace with which this is done may result in more materials than the processors can market.

G. Rate Incentives

**Comments:** Not pursued. Metro adopted an interim rate reduction for source separated yard debris at St. Johns in 1986. Unfortunately, this caused people to bring yard debris to St. Johns instead of the processors and, with no processing capability at St. Johns it had to be sent to Grimm's Fuel Co. The rate incentives were then dropped. There is no capability at CTRC to accept source separated yard debris, thus yard debris delivered there ends up in the landfill.

H. Local Collection Service Certification

**Comments:** Not pursued. Metro started working on this program element, but then dropped it based on the fact that the supply of yard debris is meeting the processors' abilities and the markets demand for the material.

I. Bans on Disposal

**Comments:** Behind schedule. While the intent of this element is to work toward a ban on disposal of yard debris in landfills by January, 1989, Metro is now backing off this approach. While the

question of whether or not a ban should be implemented may be a valid one, Metro has not raised this issue with the EQC.

**PROGRAM NAME: POST-COLLECTION RECYCLING/MATERIALS RECOVERY**

**Purpose:** To recover recyclable materials and reusable items from the waste stream through facilities which process waste which contains a high percentage of economically recoverable material. The mechanical processing of waste to produce compost, fuel or other by-products is considered Materials Recovery until it is looked at through the process outlined in Alternative Technologies.

**A. Material Recovery Centers**

**Comments:** Completed. Metro's report accepts credit for the establishment of these centers although there is conflicting information about how the process occurred.

**B. Use of Transfer Stations**

**Comments:** Behind schedule or not implementing efforts which would maximize waste substream differentiation or salvage materials.

**C. Waste Auditing and Consulting Service**

**Comments:** Not pursued. A plan for this activity was to have been developed by December, 1986 but nothing has been done to date. Metro states in the report that "the solid waste management planning process, through consensus of local jurisdictions, will address the most appropriate design of waste audit and consulting programs".

**PROGRAM NAME: ALTERNATIVE TECHNOLOGIES**

**Purpose:** To recover material and/or energy from the implementation of Alternative Technologies

**A. Solicit Proposals for Alternative Technologies that process up to 48 percent of the waste stream.** Specific processes to recover material will be evaluated through a RFQ/RFP process including material recovery technologies, composting, refuse-derived fuel (RDF) and Mass Burn.

**Comments:** Insufficient/Conflicting information related to achieving program objectives. Metro issued a Request for Qualification and Information (RFQ/I) in March, 1986 to systems

contractors who provide waste processing techniques including composting, refuse-derived fuel and mass burn. In September, 1987 the Metro Council authorized the negotiation of a Memorandum of Understanding with Riedel Environmental Technologies, Inc. (RET) for a 160,000 ton per year mass composting facility and with Combustion Engineering, Inc. (C-E) for a 350,000 ton per year refuse derived fuel facility.

Negotiations with C-E were terminated after the City of St. Helens voted against an incineration facility in May, 1988 and an alternative community which would accept the facility could not be identified.

Negotiations with RET were successfully concluded in May, 1988 and approved by Metro Council on June 23, 1988. RET guarantees a waste throughput of 185,000 tons per year. The facility will cost \$18 million and is expected to become operational in 1990.

It is unclear whether or not this product will impinge upon the yard debris compost market. Metro is currently conducting a market survey to determine if the markets for the two types of compost are overlapping or distinct.

**PROGRAM NAME: LEGISLATIVE PROGRAM**

A. Present packaging, plastics, effective public purchasing policies, and other proposals for legislative action.

Comments: Conflicting information on Metro's participation in the 1987 legislative session.

**PROGRAM NAME: CERTIFICATION FOR LOCAL COLLECTION SERVICES**

**Purpose:** To assure participation of local jurisdictions and the collection industry in waste reduction efforts to accomplish maximum feasible reduction through those programs which require changes in the collection system.

A. Adopt Certification Standards

Comments: Not pursued. This effort, to be used in conjunction with Rate Incentives (next section), was designed to increase the effectiveness of Recycle - 405 Materials, Recycle - Yard Debris, and Post-Collection Recycling/Materials Recovery programs. Metro states that local jurisdiction involvement in 405 activities obviated the need for certification standards.

Instead, Metro has re-organized its advisory committees and is pursuing a "consensus-building" approach to gain cooperation of local governments to implement its waste reduction program. This substantial program modification should have come before the Department for review and comment.

**PROGRAM NAME: RATE INCENTIVES**

**Purpose:** To establish a variety of rate incentives to achieve the goals and objectives of the Waste Reduction Program.

**A. Incentives for Post-Collection Recycling/Materials Recovery**

**Comments:** Insufficient information. Metro did exempt material recovery centers from having to collect the user fee and regional transfer charge, which did provide a rate differential between what is charged for regular garbage coming into St. Johns Landfill and the material which could be recycled. They now state that the proposed tipping fee increases (Fall, 1988) will be a substantial incentive to recycle.

**B. Rate Incentives to Assure Compliance by Local Collection Services with the Standards of the Certification Program**

**Comments:** Not pursued. This program was to be linked to the Certification For Local Collection Services Program described above. Since the certification program was not implemented, this rate incentive program was also not implemented. It has been "replaced" by the Solid Waste Management planning process.

**C. Funding of Work Plan Commitments Through User Fee Rates**

**Comments:** Insufficient information. This section states that Metro will modify user fee rates, as appropriate, to assure funding necessary to carry out specific programs or actions in the Work Plan. A rate study incorporating these needs was conducted, as stated, by January 1, 1987 but it is unclear if this is a general statement applicable to all programs or reference to a limited number of programs.

**PROGRAM NAME: MATERIALS MARKETS ASSISTANCE PROGRAM**

**Purpose:** To develop programs and services designed to stimulate demand for certain recyclable materials to meet expected increased supply of those materials generated through the implementation of SB 405 and Waste Reduction Program; to develop an annual information base on market conditions from which to evaluate market assistance programs.

**Comments:** Not pursued or behind schedule. This section in the report contains ten action elements, most of which have one line comments or refer the reader back to previous sections for information. Some brief comments on the action elements follow.

- A. Annual Market Analysis: Conducted in 1987-88.
- B. Annual Market Survey: Not conducted in 1987-88; specific markets may be focused on in 1988-89.
- C. Annual Supply Survey: Not conducted.
- D. Recycled Products Survey: Not conducted.
- E. Consumer Education: Ongoing. Appears as portion of Promotion, Education and Public Involvement Program.
- F. Institutional Purchasing: Metro worked on some internal purchasing options, but it is not clear what the results were. Did not provide technical assistance to other jurisdictions.
- G. Legislative Action: referred to Legislative Program, where there is no specific indication that Metro conceived or supported legislation which was designed to support the development of recycling markets.
- H. Grants and Loans - Research and Development: Referred to grants and loans section and Recycle 405 section. Metro Council only recently initiated a grants and loans program (July, 1988).
- I. Grants and Loans - User Assistance: See comments in H above.
- J. Materials Brokerage: Report states that no policy has been established on these issues.

**PROGRAM NAME: SYSTEM MEASUREMENT**

**Purpose:** To establish a system, based on analyses of waste compositions, for determining which programs and projects will obtain the maximum economically and technically feasible waste reduction through each level of the hierarchy.

**A. Waste Substream Composition Study**

**Comments:** Behind schedule. This study was scheduled to be completed in December, 1986 but was not completed until December, 1987. The lateness of this study has held up other program elements.

**B. Substream Resource Recovery Study**

**Comments:** Behind schedule. Completed December, 1987.

**C. Set Waste Reduction Performance Goals**

**Comments:** Behind schedule. Submitted with Metro's report as Appendix L is the Waste Reduction Goals - Draft Report, dated

EQC Agenda Item N  
September 9, 1988  
Attachment I  
Page 10

July 1, 1988. This report describes a process used to rank more than twenty program options, ending up with five program options which, when implemented, will generate approximately 21 percent additional recycling. This, in combination with the existing recycling rate of 21.7 percent, will achieve a regional rate of 43 percent.

On July 25, 1988 the Department received a copy Metro's System Measurement Study, which describes in more detail the programs (now six in number) which will generate the additional waste reduction. It is unclear whether the six programs now constitute the total Metro effort or if they are designed to test the predictive reliability of a measurement system.

**D. Establish Ongoing Measurement of System Performance**

**Comments:** Behind schedule.



EQC Agenda Item N  
September 9, 1988  
Attachment II

METRO REPORT REVIEW LIST

Bruce Walker  
Recycling Program Manager  
Environmental Services  
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Recycling Advocates  
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(Written comments submitted)

John Charles  
Oregon Environmental Council  
2637 S.W. Water  
Portland, OR 97201  
222-1963

(Written comments submitted)

Lynda Kotta  
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Gresham, OR 97030  
661-3000/669-2405

Dave Phillips  
Clackamas County Dept. of  
Transportation & Development  
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655-8521

(Written comments submitted)

Judy Dehen  
Sierra Club  
2637 S.W. Water  
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Merle Irvine  
OPRC  
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Portland, OR 97217  
285-5261

Estle Harlan  
Harlan Associates  
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Milwaukie, OR 97222  
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(Written comments submitted)

Rod Grimm  
Grimm's Fuel  
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636-3623

(Written comments submitted)

Joe Cancilla  
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Portland, OR 97266  
761-8075

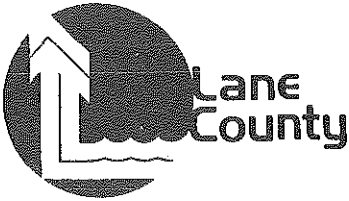
Ken Sandusky  
Association of Oregon Recyclers  
Lane County Waste Management  
Division  
125 East Eighth Street  
Eugene, OR 97401  
687-4336

(Written comments submitted)

Ed Druback  
2042 S.W. 8th Ave.  
West Linn, OR 97068  
656-4211

Tom Miller  
Miller's Sanitary Service  
5150 S.W. Alger  
Beaverton, OR 97005  
644-6161

(Written summary of phone  
conversation)



Permitting & Solid Waste Division  
Dept. of Environmental Quality  
RECEIVED  
AUG 5 1988

August 1, 1988

Dave Rozell  
Manager, Waste Reduction Section  
Department of Environmental Quality  
811 S.W. 6th Ave.  
Portland, Oregon 97204-1334

Dear Dave,

I have reviewed the Metro Report on the implementation status of their waste reduction program, and submit the following comments:

First some remarks on the structure and style of the report -

I found the report difficult to read in that a) the implementation activities were broken down into fiscal years as opposed to a simple explanation of what total steps had been taken to carry out the various action elements, and b) the use of past, present, and future tenses were employed in such a manner that in one paragraph the report referred to an activity that was just completed, and a following paragraph referred to an activity that will be completed at a date more than a year in the past. I could only conclude that the report was either written as a daily diary and then put together without regard to time sequence, or was written by more than one author without coordination as to time sequence. In any event, the report was difficult to follow because of the lack of concern for chronological order.

With regard to style, I was reminded of some of the first reports I heard (and wrote) in high school. There was considerable unnecessary repetition, overstatement of the case, and a "feeling" that some padding of accomplishments may have taken place.

As a final comment I would add that not being from the Portland Metropolitan area I am not in tune with what, for the most part, has transpired in the way of waste reduction in the area. I also wish to add that when a person is asked to review a report, the natural proclivity is to criticize. The assumption is, if the program were a model one, no comments would have been solicited. Lastly, I am glad that it is not one of my reports on which comments are being requested, as the world seems to be full of people who are willing to

criticize the work of others without taking into consideration the dynamics under which they are forced to work.

### Substantive Comments

In the cover letter for the report, Rena Cusma, makes three comments that raised some question marks or surprised this reader:

1. Her comments about the siting of the landfill in eastern Oregon with OWSI: was the siting of a landfill part of the Waste Reduction Program? If not, then this seems to fit into the category of the padding of accomplishments, or the taking of credit for matters that are not germane to the focus of the report.

2. Her comments about the increased tipping fee resulting from the siting of the eastern Oregon landfill working to the benefit of recycling are undoubtedly correct, however, they are a consequence of the need to replace the landfill, and not a technique employed by Metro to increase the recycling rate as might be implied by her statement.

3. She describes the development of material processing centers as a "major gain". From my understanding of the issue, Metro did not go out and seek such development, rather (in the case of OPRC at least), OPRC sought a franchise from Metro to conduct their operations. This franchising arrangement was one which OPRC had to fight to get, being turned down in their initial efforts to gain such an arrangement. This is a "major accomplishment" which Metro achieved in spite of itself.

### Education/Promotion

I do give Metro high marks for their work in the area of promotion and education. Since the agency probably relies upon local jurisdictions for direct delivery of education and promotion services, it seems reasonable that the role they have taken as a market surveyor, a purveyor of technical assistance, and a provider of general recycling information for the region is a reasonable one. The services of the Recycling Information Center are vital, well delivered, and growing in both scope and importance. Their staff in the education and promotion area are well thought of in the field, and I am hopeful that their increased involvement in direct classroom presentations during March, April, and May of 1988 is an indication that this is a Metro priority.

### Plastics and Packaging

In the area of Plastics and Packaging, Metro, like most governmental units has done very little. Their activity

has been limited to participation in a task force, a couple of articles, some factsheets, mention of buyer awareness in their slide show, and legislative support for bills introduced by others. Most parties in the recycling industry have taken a very cautious approach to the promotion of plastics recycling given the newness of this facet of the business. I do not blame Metro for not having done more. However, given their degree of influence on solid waste and recycling matters for the state's largest population area they should be expected to take a pro-active stance on both plastics and packaging legislation in the 1989 session.

#### Waste Exchange

I concur with Metro's decision to limit its waste exchange services to calls it receives through its RIC. This type of activity will more likely take place because of the economics of disposal rather than from solicitation or promotion by Metro. I do not agree that this is a role that ought to be assumed by the state just because Metro does not find it economically feasible to do the job itself.

#### Technical Assistance

For the most part this section of the report is a re-hash of earlier sections, particularly those associated with education and promotion.

#### Source Separation Technology Development and Grants & Loans

This section of the report talks about what will be done, rather than what has been done and therefore requires no comment.

#### Yard Debris

It does not appear that Metro has done much with yard debris since its abortive attempt to process materials at St. John's landfill. Perhaps the best thing it has done is to let the existing processing system alone so that it could develop supply as demand developed. It is unclear to this reader as to whether Metro aided this process by creating a rate incentive for the public and commercial generators of yard debris to use Grimm's fuel yard rather than the landfill. In fact, the whole section on rate incentives has this reader confused. Metro has developed some written information on yard debris composting which is of benefit. In the cover letter written by Rena Cusma, she claims that the yard debris recovery program has become recognized as the "most successful of its kind in the United States". If this is true, and it may be, the

section in the report describing the activity left out many crucial details.

#### Material Recovery Centers

As stated earlier, with regard to OPRC, Metro seemed to have had little to do with developing the center, indeed, appeared at least initially to be a barrier. I can not conclude that the same was true with other operators, but it does make one suspicious.

#### Alternative Technologies

Frankly, this is an area which is out of my level of expertise. The time period stated for the selection of successful contractors from the six finalists seemed long, but not having a background in the process prohibits me from drawing any conclusions. The price negotiated by Metro with RET is also outside my area of understanding, but should be compared to prices negotiated by other solid waste authorities with comparable sized wastestreams for the same technology. I could not tell from the way the report was written, but I assume that the price was negotiated as a result of a competitive bidding situation, rather than a contractor selected, and then a price negotiated.

#### Certification Program/Rate Incentive Program

Metro's report details a variety of reasons why no certification took place: staff turnover, DEQ slowness in examining wasteshed reports, legal issues, etc. Whatever the reasons, it appears that little if any progress has been made in certifying local jurisdictions. Apparently, elements of the certification program will be replaced by the Solid Waste Management Planning process. I am unsure if this is because of the failure of the certification process, or because it was not needed in the first place.

As stated earlier, I have difficulty understanding the rate incentive plan for recycling. It may or may not be currently in use, and it is unclear to me whether the amount of recyclables necessary to qualify for a rate reduction is a reasonable amount for the normal person to deliver to a disposal site. I also wonder to what degree the incentive (if in effect) has been publicized.

#### Materials Markets Assistance Program

Most of this section is repetitious of program elements reported previously. However, two items deserve comment: 1) Institutional Purchasing: The report mentions working with the in-house purchasing supervisor to establish a

system for purchase of secondary materials. Did in fact an appreciable amount of secondary materials get purchased? 2) Materials Brokerage: While the report indicates that no policy on market and supply guarantees and price subsidies has been established, this is an intriguing concept. It appears Metro intends to subsidize the alternative technology approach given the price it negotiated with RET. I would like to see more in depth discussion of recycling market and supply guarantees.

#### Summation

Overall I would have to say that the report is repetitious, somewhat "padded", and in some cases makes excuses for Metro's inability to get a job done while never taking responsibility for that failure. On the other hand the education and promotion efforts are good overall, and many governments would do well to emulate Metro's efforts. As I stated from the outset, it is easy to criticize when you don't have knowledge of all the conditions under which someone else has to work, but Metro has not done an impressive job in most areas of implementing its waste reduction plan. This being the case, one assumes that waste reduction is not a high priority for this agency.

Sincerely,



Ken Sandusky  
Recycling Coordinator

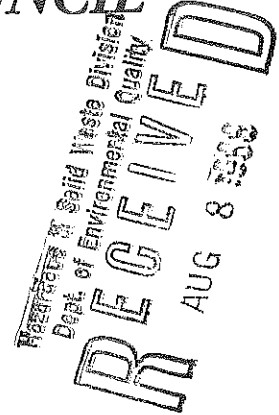
# OREGON ENVIRONMENTAL COUNCIL

2637 S.W. Water Avenue, Portland, Oregon 97201

Phone: 503/222-1963

August 5, 1988

Comments of Oregon Environmental Council on  
Metropolitan Service District's Report,  
Implementation of its Waste Reduction Plan



## INTRODUCTION TO THE REPORT:

- Much of what METRO has done they were forced to do.
- The contract for land fill space in eastern Oregon was written assuming that an additional 30% of the waste would be directed away from the landfill. This is a good move if that 30% is slated to be recycled.
- METRO states that "The tipping fee increase that supports this disposal method will serve as a rate incentive for both the commercial and residential sectors...." This is not a rate incentive. There is no differential between mixed loads and high grade loads. Haulers say that the increased fee to the home will be minimal -- no incentive.
- The waste composition study found that about 11% of the waste was yard debris. METRO states that if its yard debris program is fully implemented 75% of the yard debris will be recycled, yet in the introduction they state that if the program is fully implemented it will reduce wastes landfilled by approximately 3%. 75% of 11% is 8.25%.
- METRO claims to have "dramatically expanded the region's recycling capacity using this reduction technique (material processing centers)." Both of the two independent centers listed, OPRC and ECR asked for the franchise. METRO did not seek them out. These centers are a good step but METRO cannot claim credit for them.
- Much of what is listed throughout the report is educational and promotional in nature. This is very good but is only one element in what METRO could be doing.

## PROGRAM NAME: PROMOTION, EDUCATION AND PUBLIC INVOLVEMENT

- METRO has done a good job in general education and public awareness campaigns. What is needed is specific information and person-to-person promotion, especially in the business and industrial communities.



## PROGRAM NAME: REDUCE AND REUSE PROGRAMS

A. - METRO lists under 1987-88 a paragraph about markets for plastics, EQC possibly adding plastics as a principal recyclable and OPRC's purchasing of plastics for recycling. None of these activities are METRO generated.

- METRO should be commended for supporting plastics legislation in the 1987 legislature, and encouraged to support comparable or even better legislation in the next session. METRO generated information and research could be used in the drafting of plastics legislation.

- METRO says it researched and created a list of plastics recyclers and distributes it to interested parties upon request. METRO should take an active role here and do research into what businesses might have waste plastic that could be recycled and send the list to them.

- METRO states that "specific recycling goals for plastics are under consideration in the region's solid waste management process". As a member of the subcommittee that was charged with coming up with recycling goals I recall that plastics were removed from consideration early in the process. This was because of a relatively low level of potentially recyclable plastics in the wastestream and poor markets.

- Recycling programs and activities are listed under Reduce and Reuse Programs. Recycling is not the same as reducing and reusing.

C. - METRO states that they will develop salvage capability at disposal facilities for salvageable building materials and items. I don't believe this has been done.

## PROGRAM NAME: RECYCLE -- 405 MATERIALS

- Here we find a word that is subject to many interpretations -- feasible. The definition of feasible depends greatly upon your point of view and criteria. What is feasible in the eyes of Oregon Environmental Council is likely to be different that what is feasible in the eyes of a hauler or manager of a recycling center.

E. - METRO states that an analysis of home or office recycling container programs will be completed by February 1987. This was not done. The pilot program has only just begun.

- The report states that "Office paper recycling was also developed as a program in fiscal year 1987-88." All I could find in the rest of the report was the production of a handbook on how to recycle office paper. The production of a handbook does not constitute a program.

## PROGRAM NAME: RECYCLE -- YARD DEBRIS

Under the "Purpose" section METRO lists "on-route collection of source-separated yard debris," as a method of achieving maximum feasible reduction of yard debris going to the landfill. This method is not mentioned further, nor has it been implemented.

More yard debris could be diverted through programs that address people who have yard debris but no method of transporting it to the current drop-off centers.

PROGRAM NAME: POST-COLLECTION RECYCLING/MATERIALS RECOVERY

C. 1987-88: The "waste audit and consulting effort" mentioned is a very good idea. This is an action item to go hand in hand with increased tip fees and the other educational efforts that METRO does. Business people need to know what they can do to decrease their costs when the increased fees go into effect.

PROGRAM NAME: ALTERNATIVE TECHNOLOGIES

Oregon Environmental Council has some concerns with the proposed MSW compost facility.

- What are the markets for the finished product? Will this product take away from the market share of yard debris compost currently being produced in the private sector?
- How will hazardous materials be segregated from the materials going into the compost? If hazardous materials are not to be segregated, we are concerned that the finished product will either be tainted or perceived as tainted. This actual or perceived taintedness will affect potential markets' confidence in the product. Additionally, markets could lose confidence in all compost products including yard debris compost.

PROGRAM NAME: CERTIFICATION FOR LOCAL COLLECTION SERVICES

"Standards and measurements will be developed to assure effective local collection programs which meet source separation goals for principle recyclable materials, remove yard debris from the waste stream, and provide high-grade loads of mixed waste."

The above would be a good idea if it could achieve the stated goals, but it has not been done.

III. Once again, yard debris seems to be left out. Under 1987 Standards Tasks Completed, METRO states "The certification goal of developing collection systems for yard debris was adopted by Council as a part of the Waste Reduction Program." Yet, this has not been done.

PROGRAM NAME: RATE INCENTIVES

A. 1987-88. METRO states that more recycled material could be diverted to processing facilities if there were more of a rate incentive to waste generators. The goal is to divert more materials, therefore rate incentives should be used.

In 1986 the Metro Council adopted ordinance 86-199, which amended Metro's Solid Waste Management Plan. One of the Solid Waste Reduction Policies in the amended plan dealt with rate incentives. Specifically the policy stated that "Rates for disposal will be structured to provide adequate incentives to conduct maximum feasible source-separation programs and to provide maximum feasible high-grade select loads."

This policy was further enunciated in the Program Component: "Rate regulation of high-grade materials recovery facilities will be structured to provide an adequate rate of return while maximizing the number and quality of loads which are delivered."

The Work Plan Action Element stated that "Specific changes will be made in the Metro Disposal Franchise Ordinance, Rate Ordinance and Rate Policies by July 1, 1986, to provide economic incentives for the Post-Collection Recycling/Materials Recovery feature of the Framework Plan."

Further commitments are made in another Work Plan Action Element: "Rate incentives which assure compliance with the Standards of the Certification of local collection service program will be developed. A variety of options will be examined and a specific program of rate structure modification will be developed for implementation by January 1, 1987". Although OEC doesn't support certification as the method to be used, we support an alternative to achieve the same objective.

In June, 1987 Recycling Advocates made a specific proposal to METRO for a rate incentive program. The only response from METRO staff was that the certification program was part of a 2-year functional planning process and that rate incentives would be part of the normal rate review process.

These things have not been done. The 1986 Solid Waste Plan amendments were adopted by ordinance and METRO is required to enforce the ordinances enacted by the council." ORS 268.190(4).

B. Rate incentives should impact the waste generator, not the city or the hauler. The idea of a rate incentive is to make garbage collection more expensive for the one who does minimal or no source separation of recyclables -- and less expensive for the one who does do some source separation -- and even less expensive for the one who does extensive source separation.

PROGRAM NAME: MATERIALS' MARKETS ASSISTANCE PROGRAM

A., B., C., D. Activities are listed and it is indicated that money to do them was budgeted, but were they done?

J. In one part of the report METRO says that there are not enough markets to aggressively recycle yard debris. In the "Long-Term Marketing Plan" section, METRO states that "all of the yard debris, slated for recycling under the Waste Reduction Plan (75%), could be successfully marketed as new products." Which is it -- the markets are flooded or yard debris can be successfully marketed?

PROGRAM NAME: SYSTEM MEASUREMENT

A. This waste composition study was well done and has been a useful tool for those who work in solid waste issues.

C. 1987-88. (paragraph 3) METRO states that the Subcommittee came up with preliminary program recommendations to ensure "the maximum feasible recovery rate for the METRO region." In fact many compromises were made by members of the committee who represented quite varied points of view. Programs that were projected to achieve quite high recycling rates were discarded because of perceived high costs. Therefore, the programs chosen were not necessarily the ones that would achieve maximum feasible rates. In the long term it might be less expensive to have a program that initially costs more but achieves higher recovery rates.

The subcommittee had to work under adverse conditions on occasion as our technical staff support person was removed from the subcommittee's work and assigned to other projects. There were deadlines to be met and sometimes we had to make decisions without sufficient time to fully consider the options. Hopefully, we can refine and improve programs over time as information comes in, and we can add other programs.

(paragraph 4) The Subcommittee was not allowed to look at programs dealing with yard debris recycling.

SUMMARY:

Throughout the report the reviewer is sent back to education and promotion. At times this is proper, but at other times an action is called for.

In general many deadlines were missed, and plans or program were rewritten before the original was implemented.

RECEIVED  
AUG 1 1988

COMMENTS ON IMPLEMENTATION OF METRO'S WASTE REDUCTION PLAN

1987/88 REPORT TO THE DEQ

PROMOTION, EDUCATION, AND PUBLIC INVOLVEMENT

Metro has done a good job in this area.

REDUCE AND REUSE PROGRAMS

A. Plastics reduction. The statement "specific recycling goals for plastics are under consideration in the region's solid waste management process" on p. 11 is not correct.

B. Packaging Reduction. The report refers to a Purchasing Policy, but it was never written. Last week Rena Cusma announced Metro would stop using styrofoam cups.

C. Salvageable Building Materials. Metro has not examined the feasibility of programs to promote reuse of building materials. A report by the Environmental Learning Center is referred to. However, I can't find anyone at Metro who knows where this report is.

Salvage capability has been developed at CTRC but not St. Johns.

RECYCLE--405 MATERIALS

A. Technical Assistance. Metro has not provided technical assistance services to local governments in developing single and multi-family curbside collection programs. They were to designate a Project Manager for a technical assistance program by 1/86 (Work Plan, p. 15). I don't believe they did that. They were to distribute Residential Recycling Demonstration Grant Program Final Report by 4/86 (WP, p. 15). I don't believe they did that.

E. Source Separation Technology Development. Metro provided for a curbside container demonstration program in its fiscal year 1987-88 budget. The results were to be used to develop recommendations for the Solid Waste Management Plan. The project was not done.

RECYCLE--YARD DEBRIS

A. Material Recovery Centers. Metro did not establish a yard debris processing facility at St. Johns Landfill. Yard collected there is being transported to Grimm's for processing.

B. Material Markets Assistance. Metro has done a good job of markets assistance for yard debris. A full-time person was hired for this purpose.

G. Rate Incentives. Metro has not lowered its fees or provided separate space at CTRC for yard debris to encourage source separation. Therefore yard debris brought there goes to the landfill. The third paragraph on p. 27 was not carried out.

H. Local Collection Service Certification. Metro was making some progress on developing standards for yard debris recycling, but when the new administration took over, this was dropped.

I. Bans on Disposal. Nothing has been done to prepare for a 1989 ban, and Metro has no intention of doing this.

#### POST-COLLECTION RECYCLING/MATERIALS RECOVERY

A. Material Recovery Centers. Metro has done nothing to cause the establishment of recovery centers, which was to have been done by 12/87 (WP, p. 22). OPRC and East County Recycling asked for franchises.

B. Use of Transfer Stations. Metro has not redesigned CTRC for maximize waste substream differentiation, salvage, or post-collection recovery. Design modifications were to have been determined by 11/86 (WP, p. 22). Some high-grade loads, I believe, are being transported to OPRC, but redesign has been put off until fall of 1988.

C. Waste Auditing and Consulting Service. Metro has not assisted waste generators in developing more high-grade loads. A plan for such assistance was to have been developed by 12/86 (WP, p. 22).

#### CERTIFICATION FOR LOCAL COLLECTION SERVICES

Work on standards for certification stopped in the beginning of 1987. "Future Tasks" on p. 37 were not carried out.

Rate incentives for the second-year standards were to have been in effect 1/88 (WP p. 33).

In the regional planning process, Metro will propose that local governments or collectors provide curbside containers for residents and recycling dumpsters for apartment dwellers. However, Metro "believing" that they will carry out these proposals does not make it happen. No proposals for yard debris collection are being made in this regional process. The regional process cannot substitute for the Certification Program which had some teeth because of Metro's rate setting authority.

#### RATE INCENTIVES

A. Incentives for Post-Collection Recycling/Materials Recovery. The 1986-87 plan states,

"Changes in waste flows at processing centers following this

increase will be compared with data from the System Measurement Study to determine targeted goals for the high-grading of waste. If it is found that the differential produced by the Metro rate increase in 1987 or future years is not effective in optimizing high-grade load generation, then processing facility operations will be evaluated to determine the best method of increasing their waste flows. . ."

Evaluation of needed changes was to have been done by 5/87 (WP p. 38). This was not done. In fact when it became obvious that the rate differential was not great enough in the fall of 1987 and tons of office paper began going to the landfill instead of OPRC, Metro would still not implement any additional incentive. Because of Metro's intransigence, OPRC developed a proposal to accept more mixed waste but to burn up to one half of it.

I challenge the statement on p. 41 that impending rate increases in the fall of 1988 will provide sufficient incentive to the generators of waste to use the processing centers. Metro has done no analysis to show this would be true. In fact the Waste Reduction Goals White Paper projects that increased tip fees will increase total recycling by only .6%.

B. Rate Incentives for Certification Program. This was never done. Stating that yard debris has been placed on the principal recycling list is no excuse for not using the rate incentives. Local jurisdictions need incentives just as much as ever.

On p. 42 is the statement that the certification program has been replaced by the Solid Waste Management planning process. However, the results of the planning process will be not be same as those sought from the certification program as is stated. Yard debris collection is not even included in the planning process.

C. Funding of Work Plan Commitments Through User Fee Rates. The 1987-88 plan says that Metro provided for two other rate incentives. That is true. However in its new rate recommendations Metro plans to discontinue the rate differential at the landfill for commercial haulers of yard debris. It also plans to discontinue the waiver of the minimum charge to public customers who deliver at least half a cubic yard of recyclables with their waste.

#### MATERIALS' MARKETS ASSISTANCE PROGRAM

A., B., C., & D. The Annual Market Analysis, Annual Market Survey, Annual Supply Profile, and Recycled Products Survey, although in the budgets, were not done.

F. Institutional Purchasing. Metro has not provided technical assistance and promotion for developing institutional purchasing policies favoring use of recycled materials.

H. Grants and Loans. These have not been used for research and development of new methods for utilizing secondary materials.

I. Grants and Loans. These have not been used for users of secondary materials.

J. Materials Brokerage. Neither the markets nor the supply of materials have been guaranteed by Metro. In fact their Waste Reduction Goals White Paper says that this shouldn't be done.

#### SYSTEM MEASUREMENT

A. Waste Sub-stream Composition Study. Metro should be commended on their study.

C. Set Waste Reduction Performance Goals. Specific goals were to have been adopted by Council by 12/86 (WP p. 48). Goals for programs, rather than substreams, are being set now in the Solid Waste Planning process. However, they are not being set in conformance with the Waste Reduction Plan. In other words they are low because it was assumed that many parts of the Work Plan would not be carried out such as rate incentives, certification, market guarantees, and so forth. The annual goals of 2-4% for each of the next two years are much too low. At this time when disposal costs are to go way up, there should be tremendous incentive for expanding recycling programs. Metro should implement all parts of the Waste Reduction Work Plan. Saying that promotion and education and funding of innovative recovery programs are the main things Metro will do to achieve the goals is completely unacceptable.

D. Establish Ongoing Measurement of System Performance. A plan was to have been developed for ongoing measurements of system performance. I am not aware of any plan.

*Joanne Ray*





Reply to: 2202 SE Lake Road  
Milwaukie, OR 97222

MEMBER  
**NSWMA**  
National Solid Wastes  
Management Association

OREGON SANITARY SERVICE INSTITUTE (654-9533)

July 27, 1988

FRED HANSEN, Director  
Department of Environmental Quality  
811 SW Sixth Avenue  
Portland, OR 97204

Hazardous & Solid Waste Division  
Dept. of Environmental Quality  
**RECEIVED**  
JUL 28 1988

Re: METRO WASTE REDUCTION PROGRAM IMPLEMENTATION

Dear Fred:

Thank you for the opportunity to comment on the implementation of Metro's Waste Reduction Program. I understand you are soliciting comments from various sources for incorporation in the report required by ORS 459.345.

The solid waste industry has been deeply involved in program implementation with John Trout (Teamsters Local 281), Tom Miller (Washington County) and Michael Borg (Clackamas County) serving as members of the functional planning Technical Committee, and with Tom Miller, Bill Webber (Linn-Benton County) and I serving as members of the Waste Reduction Committee. Therefore, these comments are made with some degree of understanding for the process, and not as a mere observer.

The following would be my comments on the 1987-88 Report to the Department of Environmental Quality on Metro's Waste Reduction Plan:

1. PROGRAM NAME: PROMOTION, EDUCATION AND PUBLIC INVOLVEMENT.

Metro is fulfilling its commitment to increase the public's awareness and participation in waste reduction activities. The circle of interest is increasing and it is common to hear people discussing recycling in restaurants, on public transportation, and in social gatherings. Metro has plans for future promotion campaigns, and the public involvement that will occur through their recycling container pilot program should boost the region's awareness. This is just one of many programs planned by Metro, and each one has a compounding effect on people's lifestyles. - It would be our recommendation that future ad campaigns focus more closely on the correct preparation of recyclables now that we have people generally aware of the opportunity to recycle. Metro has indicated a willingness to us to address this educational concern.

2. PROGRAM NAME: REDUCE AND REUSE PROGRAMS.

Packaging, and particularly plastic, has been a focus in the past. Metro should be commended for the pilot program in Plastic Recycling they are conducting with the cooperation of the Environmental Learning Center at Clackamas Community College, Clackamas County, and B & B Leasing Co. They have indicated a willingness to support legislation in the next session to address packaging reduction. The database developed by Metro for demolition reuse is extremely valuable, and particularly the report generated by the project at the Environmental

Learning Center. The Recycling Information Center is a vital link in informing the public of reduce/reuse opportunities.

3. PROGRAM NAME: RECYCLING--405 MATERIALS.

The Waste Composition Studies indicate that the Metro region has one of the highest recovery rates in the nation for 405 recyclable materials. This has been attained through aggressive education, promotion and commitment on the part of both Metro and the solid waste industry. It has not been without cost. On an average in the Metro region, the net cost of recycling reduces the net profit of solid waste companies by 2% per year. For some companies, that 2% cost exceeds the company's net profit. Peter Spendelow of the DEQ staff reported on 405 Recycling to a task force meeting in the City of Gresham, and stated on July 21, 1988: "We have the top recycling rate in the nation, especially when you consider newspaper recovery. Portland has been surprisingly strong in the results they have produced." Much of the leadership for this effort has come from Metro, in cooperation with the aggressive requirements placed on collectors by local governments and the commitment of the solid waste industry to make recycling work.

4. PROGRAM NAME: RECYCLE--YARD DEBRIS.

Metro has addressed the stockpile of yard debris at St. John's and has worked with the DEQ to solve the problem of the stockpile at McFarlane's Bark. Metro appropriately has not provided monetary incentives to assist in yard debris recycling because the supply of material has been more than adequate to meet the demands of the processors' capacities and the markets' willingness to use the compost material. A flooding of the tenuous market now could be the death-blow to fledgling yard debris programs. Rod Grimm, the major yard debris processor in the region, reported at the DEQ Hearing on Yard Debris on July 13 that he could process and market the entire region's yard debris if he were given time - but he could not accomodate the region if he were inundated with material within the next 1-3 years. Metro's Waste Reduction Goals recommend yard debris collection depots at all transfer station/landfill sites and Metro is continuing to monitor the availability, adaptability and marketability of the yard debris now in the wastestream. It should be noted that the Metro region has far more yard debris available than the nation as a whole, yet the Waste Composition Study shows we have only 10% or less of yard debris in our wastestream as compared to the national average of 16%. Again, we should recognize our results and carefully nurture growth in this area - rather than dooming the program through over-zealous goals.

5. PROGRAM NAME: POST-COLLECTION RECYCLING/MATERIALS RECOVERY.

Metro should be lauded for the installation of a high-grade compactor for corrugated loads at CTRC, for the expansion of the processing capacity granted to Oregon Processing and Recovery Center (OPRC), and for their functional planning process that is developing a consensus of local jurisdictions to address post-collection facilities. The Waste Reduction Goals Committee has recommended that Post Collection Recycling and Materials Recovery facilities be a vital factor in reaching the recycling goals developed by the functional planning process.

6. PROGRAM NAME: ALTERNATIVE TECHNOLOGIES.

Metro is on track with their Memorandum of Understanding (MOU) entered into with Riedel Environmental Technologies. It is anticipated this facility will reduce the wastestream by about 7%. Metro should not be faulted for failure to move forward with the Combustion Engineering, Inc. RDF facility - the voters of Columbia County exercised their veto power at the ballot box.

7. PROGRAM NAME: LEGISLATIVE PROGRAM.

Metro supported virtually all recycling legislation in the 1987 session, and this stance has not been projected to change in the 1989 session. Metro should be encouraged to take the offensive and develop legislation that will facilitate their Waste Reduction Program. DEQ and Metro should work in tandem on this, rather than as opponents due to conflicting bills. Last session, DEQ had a "Get Metro" attitude that should not be repeated this session. DEQ has indicated the desire to let the current recycling legislation have a chance to work before making changes in it. Neither DEQ nor Metro should bow to the pressure of interest groups to alter this plan. SB 405 is working and SB 662 is working. The Waste Reduction Program should be implemented and allowed to record its impact before any major changes are made in recycling legislation. Efforts that would otherwise be expended in the legislature should be directed instead at the City of Portland to regulate solid waste collection so that efficiencies and stabilization can occur that will do more to enhance recycling than any legislative hammer.

8. PROGRAM NAME: CERTIFICATION FOR LOCAL COLLECTION SERVICES.

Based upon DEQ's approval of wasteshed reports, Metro has certified jurisdictions within its region. Beyond that, certification should not occur because Metro has no collection authority. A product of certification was to be rate incentives. Metro appropriately concluded that such an enforcement device - while sounding good - was impossible to implement in an equitable fashion. It should be noted that local governments across the nation have struggled with the question of rate incentives, but no jurisdiction has implemented them where varied demographics/collection conditions existed within the jurisdiction. They are an administrative nightmare at best and an inequitable tool at worst. The impending increase in disposal fees at transfer/disposal facilities will create a natural rate differential between those facilities and recycling/processing centers that will effectively give a recycling incentive. Before any artificial rate structure is implemented, the natural rate differential that is based upon cost of service should be allowed to function and impact the lifestyles of generators in this region. The purpose of the certification program was to "assure participation of local jurisdictions and the collection industry in waste reduction efforts." Through the functional planning process, that is occurring without Metro overstepping their authority and without artificial, inequitable rate gimmicks.

9. PROGRAM NAME: RATE INCENTIVES. (See 8. above)

10. PROGRAM NAME: MATERIALS' MARKETS ASSISTANCE PROGRAM.

Metro has conducted and should continue to conduct market analysis, surveys, supply profiles, products survey, consumer education, institutional purchasing, legislative support where appropriate, grants and loans if appropriate. Metro should be very careful about becoming a materials broker because the result could be government competing with the private sector which is providing a vital service for the continued success of recycling. Metro's appropriate role is to enhance markets, but it is not appropriate for them to become a competitor in the marketplace to the detriment of the private sector. Metro has indicated their commitment to market assistance by the devotion of staffing dollars, particularly in the area of yard debris marketing, research and technical assistance.

11. PROGRAM NAME: SYSTEM MEASUREMENT.

Metro has analyzed the composition of the wastestream and has worked through its Waste Reduction Committee to evaluate the process for recovery of recyclable materials through specific waste reduction programs. This has been an arduous task. The specific programs have new and aggressive elements to accomplish maximum feasible recycling/recovery. They will not be embraced automatically by all local governments who are charged with regulating the collection system. It is important to let the functional planning process work so that a consensus can be attained that will allow local governments to "buy in" to the radical changes that are recommended. Once local governments "buy in," the programs call for the collection industry to make personal contact with the generators, particularly large volume commercial generators, to include them in ownership of the programs. This will not happen tomorrow, next month or all at once in any given time-frame. But the important measurement will be the success of the Waste Reduction Program three, five, ten years down the road when the entire region adopts the program - not through a trauma of kicking and screaming, but through an acceptance of responsibility for protecting our fragile environment.

Respectfully submitted,



ESTLE HARLAN, Consultant

EH:e

C: METRO  
OSSI  
TRI-COUNTY COUNCIL

Tom Miller - Miller's Sanitary Service  
Comments on Metro Report  
Phone conversation 8/1/88  
Reviewed and verified by Tom Miller

Basically he agrees with Estle Harlan's written comments, with the following additions.

**General:** We should allow programs the luxury of evolution. Need a long term perspective. Shouldn't push too hard. Artificial stimulation (e.g. incentives) won't have long term impact. Who will pay for artificially stimulated programs when the money dries up?

**Promotion, Education and Public Involvement:** Need to think in terms of practical applications - what can actually be done. Not developing a consistent promotion policy that fits with reality. Use ads that tell people how to recycle, so they can put their stuff out and see that it gets taken away. General ads (save the earth with a brown paper bag; where will the children play) are too vague, don't tell people specifically what to do.

**Alternative Technologies:** Metro is turning its back on some things. We shouldn't overlook the potential of other technologies. Find out the impacts before we throw something out. Appears that Metro lets the hierarchy get in the way sometimes. Hierarchy is good (reduce, reuse, recycle, etc.), but it shouldn't stop us from pursuing other technologies.

**Legislative:** Need to press harder on bottle bill type of materials (e.g. wine coolers, other glass containers). Contents shouldn't determine whether or not something is recyclable. Must deal with packaging, but banning plastic is not appropriate. Plastic has some essential uses (e.g. medical sanitary packaging).

**Certification:** Hard to administer this. Who's the cop? Need standards which can allow for local variations and don't create a situation where a jurisdiction can't meet certain standards and a program falls apart.

**Rate Incentives:** Don't create artificial situation. Use "natural" incentives. For example, the difference between disposal and processing. Economics will cause programs to grow and improve gradually.

**System Measurement:** Tendency to try to measure things to death. Not appropriate, especially when we don't necessarily have the tools to do the measuring properly. Have to draw a baseline somewhere (e.g. existing recovery rate is 22%) and measure our program success in terms of how well we are doing in moving toward a goal (e.g. 52%).

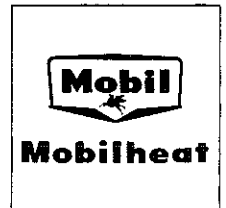
MOBILHEAT  
FURNACE & STOVE  
OILS

FURNACE REPAIRS  
FIREPLACE WOOD  
DECORATIVE ROCK  
GARDEN SAWDUST  
GROUND BARK

# GRIMM'S FUEL CO.

DOING BUSINESS SINCE 1929

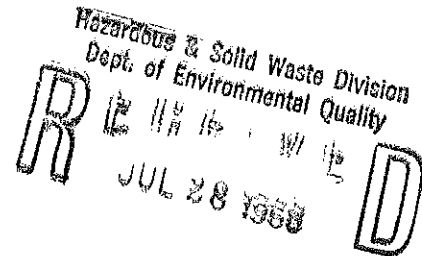
1631 South Shore Blvd., Lake Oswego, Oregon 97034



Phone 636-3623

Dave Rozell  
Manager, Waste Reduction Section  
Department of Environmental Quality  
811 SW Sixth Avenue  
Portland, Oregon 97204-1334

7-27-88



Dear Mr. Rozell,

Thank you for allowing me the opportunity to provide input regarding METRO's Waste Reduction Plan. There are several areas within the plan which I feel are flawed or need clarification. The following is a listing of those sections of the plan with which I am most concerned.

I. Regarding the cover letter from Rena Cusma to Fred Hansen.

1. Paragraph 5 regarding the Mixed Solid Waste Composting Plant. I am deeply concerned with the possibility that this proposed plant will someday become a reality. If constructed, such a plant will destroy yard debris recycling in Portland. Enclosed is a copy of a letter to Rena Cusma that covers this paragraph and the proposed plant. This letter is basically the same as my testimony at the DEQ public hearing on July 13, 1988.

2. Paragraph 8. This paragraph indicates that once a yard debris collection/recycling system is finally implemented, it will reduce wastes landfilled by approximately 3%. To me this makes no sense because nationally, yard debris makes up about 18% of the waste stream.

## II. Regarding the 1987/88 Report to the DEQ.

1. Pages 1 through 23 are the backbone of the success Portland is showing in its recycling effort. I feel that yard debris plays an extremely important role in the education process because it is the only recyclable that the general public can bring in, dump off and then, on the way out they can take home the final product and make things grow.

2. Page 24, Action Elements. The Yard Debris Processing Facility at the St. John's landfill was destined to be a disaster from the beginning. Grimm's Fuel had 2 meetings with METRO staff to try and point out the many problems. This "processing plant" was an even bigger failure than Grimm's Fuel had anticipated. This project cost the general public well over \$100,000. The big concern I have with this type of program is that a government agency is competing with businesses with the businesses' own tax dollars.

3. Page 24, paragraph 4. All the yard debris accumulated at the St. John's landfill has not been removed. To date less than 1/2 the yard debris that had accumulated has been removed, the remaining 1/2 is extremely contaminated and our bid cost of removing the material was greater than METRO's cost of moving it to a local landfill. It is so contaminated that if Grimm's Fuel did process it we would not market it. We told METRO that if they wanted the product processed they must take the product back and use it for cover on the landfill. I definitely feel that the best place for this contaminated yard debris is in a landfill. I first suggested this 4 years ago when METRO had Grimm's Fuel inspect the material.

4. Page 25, part C, Diversion Credits. Grimm's Fuel has not been made aware of diversion credits.

5. Page 27, Rate Incentives. When METRO lowered their rates at the St. John's landfill by 50% it put them below the charge of the private businesses and it created many problems and was embarrassing to all the

yard debris processors. Such a rate structure actually diverts yard debris away from the processors. Rate reduction at landfills and transfer stations is a situation where yard debris processors are competing against their own tax dollars. It is understandable and I support reductions if processors could not provide drop off services within 15 miles of a Government facility.

6. Page 34, last paragraph. See the enclosed letter and my testimony at the DEQ hearing.

7. Page 46, paragraph 9 regarding developing markets. METRO has yet to develop a product or a market. They have been doing a good job of informing the public about yard debris recycling and testing the quality of the product to protect the public from compost that may be contaminated with weed seeds, herbicides and plant pathogens. At this time they are continuing with research in this area. I feel that their participation in this research is extremely important as compost can play a large role in solving our waste stream problems. This kind of research is needed so we can establish standards in local composting facilities that will protect the general public. They have done a good job in giving processors exposure in the news media.

8. Pages 47 through 51 are quite accurate and represent a good continuing effort on METRO's part. At this time, continued research is essential, from both a market standpoint and to give us a base to establish criteria or standards for compost and composters.

Thanks again for allowing me the opportunity to provide some input. I hope you have found these comments helpful. If I can be of further assistance, please do not hesitate to contact me at 692-3756.

Respectfully,



Rod Grimm  
President  
Grimm's Fuel Company



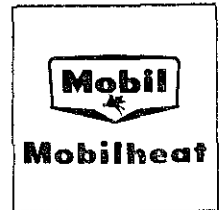
MOBILHEAT  
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GARDEN SAWDUST  
GROUND BARK

# GRIMM'S FUEL CO.

DOING BUSINESS SINCE 1929

1631 South Shore Blvd., Lake Oswego, Oregon 97034



Phone 636-3623

Rena Cusma  
Executive Director  
METRO  
2000 SW First Avenue  
Portland, Oregon 97201-5398

7-27-88

Dear Mrs. Cusma,

In 1982 Grimm's Fuel Company was contacted by the Metropolitan Service District (METRO) and asked to participate in a demonstration project. The purpose of this project was to test the feasibility of converting yard debris into a high quality compost for ground cover and/or soil amendments. Portland's yard debris recycling program has been tremendously successful and today is a model for other programs throughout the United States and around the world. Soon 75% of the yard debris in the Portland area waste stream will be recycled. This represents a substantial savings in valuable landfill space since yard debris is the single largest component in our waste stream. However, this highly successful program is currently in jeopardy. By constructing a Mixed Solid Waste composting facility that gives away the final product, METRO will destroy yard debris recycling in Portland.

## I. Background

Grimm's Fuel Company and other similar companies have been asked repeatedly over the last 40 years to help solve the waste stream problem and we have. In the 1940's we were asked to develop a market for waste sawdust and we did - for fuel, ground cover and nursery stock. In the 1950's large sawdust piles were left in our forests and after many years the piles began to catch on fire as a result of spontaneous combustion. As these fires spread into our forests, the U.S. Forest Service asked us to help. Again we developed new markets and new products to help solve this problem. In the late 50's and 60's air pollution became a major concern and the wigwam burners at sawmills throughout the state were made illegal. As these burners were phased out over the next 5 to 10 years, the material

that was once burned began to accumulate. Again Grimm's Fuel Company was a leader in developing equipment capable of processing this waste into barkdust. In the late 70's and early 80's, large volumes of bark and wood waste began accumulating at sawmill sorting yards and log decks. Leachate from these piles began to pollute the streams, causing DEQ to put more and more pressure on the sawmills to clean up this problem. The material at these sawmills is too high in moisture and too contaminated with rock to be used for fuel. Over the last five years millions of dollars have been spent by the sawmills to develop equipment to separate the rock, wood, and bark. However, 2/3 of this material is fine and very wet and can only be used as ground cover and soil amendments. This fine material cannot be used by the nursery industry as it is normally contaminated with a fungus that is very harmful to nursery stock. Grimm's Fuel Company is in the process of developing equipment that will pasteurize this material so that it can be used by the nursery industry.

Five years ago it became obvious that there was too much material available as ground cover and soil amendments. So we have set out to develop products from yard debris that would replace imported peat moss from Canada. We are very pleased with our progress to date but it will take at least another 5 years to penetrate this market. Grimm's Fuel Company has developed and is marketing 6 products from yard debris. We will have 2 more products coming on in 1989.

Grimm's Fuel Company and Plant Health Lab in Corvallis are committed on a long term basis to developing container mixes that are economical and of the highest quality to help make Oregon nursery stock the best in the world. The majority of the container mix will be materials from the waste stream.

In 1987 Grimm's Fuel Company spent \$5,000 in research and \$120,000 in equipment and plant design to develop new products. In 1988 Grimm's Fuel will spend \$4,000 in research and \$200,000 in new equipment.

In 1982 Grimm's Fuel Company began construction of a facility capable of processing both log deck waste and yard debris. At that time METRD explained that the Department of Energy had about \$10,000 available for a yard debris demonstration project. Grimm's Fuel proceeded with the project and at the end of one year had spent about \$200,000 on the demonstration project when they were informed that the money from the Department of

Energy would not be coming. Then, at one of the METRO consulting sessions we were asked if we would be continuing with the project without their financial support. My answer was that we were too financially committed to stop the project. A year and a half later we received \$9,500 from METRO for our participation in the demonstration project. By this time we had spent nearly half a million dollars on the project ourselves.

The project has been under way for 6 1/2 years now and both METRO and DEQ have been very helpful and supportive. They have been instrumental in increasing public awareness and education with regards to the yard debris and landfill issues and they have protected the public by running tests on yard debris compost for weed seeds, herbicides, toxicants, nutrient content, etc.

## II. Yard Debris as a Principal Recyclable

Over the last 2 1/2 years there have been public hearings on making yard debris a principal recyclable. At these hearings I have been very positive of the fact that all the yard debris produced in the area could be consumed in the Portland marketplace if we were given enough time to develop new markets and new products. However, the market place must control the removal of yard debris from the landfills. Both METRO and DEQ have been supportive of this until now.

On July 13, 1988 I attended a public hearing held by DEQ and testified to the fact that I can no longer support the yard debris program due to the overwhelming problems presented by the proposed Mixed Solid Waste Composting Plant. First, their marketing plan is to give away their product until someone will buy it. This will further saturate markets which are already flooded. Secondly, METRO is paying them enough money so that they can distribute and give away the product. With this kind of subsidy there is no way the private yard debris processors can compete. Not only will this affect the yard debris processors, but the proposed facility will also be in direct competition with the many barkdust suppliers, the sawmills that manufacture barkdust, the composters of animal manure, and the City of Portland's 18 million dollar Sewage Sludge Composting Facility. This sludge composting plant has only marketed about 1/2 the product produced over the last 3 years and is a perfect example of what can happen when a government bureaucracy tries to solve a problem by

throwing money at it. The policy of subsidizing one facility to compete directly with existing small businesses is unethical and possibly unlawful.

If there is to be a mixed solid waste composting facility they should go out and develop new markets outside of those markets developed by Grimm's Fuel and other private companies without subsidies.

I truly wonder why there needs to be a subsidy from METRO or any Government agency. We have gotten along fine without subsidies for 40 years. Also, composting seems to be the only area of recycling in which METRO wants to interfere. First they attempt to build a processing plant at St. John's, then they lower the yard debris tipping fees at the landfills below the tipping fees for the other components of the waste stream. The tipping fee for source separated yard debris at St. John's is lower than the rate charged by the local processors. Such a rate structure actually diverts yard debris away from the processors and back to the landfill. Now METRO wants to subsidize a mixed solid waste composting facility that would compete directly with small business. METRO does not subsidize paper, glass, or ferrous and non-ferrous materials, then why subsidize mixed solid waste?

The "Opportunity to Recycle Act" gave us the necessary tools to reduce the amount of material going into the landfills. In that Act I see nothing that indicates that a Government agency must subsidize recycling. I read it as saying that recycling is to happen below the cost of landfilling. You now have a long term landfill and you know what the costs are going to be. Let the system work as it is designed to work, without subsidies and within the scope of the markets.

### III. Yard Debris Recycling in Portland

Through the efforts of METRO, DEQ, yard debris processors, and the small retail bark distributors, Portland has accomplished something that no one else in the U.S. or in the world has accomplished: 1. We sell 100% of our processed yard debris to the general public. None of it is going into landfills or mine reclamation projects as in other parts of the world. 2. Yard debris compost is of the highest quality. 3. Yard debris recycling is done entirely with private money - no subsidies. 4. We have the most reasonable tipping fees. In most areas, charges run from \$6.50 and up. Our average charge is \$3.00. By phasing in yard debris recycling over the

next 5 years, markets will continue to grow and the entire 1 million yards of Portland's yard debris will be recycled.

Wise people learn from their mistakes and through the observation of other people's mistakes. We are fortunate in that we have 3 examples right here in Oregon to observe: 1. The Lane County Plant that ran for a short time and shut down. 2. The City of Portland's Sewage Sludge Composting Plant. This plant started producing their product at the rate of 8,000 yards a month without any markets. At this time only about 1/2 the product has been sold and there is a large accumulation of this product on sight. 3. McFarlane's started taking yard debris 8 1/2 years ago and at first could not develop markets fast enough to keep up with the volume of material coming in. They have built up a large stockpile that has caused themselves, METRO, DEQ, and Clackamas County many problems. At this time they are gaining on the backlog of material, but it is going to take several years for the problem to be corrected. If it had not been for the minor success of the yard debris program, I question whether METRO would even consider mixed waste composting.

People who are not extremely familiar with composting may say it is easier to process and compost yard debris than mixed solid waste. This is not true. Most mixed solid waste composting facilities cannot process logs, stumps, or long tree limbs, materials which we receive at our facility in large quantities. To assure a quality product and to protect the public, extreme care must be taken to pasteurize the compost against plant diseases, weed seeds, herbicides, and other toxic materials.

I have not questioned the quality of the mixed solid waste compost as none is available to see. I am assuming it will be of the same or near the same quality as existing compost products. I trust that DEQ and METRO will assure the compost's quality before the plant is OK'd.

#### IV. Conclusion

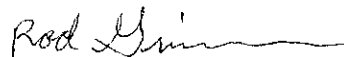
Over the last 6 years I have read hundreds of articles on composting. The most impressive of these was garbage management in Japan where they recycle 50% of their waste stream but only 2% is composted and this is declining. From all these articles the only conclusion I have come to is that every place and every situation is different. What works in one area does not always work in another. I feel that each area is unique and our

own local examples are the best. The yard debris composters here in Portland must be doing something right as Grimm's Fuel and McFarlane's have had representatives from nearly every state in the U.S. and every province in Canada through our plants.

Timing of any project is essential and if a Mixed Solid Waste Composting Plant was to go into operation within the next 7 years it would only damage or destroy the true potential of composting in Oregon. I have been told repeatedly that the Mixed Solid Waste Plant is politically popular and that the plant will go in. I am confident that if the METRO Council studies the findings in the upcoming market study that METRO is conducting, they will find that there is no place for a mixed solid waste compost in our marketplace.

If you have any questions or if I can be of further assistance, please do not hesitate to contact me at 692-3756.

Respectfully,



Rod Grimm  
President  
Grimm's Fuel Company



# CLACKAMAS COUNTY

## Department of Transportation & Development

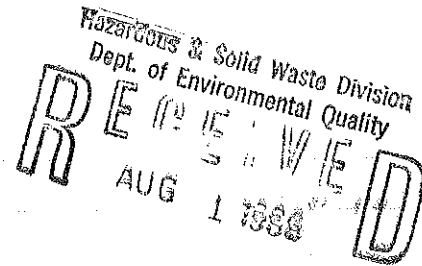
July 28, 1988

WINSTON KURTH  
EXECUTIVE DIRECTOR

RICHARD DOPP  
DIRECTOR  
OPERATIONS & ADMINISTRATION

TOM VANDERZANDEN  
DIRECTOR  
PLANNING & DEVELOPMENT

Dave Rozell  
Department of Environmental Quality  
Executive Building  
811 S.W. Sixth Avenue  
Portland, OR 97204-1334



Subject: Metro Report to the EQC on Waste Reduction

I have reviewed the report as you have requested. I find that the report accurately represents Metro's waste reduction activities over the past two years.

In reading the report, it became very apparent that the level of activity under the new leadership has increased significantly. Their promotional programs are basically at a level that I have been trying to get them at for the past several years. These activities have been very well coordinated with Clackamas County's promotional activities.

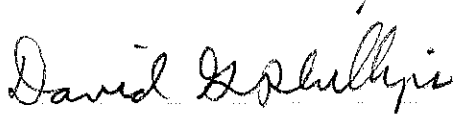
The heavy dependency Metro is placing on the functional planning effort is well founded. I have supported this activity since its inception. It is my belief that this partnership approach with Metro, local government and the hauling industry is the only way the region will ever achieve the high waste reduction goals of Metro. The recent completion of the "Waste Reduction White Paper" is an example of this teamwork. To achieve the goals of this waste reduction plan, the same teamwork approach needs to continue.

Metro's efforts in yard debris marketing have resulted in a very significant increase in the volume of yard debris recycled. I do feel, however, the banning of yard debris loads from CTCR and St. Johns should occur before any additional curbside yard debris are put on line. This would allow further development of the yard debris market capacity. This is clearly a Metro function.

Dave Rozell  
July 28, 1988  
Page 2

In general, Metro has moved forward with waste reduction with more enthusiasm in the past year than any year in its 15 year life. More needs to be done but, with the new partnership approach, it has a chance of happening.

Respectfully submitted,

A handwritten signature in cursive script that reads "David G. Phillips".

DAVID G. PHILLIPS - Administrator  
Community Environment Section

/sah





# METRO

2000 SW First Avenue  
Portland, OR 97201-5398  
(503) 221-1646  
Fax 241-7417

EQC Agenda Item N  
Attachment III

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
**RECEIVED**  
JUL 1 1988  
OFFICE OF THE DIRECTOR

June 30, 1988

Fred Hansen, Director  
Department of Environmental Quality  
811 S.W. Sixth Avenue  
Portland, OR 97204

Dear Fred:

Executive Officer  
Rena Cusma

Metro Council

Mike Ragsdale  
Presiding Officer  
District 1

Corky Kirkpatrick  
Deputy Presiding  
Officer  
District 4

Richard Waker  
District 2

Jim Gardner  
District 3

Tom DeJardin  
District 5

George Van Bergen  
District 6

Sharon Kelley  
District 7

Mike Bonner  
District 8

Tanya Collier  
District 9

Larry Cooper  
District 10

David Knowles  
District 11

Gary Hansen  
District 12

Metro is required by ORS 459.345 to prepare a report on the implementation of its solid waste reduction program and submit it to the EQC no later than July 1, 1988 and every two years thereafter. The attached document, prepared for this purpose, will demonstrate that all elements of the 1986 Waste Reduction Program have been addressed and we are well on our way to achieving a material recovery rate that will be among the highest in the nation.

We are very pleased with all that has been accomplished in the two years since the program's adoption, but several projects are worthy of note as they reflect key decision points in our shift to a resource recovery system.

- The Bacona Road landfill site was selected by the Department of Environmental Quality to replace the St. Johns Landfill. Because this proposed site would not be ready for operation when St. Johns Landfill closed, Metro solicited bids for alternative general purpose landfill sites. Only one firm responded to the Request for Bids, Oregon Waste Systems, Inc. (OWSI) with a site located in eastern Oregon.

After careful evaluation of cost, environmental issues, and contract qualification; Metro Council approved a 20 year agreement with OWSI for a general purpose landfill. See Appendix F, G, and H for more detail.

- The landfill contract signed in March, 1988 assumed that an additional 30 percent of the region's current waste would be directed away from the Oregon Waste Systems' site. This was a significant commitment on Metro's part reflecting our serious intent to extract

as much material from the waste stream as is feasible. The tipping fee increase that supports this disposal method will serve as a rate incentive for both the commercial and residential sectors and coupled with the increased opportunities to recycle being provided will result in a substantial increase in the current recycling rate. At this point we also feel that our original projections of being able to increase the material recovery rate by 30 percent is achievable. (see System Measurement Program) The window for accomplishing that recovery rate is dependent on start-up time for new program implementation, public response, i.e., participation level and market conditions.

- A refuse-derived fuel project was postponed due to public sentiment and what we felt were unreasonable costs relative to other options; however, a mixed waste compost project has progressed to a stage where we have signed a Memorandum of Understanding. This plant will process 185,000 tons of mixed waste annually and produce approximately 120,000 tons of recycled material. This does not mean that Energy Recovery has been abandoned as an option, but our experience does suggest that site economics and ash disposal options need to be solved and other resource recovery approaches need to be addressed before it can be taken up again.
- Due to the time frame allowed for the development of the 1986 Waste Reduction Program, a consensus and commitment from the region's affected interests was never achieved. To address this, the 1986 program was adopted as a framework and a major effort undertaken to involve the region in a process to adopt specific goals and programs that would be implemented by others besides Metro. A program to achieve this, is the functional planning process. It represents our meeting of an earlier commitment and based on the current level of participation, by virtually all regional interests, holds great promise of achieving recovery goals that will place this region far ahead of others.
- The Department of Environmental Quality and the Environmental Quality Commission is very familiar with yard debris and the long-term cooperative efforts of our two agencies in setting up a recycling system for this material. With the assignment of a full-time staff at Metro to develop markets for yard debris and the Department of Environmental Quality's continued work on the collection system for it, this project has come to be recognized as the most

successful of its kind in the United States. We are recovering approximately 24 percent of the material that is generated and the system continues to expand every year. When it is fully implemented, it will reduce wastes landfilled by approximately three percent.

- Another major gain has been the development of material processing centers. In the last two years Metro has dramatically expanded the region's recycling capacity using this reduction technique.

Franchises for two facilities (Oregon Processing and Recovery Center and East County Recycling) were approved. We are also conducting an experimental material recovery project at our transfer station (Clackamas Transfer and Recycling Center) and are processing a request for a third recovery facility in the southeastern portion of the region. Metro expects this recovery technique to make a significant impact on the commercial- industrial waste stream reducing the total amount landfilled by approximately five percent within three years.

- The level of promotion and education efforts that Metro has maintained these past two years reflect our strong commitment to this elemental waste reduction strategy. While it is difficult to link with a specific recycling percentage, the dramatic increase in the public's use of our Recycling Information Center, participation in events and requests for more of the education services we offer justify the commitment of resources and we expect to continue this service indefinitely.
- From our experience we know that merely providing an opportunity to recycle for residential customers does not elicit much participation. What we do know is that increased frequency of recycling collection; making collection on the same day as regular garbage collection; coupled with promotional and educational efforts delivered in person will dramatically increase the public's involvement and can decrease program costs. It has also been shown that the use of curbside containers will increase the participation level even more. We are conducting a pilot project on the container method and will provide that information along with our recommendations for improving the region's residential recycling rates to the functional planning process participants. To further facilitate moving the region in this direction, Metro has also dedicated one percent of its annual solid waste operating budget (approximately


June 30, 1988

\$306,000 for fiscal year 1989) to fund innovative recycling proposals. It is our expectation that this combination of approaches will result in a major revamping of the region's recycling collection system and a five percent annual reduction in the amount currently being landfilled within five years.

Achieving the purposes of the waste reduction program will take the continued coordination and commitment of resources in the region and Metro has accepted this responsibility. However, it is not just a matter of implementing the projects and ideas found in the existing program. In changing the way we all think about and manage waste, new ideas will evolve. Consequently our methods, time frames and goals will be periodically adjusted to encompass those realities and we will advise you of these developments in a timely manner.

I trust you will be as encouraged as we are on the results obtained from our initial efforts in implementing the 1986 waste reduction program. The spirit of cooperation and commitment that our two agencies have maintained has been in part the reason for this success.

Sincerely,



Rena Cusma  
Executive Director

RMC:aeY

cc: Mike Ragsdale, Presiding Officer  
Gary Hansen, Chair, Council Solid Waste Committee  
Council Solid Waste Committee  
Rich Owings, Solid Waste Director

1987/88 REPORT TO THE  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
ON METRO'S WASTE REDUCTION PLAN

July, 1988

## TABLE OF CONTENTS

A.	Introduction	iii
B.	Programs	
	Promotion, Education and Public Involvement	1
	Reduce and Reuse Programs	11
	Recycle - 405 Material	15
	Recycle - Yard Debris	24
	Post Collection Recycling Materials	29
	Alternative Technologies	32
	Legislative	35
	Certification for Local Jurisdictions	36
	Rate Incentives	40
	Materials Markets Assistance	44
	System Measurement	54
C.	List of Appendices	
A	1987 Rate Study	
B	1986 Waste Reduction Plan - Final Report	
C	1986 Waste Reduction Plan - Work Plan	
D	Advertizing Portfolio for Waste Reduction Program	
E	1987 Waste Characterization Study	
F	Securing a general purpose landfill - Resolutions 88-864 and 88-865	
G	General Purpose landfill chapter - Resolution 88-240A	
H	Disposal System Analysis for landfill siting	
I	1987-88 fiscal year budget	
J	1988-89 fiscal year budget	

- K Solid Waste Management Plan Inventory
- L Waste Reduction Goals Committee work book
- M Yard Debris System Report
- N Basic Data for Solid Waste Management

# WASTE REDUCTION PLAN REPORT TO DEQ 1987-88

## INTRODUCTION

The following document contains the 1987-88 update of Metro's Waste Reduction Plan. The programs are arranged in the same sequence as presented in the original work plan.

For individual action elements of each waste reduction program, both the 1986-87 and 1987-88 updates are presented.



**PROGRAM NAME: PROMOTION, EDUCATION AND PUBLIC INVOLVEMENT**

**Purpose** To develop a comprehensive program to reach the general public and special interest groups with information and other opportunities to increase their awareness of the participation in waste reduction activities.

**Action Elements:**

A. **Market Research:** Promotion and education activities will be designed in light of market research findings to reach selected target populations with information they are most likely to respond to. Market surveys will be taken at regular intervals so we can evaluate the effectiveness of the promotion and education activities we undertake.

1986-87 The Columbia Research opinion poll survey was completed in September, 1985.

The Opinion Leader survey was completed September, 1985 Metro used the compilation of results for guidelines for the advertising agency. The guidelines were written out in the scope of work for the advertising agency in the Request for Proposals.

A market survey will be conducted in December, 1986, to evaluate the effectiveness of the promotion and education activities to date. Request for written bids out on November 18. Due on November 24. Final report January 9, 1987.

Other surveys will be conducted as needed. (Following each major campaign or as needed.)

1987-88 The market research survey from FY 1986-87 helped determine the second year multi-media campaign. In the research people indicated they needed more information on "how to recycle."

A Third market research survey was conducted in June 1988. This survey followed the entire second year of a multi-media campaign. Moore Information was selected as the market research company and the final report is due June 30, 1988.

B. **Theme and Graphic Look:** A professionally developed theme, or slogan, and graphic look will tie together all elements of Metro's waste reduction promotion and education.

1986-87 Metro's theme was developed in conjunction with the basic principles of the entire Waste Reduction campaign, "To reduce the amount of waste entering the regional landfills." April, 1986.

A tag line was developed to promote the theme, "Together we can get out of the dumps," April, 1986. Three in-house meetings and two meetings with local - governments/interested parties were held in March and April, 1986.

1987-88 The theme and graphic look of the second year multi-media campaign included the slogan "Save the Earth with a Brown Paper Bag." This was developed to help demonstrate "how to recycle" using the lowest common denominator, a brown paper bag.

C. Multi-Year Campaign Plan: This will provide a detailed plan, schedule and budget to assure coordination of all Metro waste reduction promotion and education activities. The initial plan will cover a three-year period, focusing on the first year's effort. The plan will be updated and revised yearly.

1986-87 Phase I Report prepared by Coates Advertising Agency, April 15, 1986 Ordinance No. 86-200.

Phase I Report included information on the theme and a full outline of the first year campaign. The second and third year were left open for the topic to "be announced" to provide for implementation of projects within the Waste Reduction Plan.

1987-88 Year II Report prepared by Coates Advertising Company is attached. (Appendix D)

D. Specific Campaigns: Two major promotions will be undertaken every year. Each will utilize a broad range of information outlets -- including such measures as newspaper and magazine articles and advertising; billboards and transit advertising; radio ads; radio and television public service announcements and station promotions; and various direct contact approaches such as direct mail. In addition, Metro staff will carry out at least eight promotions in the community each year such as exhibits and displays in trade shows and shopping centers.

- 1986-87 The two major promotions developed by the Coates Advertising Agency
1. Where will the Children Play. The campaign utilized radio, television and newsprint. The campaign ran for three weeks June '86.
  2. Save the Earth with a Brown Paper Bag. The campaign utilized radio, newsprint, grocery bags and a traveling exhibit. The campaign ran for three weeks in the months of July, August, September and October, 1986.

1987-88 The two major promotions developed by the Coates Advertising Agency were:

1. Multi-media (Television and Newsprint Advertising) of "How to Recycle" and "Save the Earth with a Brown Paper Bag".
2. "Our Biggest Waste Problem is Right in Your Own Back Yard". Fall and spring yard debris recycling campaign utilizing newsprint and transit.

See attached list of promotions, community events, exhibits developed by Metro Staff. (blue pages)

E. Recycling Information Center: The RIC, with adequate paid staff, will continue to be the main point of public contact for inquiries on recycling and waste reduction.

1986-87 RIC now has a staff of three. One full-time program coordinator, a full time program assistant and a half-time office assistant. The number of phone calls received continue to run between 40-50% higher than last year. (See Recycle - 405 Program)

1987-88 RIC now has a staff of three. One full-time program coordinator and two full-time office assistants. The number of phone calls has continued to increase in 1987 and is up 49 percent - 13,916 in 1986 vs. 20,692 in 1987. Calls in the first third of 1988 have increased 78 percent over the same period in 1987 - 5,484 vs. 9,764.

F. Support for Local Jurisdictions: Metro's promotion and education activities are intended to supplement those of the local governments. Metro will use primarily regional

outlets and will cover topics and themes of interest across the region. Local jurisdictions will take the lead in providing educational information with specifics about pick up, schedules and requirements. Metro will offer support by (1) compiling and distributing a monthly calendar of events, (2) developing, upon request, ready-to-print promotional materials incorporating Metro's overall logo and theme; and (3) providing general information and assistance on how to work with the media, also upon request from local governments.

1986-87 Bi-monthly calendar of events for recyclers, local governments and interested parties, included in the Recycling Information Center Monthly Report, October, 1986. This calendar is in the testing phase to monitor the needs and information availability from local governments and recyclers.

Recycling Information Center/Lions Recycling Flier for the telephone book recycling campaign, November, 1986.

A flier was made available to United Chippers (Consortium of mobile yard debris processors) in August, 1986.

Information and assistance is available at all times on how to work with the media. Media lists were made available to United Chippers.

1987-88 Monthly report and calendar of events for recyclers, local governments, the media and other interested parties. This calendar, which lists events and meetings pertaining to waste reduction and recycling for a two-month period, has been included in each report during the 1987-88 fiscal year and will continue to be included each month.

Several promotional and informational pieces including: Recycling Information Center/Lions Operation Phonebook flyer, October 1987, inserted in phone books; Yard debris chipper/processor list, fall and spring 1987-88, supplied to businesses and groups; the curbside program informational brochure, 1987-88, mailed to groups and individuals.

Information and assistance on how to work with the media is always available to groups, recyclers, local governments and others in waste reduction and recycling.

Loan of Metro exhibits (on yard debris, office paper and curbside recycling) to local governments and

recycling companies to promote waste reduction; average length of loan is one week.

Phone Book Recycling Campaign: Metro worked with two phone companies and 20 Lions Clubs to produce an insert for every new phone book that listed drop locations for old phone books. Also operated a referral system for nine weeks for pick-up of large volumes of phone books from businesses. Campaign collected 600 tons of recyclable newsprint.

- G. Public Involvement: Several elements of the Waste Reduction Program require ongoing efforts to involve the public and special interest groups from the metropolitan area. Examples include scheduling public meetings to review alternative technology proposals, and arranging meetings with local governments and private business to arrive at workable recycling goals. These public involvement activities are referenced in the Work Plans for each program area. They will be planned, coordinated and carried out as part of this promotion, education and public involvement work program.

1986-87 Public involvement meetings were held in March/April, 1986 on the Coates advertising theme development.

Public involvement meeting was held on August 9, 1986, to discuss regional recycling awareness week.

Regular attendance at local government task force meetings and the Association of Oregon Recyclers.

Coordinated with local governments on Recycling Awareness Day.

Coordinated with recycling industries on Recycling Industries Day and Recycling Awareness Day.

The compilation of the office recycling handbook will involve input from local governments and private businesses who are involved with office recycling.

Design of a curriculum implementation plan will involve meetings with individuals (teachers, curriculum specialists) and groups. Material developed by the DEQ will be distributed in spring and summer 1987 for fall 1987 use.

1987-88 A Household Hazardous Waste Collection was held on May 14, 1988. Metro worked in conjunction with local

governments to set up sites, establish emergency plans, to collect material from the public and to handle the waste.

Recycling Awareness Week: Scheduled public involvement meeting from July through September to coordinate involvement of 19 local governments and recycling companies at Recycling Awareness Day at the Zoo on October 3 and Recycling Industries Day on October 6. Provided recognition awards at a Metro Council meeting on October 8 to a local government and a recycling firm that excelled in recycling.

Zoo/Waste Reduction School Program: Scheduled public involvement meetings with curriculum specialists from four school districts, staff of Washington Park Zoo and administrators of Portland Public School District to develop an assembly program that teaches waste reduction and conservation concepts to middle school students. Assembly would augment Department of Environmental Quality's Re:Thinking Recycling curriculum and would be available during the 1988-89 school year. Worked with zoo staff to develop waste reduction activities to insert into existing zoo tour packets beginning September, 1988.

1986-87 Attachment for Promotion/Education

- Eight Metro staff produced promotions

Spring Yard Debris Campaign, March/April/May, 1986

Home recycling exhibit in coordination with local governments to county fairs. July/August, 1986

Curbside Recycling exhibit to shopping malls, July/August/-September, 1986.

Curbside recycling brochure, July, 1986. Reprints, October, 1986.

Recycling Teacher In-Service (not held due to limited registration)

Recycling Recognition Awards, October, 1986

Recycling Industries Day, October, 1986

Recycling Awareness Day at the Washington Park Zoo, October, 1986.

Far West Agricultural Show, August, 1986

National Recycling Congress Conference display, September, 1986.

Fall yard debris recycling campaign October to December, 1986.

- Upcoming events

Christmas Tree recycling campaign, December, 1986

Office Paper Recycling Campaign, February, 1987

Spring Yard Debris Campaign, April, 1987

Coates campaign, "Where will the Children Plan." Tentative, February, 1987.

Planning for new Coates campaign (Year 2), April/May, 1987.

1987-88 Attachment for Promotional Activities

- Street of Affordable Homes - June 1987 - promoted curbside recycling
- Multnomah County Fair - July 1987 - promoted curbside recycling
- Washington County Fair - August 1987 - promoted curbside recycling
- Clackamas County Fair - August 1987 - Assisted the Clackamas County Task Force - promoted curbside recycling
- Beaverton Business to Business Trade Show - August 1987 - promoted office paper recycling
- Family Fair at Janzten Beach Center - August 1987 - promoted curbside recycling
- Beaverton Good Neighbor Days - September 1987 - Assisted City of Beaverton employees with exhibit and informational materials - promoted curbside recycling
- Yard Debris Recycling promotion - September/October 1987 - Worked with 19 agencies/businesses in the Metro area to develop the program - promoted all types of recycling with exhibits, displays, games and informational materials.
- Telephone Book Recycling - October/November/December 1987 - Developed an insert for new telephone books, worked with Lion's Club on media event, provided space for Lion's Club volunteers in the Recycling Information Center (RIC) to coordinate large volume pickups and RIC answered all individual callers - promoted telephone book recycling
- Christmas Tree Recycling - December 1987/January 1988 - Worked with over 30 community groups to set up locations for christmas tree recycling. Media event in Pioneer Courthouse Square. RIC extra staffing for three weekends. 22,000 trees were recycled. RIC answered 4,506 calls - Newsprint and grocery bag advertising - promoted christmas tree recycling
- Office Products Show - February 1988 - Exhibit developed for trade show distributed office paper recycling handbooks - promoted office paper recycling
- Portland Property Management Show - February 1988 - Exhibitors at trade show distributed office paper recycling handbook - promoted office paper recycling



1987-88 Attachment for Promotional Activities (continued)

Home and Garden Show - March 1988 - Developed exhibit and distributed informational materials Transit Advertising and Newsprint "Our biggest waste problem is right in your own backyard, To Recycle call 224-5555" - promoted yard debris recycling

Children's Fair - April 1988 - Exhibit, hands on display, and Recycle Hats were available for children and adults - promoted curbside recycling

Intel Health Fair - May 1988 - Static display - promoted curbside recycling

Household Hazardous Waste Collection Day - May 14, 1988 - Wrote RFP, interviewed and selected a vendor - publicized the event newsprint advertising and flyers - worked with local governments, and fire districts - serviced 1,176 households at four sites

1987-88 Attachments for Educational Activities

Note: 1987 was the first year Metro focused on teaching educators and children about recycling and waste reduction. Teacher education was accomplished through workshops in each of the three local counties utilizing the Re:Thinking Recycling Curriculum. Education of children was implemented through classroom presentations in association with the program called "In-School Scouting."

Teacher Workshops

Clackamas County (one workshop) - October, 1987

Multnomah County (three workshops) - January 1988

Washington County ( two workshops - cancelled due to low registration) - May 1988

Classroom Presentations on Recycling - Portland Public School District

Five presentations - March 1988

Four presentations - April 1988

Ten presentations - May 1988

Other Education Events

Girl Scout Thinking Day - Six presentations - February 1988

Re: Thinking Recycling Curriculum

Number of curriculum packets mailed to teachers: 120

**PROGRAM NAME: REDUCE AND REUSE PROGRAMS**

**Purpose:** Develop programs to achieve the maximum feasible reduction of materials that eventually become waste; and the salvage and use of reusable products retrievable from the waste stream.

**Action Elements:**

**A. Plastics Reduction Task Force:** Participate in a statewide or regional task force to research strategies for reducing plastic material in the waste stream.

1986-87 During the period June, 1986, through November, 1986, the Waste Reduction Manager served as Metro's representative on DEQ's Plastics Task Force. The Task Force's conclusions and DEQ's recommendations will be available in December, 1986. Any proposed legislation will be brought to the Metro Executive Officer and Council for action. Results of the Waste Characterization study (Appendix E) which included plastics, will be shared with appropriate legislative committees.

1987-88 Due to the strength of the market prices that are mainly due to the Pacific Rim countries purchasing plastics, plastic prices and the action in that arena have picked up considerably in the last year. If the market prices hold, the Department of Environmental Quality will probably add plastics to their list of principal recyclable materials and the collection of plastics at the curb will be mandatory. One of Metro's franchisees, Oregon Processing and Recovery Center (OPRC), is currently purchasing plastics (either source separated or mixed).

There are five other private dropoff recycling centers that also take or purchase plastic material in the region. It should be noted that Metro supported all plastics recycling legislation at the 1987 legislative session and that specific recycling goals for plastics are under consideration in the region's solid waste management process. (see Certification and System Measurement)

Researched and created list of plastics recyclers in the region and distributed to interested parties upon request - spring 1988

Worked with neighborhood group and with a Metro Councilor in setting up two plastics recycling informational meetings for the public - winter and spring 1988  
Investigating methods of increasing plastics recycling -1987-88

Provided information to local media on plastics which resulted in two informational articles - spring 1988

Researching plastics recycling informational materials available for Recycling Information Center (RIC) library - 1987-88

Working toward the resurrection of the Plastics Recycling Task Force of which the RIC coordinator will be a member. Task Force will be made up of recyclers, manufacturers and interested public and will work toward legislation which will encourage recycling at the commercial and consumer levels.

**B. Packaging Reduction: Promote consumer attention to packaging issues, develop legislative action to address degree of packaging-type waste in waste stream. (See Promotion & Education and Legislative Action Work Plans.)**

- 1986-87
- 1) Slide show includes packaging information (developed, August, 1986).
  - 2) Poster Distribution (ongoing) deals with Buyer Beware.
  - 3) Distribution of curriculum materials (ongoing) that deal with buyer awareness of packaging.
  - 4) Topic will be under consideration for future Coates Campaigns and in-house promotions.
  - 5) Investigating videos and written material for library.
  - 6) Flier available - will be updated FY '87 (after legislative session) with any revisions
  - 7) Purchasing Policy being written - complete, January, 1987.

1987-88 Packaging fact sheet will be revised to include information on biodegradable materials and on materials which are currently recyclable.

Distribution of curriculum materials which deal with buyer awareness - ongoing

Slide show includes packaging information - summer 1988

- C. **Salvageable Building Materials and Items:** Metro will examine the need and feasibility of programs to promote reuse of building and other materials before disposal, and develop salvage capability at disposal facilities. The RIC will expand and promote the use of salvageable material database and hot line to encourage the reclaiming and reuse of salvageable materials before they are discarded as waste.

1986-87 (See Promotion and Education and Post-Collection Processing - Materials Recovery Work Plans.)

1987-88 A report on the project that was conducted by the Environmental Learning Center at Clackamas Community College was completed and delivered to Metro in May 1988. The results of that report show that if appropriate procedures are followed, money can be saved through the salvaging of materials in demolition projects. That report is going to be published and distributed to appropriate interests in the region in fiscal year 1988-89.

Recycling Information Center database includes recyclers who reuse lumber, broken concrete, used carpeting, partially used paint and other building materials.

Database also includes many businesses and organizations who have uses for other materials such as styrofoam pellets, wooden pallets, pesticides and herbicides, furniture, rags and steel drums.

- D. **Waste Exchange:** Metro will fully explore the utility and feasibility of expanding its current waste exchange activities to develop information clearinghouse for industrial and manufacturing waste.

1986-87 Waste Exchange is a work element under reduce and reuse programs. Background research on other existing waste exchanges has been completed and a library developed. Staff attended 3rd National Conference on Waste Exchange last March. Staff is considering how to establish a Northwest coalition to attend the 4th National Conference on Waste Exchange in March '87. Additionally, an exempt/small quantity generator task force will be started in January/February. This task force will be developing a survey of what types of industrial wastes are being produced. Some of these may be recyclable. This will be valuable information for the Industrial Waste Exchange Program. Initiation of a feasibility study for an Industrial Waste Exchange program is anticipated to begin in February when DEQ has hired new personnel.

Changes in Tasks Schedule

Initiate Study - February-May, 1987

Develop Proposal - June, 1987

Survey recycling and industry - July-August, 1987

Develop final program - September, 1987

Council deliberation - October, 1987

1987-88 After completing a study on the utility and feasibility of Metro getting into a waste exchange program, it was concluded that it would not be cost effective at this level. Instead, the state ought to take the lead on the development of a waste exchange program. Furthermore, the state ought to work with other states to either coordinate with existing waste exchange programs or encourage other states to initiate such programs. The Department of Environmental Quality has a staff person that is working on setting up a waste exchange programs. Metro's Recycling Information Center does provide information to people who call in wanting to exchange their reusables and recyclables. The hazardous and special waste permit program also has a list of companies that are interested in purchasing "used" hazardous and special wastes.

Recycling Information Center (RIC) is conducting ongoing research into companies and organizations which will reuse materials and adding these names to the RIC database as they become known.

PROGRAM NAME RECYCLE -- 405 MATERIALS

Purpose: Establish and aggressively promote a variety of programs to assist local governments and other parties in developing curbside collection programs as required under the Oregon Opportunity to Recycle Act; to meet standards developed by the Department of Environmental Quality; and to achieve maximum feasible reduction through those programs.

Action Elements:

A. Technical Assistance: A program to provide technical assistance services to local governments in developing single and multi-family curbside collection programs and effective promotion and education campaigns in accordance with SB 405.

1986-87 This program works in concert with the certification program. Involvement with local governments in setting up certification will provide information to make assessment of relevant services to offer. Local governments verification of appropriate services will then be budgeted. Initial services will be in 1987-88 budget recommendations.

1987-88 Subsequent to the Environmental Quality Commission acknowledging that all local governments in the region had complied with the state law on providing the opportunity to recycle, the solid waste management planning process, outlined in other parts of this report, has been the primary method used to provide service to local governments. The planning process is examining the benefits of enhancing the current service for recycling using a variety of curbside container methods. The objective is to have the region's local governments agree to specific recycling goals and methods to achieve them.

Two presentations of the "how to's" of recycling promotion/education for the Association of Oregon Recyclers Conference, April, 1988.

Loan of Metro exhibits (yard debris, office paper and curbside recycling) to local governments and recycling companies for use at their events to promote waste reduction.

Six teacher workshops provided in three counties utilizing the Re:Thinking Recycling Curriculum.

- B. Recycling Information Center Enhancement: A program to facilitate the development of recycling habits, attitudes and awareness in the general public; and to upgrade the information services of the RIC in response to the development of curbside collection programs. Specific activities include:

Computer Capability: Develop a computerized information storage and retrieval system to manage the resources of the center.

1986-87 Computer program developed for retrieval of information on markets, drop-off centers and pick-up services, i.e. curbside. Program can be revised to include recycling information on education curriculum, waste exchange, and report generation. A second computer will be added in January, 1987, to assist in handling ever increasing number of calls.

1987-88 Computer database now contains 189 recyclers who provide services from drops to pickups for a variety of materials. The database underwent an update in spring, 1988 with mailings going to all recyclers currently included and others who might qualify.

The system is now made up of a server and two terminals which may be accessed by all three operators simultaneously. The system is designed to search by type of material, location or zip code and type of service requested.

The system also allows operators to move from word processing functions to data retrieval with one command, allows operators to retrieve monthly and yearly statistical data and has the capability to create statistical reports.

In winter 1987, a library database was created which contains the titles of all books and publications currently housed in the Recycling Information Center library and which enables operators to easily check out materials to the public with a printed record for the RIC files and a copy going to the customer.



**Public Education Materials:** Develop a series of educational flyers and handbooks on waste reduction and recycling issues for distribution to the general public.

1986-87 Office Recycling handbook - final print in January for dispersal at Office Products Show in February. Looking to update Art of Composting to include information on markets. Looking at doing a series on chemical hazards in the home that talks about what is hazardous, why it is, precautions and alternatives. Update packaging flier after legislative session.

Other publications issued in 1986:

Art of Composting Handbook  
Curbside recycling brochure (By county)  
Fact sheet on the Recycling Information Center  
Trim, Prune, Clip and Recycle brochure  
Yard debris compost brochure  
Grocery bags/Save the Earth and Tin Bin, Glass Stash and Paper Pouch.  
Poster distribution  
Fact sheet distribution  
Curriculum and educational materials distribution

1987-88 Many of the materials are still being used which were created in previous years. They are:

Office Paper Recycling Handbook  
(to be revised in 1988)  
Art of Composting Handbook  
Composting Fact Sheet (revised 1988)  
Curbside Recycling brochure (revised 1988)  
Recycling Information Center brochure  
(revision in progress)  
Office Paper Recycler lists by county  
(revision in progress)  
Clackamas Transfer and Recycling Center brochure  
(to be revised)  
St. Johns Landfill and Recycling Center brochure  
(to be revised)  
Yard Debris Compost for the Landscaper Contractor  
fact sheet  
Alternative to hazardous household products  
(to be revised in 1988)  
Recycled Paper Outlets (revised 1988)

New materials include:

Our Biggest Waste Problem is Right in Your Own Backyard (1988)  
Yard Debris Compost: A Homegrown Solution for Your Garden (1988)  
Container suppliers/paper buyers for newspaper drives (1988)  
Sources of Fiber & Steel Drums for Office Paper Recycling (1988)  
Plastics Recyclers in the Metropolitan Region (1988)  
How to Keep Your Home From Becoming a Hazardous Waste Site (1988)  
Yard Debris Recycling Services (1988)  
The Metro Handbook (1988)

Produced a Teacher Resource Booklet that lists films, written materials and field trips on recycling waste reduction available to teachers in the Portland Metropolitan Area.

Mailed the Re:Thinking Recycling Curriculum to 120 educators.

Produced a ten minute puppet play (stage, puppets, script) about how and why to recycle and performed show at two promotional events.

**Library Development:** Develop a library of audio-visual and printed materials on recycling and waste reduction issues for use by the general public.

- 1986-87 Existing in-house material cataloged August, 1986. Regional assessment to be completed by April, 1987. Additional material list to be developed by May, 1987 and purchasing begun. 1987-88 budget will include funding for ongoing material purchasing.
- 1987-88 In-house assessment of materials completed winter 1987 and cataloged and entered into new database. 1988-89 Budget includes funds to purchase additional materials and maintain subscriptions to the major waste reduction and recycling publications. Print and audio-visual materials are available to be checked out by the general public and have been used extensively during the past six months by college students for speech and report preparation.



1987-88      Operation Phonebook with the Lions Club Volunteers answering large volume calls at a special desk in the Recycling Information Center (RIC), approximately 600 tons recycled; 1,570 calls handled by RIC staff. Worked with two phone companies and 20 Lions Clubs. Produced an insert for every new phone book that listed drop box locations for phone books. October/November 1987.

Christmas Tree recycling campaign coordinated with 30 community groups operating 45 drop sites in the region -- over 22,000 trees recycled; 4,506 calls handled by RIC staff. Worked with private business to accept trees from non-profit groups for free or half price. December 1987/January 1988

Materials are provided to groups who sponsor yard debris composting workshops, neighborhood clean ups and on a regular basis mail information to callers -- Ongoing

Staff makes recycling presentations on any type of recycling; office paper, home recycling; yard debris. Staff actively participates and networks with the Association of Oregon Recyclers, Clackamas County Recycling Task Force, and the City of Portland's recycling promotion group. - Ongoing

Recycling Information Center coordinator worked with Kerns/Buckman Neighborhood Association and the City of West Linn to assemble a panel to speak on plastics recycling - Ongoing

Recycling Information Center staff compiled a list and provided yard debris information and printed dates in the RIC calendar of events for neighborhood spring cleanups in the region - Spring 1988

Developed an exhibit for the Home and Garden Show, Office Products Show, Property Management Show, the Children's Fair, Recycling Day at the Zoo and Conservation Day at the Zoo. Staffed each show and event and performed the puppet show - Spring 1988

Scout/Campfire Program; conducted 19 presentations on recycling for the in-school Scouting program in the Portland Public schools - Ongoing

Teacher Workshops; worked with the Clackamas County, Portland School District, and Beaverton School District administration to provide six teacher workshops utilizing the RE:Thinking Recycling Curriculum - Ongoing

Household hazardous Waste Collection Day - Wrote Request for Proposals, received five proposals, interviewed the vendors, selected Chemical Processors, Inc. as the contractor. Developed flyers, brochure and advertising to promote the collection event on May 14, 1988. 1,176 households were serviced by the event. Metro worked with the Department of Environmental Quality, local governments and fire districts in the region to complete the event. Four sites in the region were utilized.

**Salvageable Materials and Waste Exchange:** Appropriate functions related to waste exchange and salvageable material database and hot line will be expanded.

1986-87 If it proves feasible to set up such a program (See Reduce and Reuse Program), RIC will incorporate a special sub-section in our computer program to retain necessary information and facilitate reclamation of materials.

1987-88 Recycling Information Center incorporated businesses and organizations who accept reusable materials into the recycling database and consistently refers the public to these businesses and organizations when appropriate.

C. **Local Collection Service Certification:** A program to assure that curbside collection programs are optimally effective.

\* (See Local Collection Service Certification Work Plan.)

D. **Regional Promotion and Education:** A multi-year regional recycling promotion campaign. (See Promotion and Education Work Plan.)

1986-87 Where will the Children Play campaign (June '86) - newsprint, television, radio

Save the Earth with a Brown Paper Bag (July, August, September and October, 1986 - newsprint, radio, grocery bags, exhibit.

Trim, Prune, Clip and Recycle (April, May, 1986) - transit ads and newsprint.

Fall Yard Debris Campaign (October, 1986) - newsprint, media coverage

Upcoming Campaigns:

Christmas tree recycling (Dec. '86)  
Office Products Show (Feb. '87)  
Spring Yard Debris (April, '87)  
Coates Advertising Campaign (June-Oct. '87), est.

1987-88 See Coates Multi-year campaign, Page 2 and Appendix D

Displays - Office Paper  
Home recycling  
Hands on Display (tires, scrap metal, corrugated cardboard)  
Yard Debris

Optional Action Elements:

E. Source Separation Technology Development: The development and distribution of home or office recycling containers.

1986-87 An analysis of this system will be completed by February, 1987. If appropriate, funds and a program will be recommended in 1987-88 budget.

1987-88 Metro provided for a curbside container demonstration program in its fiscal year 1987-88 budget. That program was amplified on by the 1987 legislature which required that Metro do a pilot project with curbside recycling containers after July 1, 1988, if Metro was going to use a regional landfill. Since Metro recently concluded a contract negotiation process that provides for a regional landfill in eastern Oregon, that project will need to be brought on line before the new landfill is used. Staff has been assigned and is in the process of developing a request for proposals for the project. The results will be used to develop recommendations for the Solid Waste Management Plan. It will show the cost effectiveness of doing two or three different types of curbside container programs and the results used to make recommendations to the Metro Council and the region on the type of container program that ought to be implemented region-wide.

Office paper recycling was also developed as a program in fiscal year 1987-88. (See the promotion education section)

F. Grants and Loans: Targeted to local governments, businesses and/or recyclers to support waste reduction and recycling programs.

1986-87 An analysis of this approach will be completed by February, 1987. If appropriate, funds and a program will be recommended for inclusion in 1987-88 budget.

1987-88 The fiscal year 1988-89 budget has a program that dedicates approximately one percent of the solid waste budget (approximately \$306,000) for funding innovative resource recovery programs. Requests for Proposals will be issued in the fall of 1988 and awards of funding will be given in the spring of 1989. This promises to be one of the more exciting waste reduction programs that Metro has contracted.

In June, 1988, Metro appropriated funds for implementation of a plastic recycling demonstration project. Through agreement with Clackamas County, plastic milk jugs will be collected with a retro-fitted drop box situated at rotating locations. Co-mingled plastic food containers will also be picked up on a regular residential recycling route in a specific area of Clackamas County. The project will investigate the cost effectiveness of the collection alternatives as well as various market preparation options.

**PROGRAM NAME: RECYCLE -- YARD DEBRIS**

**Purpose:** To achieve maximum feasible reduction of yard debris currently being landfilled through the use of regional processing facilities and on-route collection of source-separated yard debris.

**Action Elements:**

- A. **Material Recovery Centers:** Metro will establish a yard debris processing facility at the St. Johns Landfill capable of processing up to 200,000 cu. yds. of materials annually. Fees for source-separated yard debris will be based on program costs, consistent with Metro's policy for the handling of recyclables.

1986-88 Metro has acquired a disc screen to begin processing of stockpiled material, and has contracted for operation of the equipment. The stockpile of contaminated material has not been completely cleaned due to technical problems, and this has delayed the development of an on-site grinding/processing operation as scheduled. A RFP for the full scale processing center will be developed during the first quarter of 1987, to include an option for transferring of material to a private firm. The existing site is being used for stockpiling of incoming, uncontaminated material collected from both private individuals and commercial haulers. This material is being attracted at the projected levels through the use of rate incentives established in October of 1986 (see rate incentives).

1987-88 The disk screen project was discontinued in 1987. In lieu of this, a contract with a local yard debris processor was developed. All source separated yard debris is trucked to Grimm's Fuel company to be processed into yard debris compost. All the old, contaminated material and other yard debris that had been accumulated over time, has been removed. Furthermore the Department of Environmental Quality has set limits as to the amount of material that can be accumulated at St. Johns Landfill. Funding to continue this program is contained in the fiscal year 1988-89 budget. (see rate section for discussion of incentives)

In Spring 1987, Metro purchased 6,900 cubic yards of yard debris compost for final landfill cover. Negotiations are currently in progress to continue use of yard debris compost for this purpose.



- B. **Materials Markets Assistance:** Encourage the purchase of recycled yard debris products through the use of the RIC referral system, annual yard debris composting campaign, and institutional purchasing policies.

(See Materials' Markets Assistance Program.)

- C. **Diversion Credits, Loans and Grants:** Metro may use diversion credits (payments for yard debris which is processed) to private sector processors to encourage the processing of materials and market substitution. (See also the Rate Incentive Work Plan.) In limited circumstances loan or grant monies may be given to processing of source-separated yard debris.

1986-87 Metro will examine the cost effectiveness of diversion credits to private processors of yard debris during FY 87-88. If these methods are shown to be necessary and cost effective, they would be implemented during FY 88-89. Metro is limited in providing grants or loans to businesses by state law.

1987-88 It has not been necessary to provide any sort of monetary incentive to assist in the recycling of yard debris. The supply of the material has been more than adequate to meet the demands of the processors capacities and the markets willingness to use the compost material. Metro is examining the feasibility of franchising the region's yard debris processors for purposes of adding more certainty to the recovery of yard debris in the future in the planning process .

- D. **Technical Assistance:** Share information from other states and countries with local processors, haulers, and municipalities for the collection and processing of source-separated yard debris.

(See Certification and Markets Assistance Program)

- E. **Promotion and Education:** Use to promote home composting, source separation, and market development. (See Promotion, Education and Public Involvement Work Plan and Markets Assistance Work Plan.)

1986-87 - Spring Garden and Landscape Show - April, 1986 (Yard debris compost display)

- Developed Trip, Prune, Clip Brochure, April, 1986. Reprint August, 1986.

- Trim, Prune, Clip and Recycle Advertising Campaign - transit signs and newsprint.

- Developed Yard Debris Compost brochure, April, 1986, Reprint August, 1986.
- Reprint and new cover for the Art of Compost Handbook.
- Workshops coordinated by Metro. Eight workshops from April to June, 1986.
- Yard Debris Compost displays developed for Grimm's Fuel and McFarlane's.
- Far West Agricultural Show. August, 1986.
- Yard Debris Recycling and Compost information provided at all community outreach activities (shopping malls, fairs)

1987-88 Home and Garden Show Exhibit (March 1988)

- Transit and Newsprint advertising (fall 1987 and spring 1988)
- Art of Composting brochures, fact sheet, technical reports
- List of yard debris services in the region (distributed through Recycling Information Center)
- Loan of Yard debris exhibit to City of Gresham (May 1988)
- Yard debris display at Recycling Day at the Zoo (October 1987)

F. Provide Analysis for the Placement of Yard Debris on the list of "Principle Recyclables": Staff will present an analysis to the Environmental Quality Commission regarding the placement of yard debris on the list of "principle recyclables."

1986-87 In its March, 1986 testimony to the Environmental Quality Commission, Metro submitted technical analysis of curbside collection costs for yard debris. Based on subsequent information from program experience, Metro is updating its analysis and will provide the Department of Environmental Quality with its findings in January, 1987.

1987-88 Metro staff has continued to support and participate in the Department of Environmental Quality's rules process. More recently, due to the Environmental Quality Commission action of identifying yard debris as

a recyclable material, Metro staff has given a substantial amount of time providing technical assistance and information to the Department of Environmental Quality staff on the writing of rules that will guide the development of the collection system for yard debris. Those rules are scheduled to be adopted by the Environmental Quality Commission in late fall 1988.

**G. Rate Incentives: Metro will adjust fees at its processing and transfer points downward to encourage recycling as outlined above.**

1986-87 Metro adopted an interim rate reduction for source-separated commercial and public loads at its St. Johns facility on October 6, 1986. Rates were reduced by approximately 50% for commercial loads and 66% for public loads. In its current rate study, staff is recommending the adoption of source-separated yard debris rates which are lower than for mixed loads. The recommended yard debris rates which would be effective April 1, 1987 are 56-57% of mixed loads.

Metro will be incorporating a yard debris high-grading point at its West Transfer and Recycling Center which is scheduled for completion in the spring of 1988. This facility would have reduced rates for source-separated material.

Metro will also be analyzing the need to retrofit its Clackamas Transfer and Recycling Center to accept yard debris. Rates would be reduced if this option is pursued and would occur in early 1988. The results of the composition study will be used to determine this.

1987-88 (see rate incentive section)

**H. Local Collection Service Certification: Metro will develop standards for yard debris recycling by jurisdiction. Higher disposal rates may be assessed to local jurisdictions which do not implement adequate yard debris collection and/or processing systems.**

1986-87 (See local Collection Service Certification Work Plan.)

1987-88 Based on the knowledge that the current supply of yard debris is meeting the processors abilities and the markets demand for the material and the recent development by the Department of Environmental Quality of rules requiring the collection of yard debris, the use of the certification program and disposal rates as incentives has not been necessary. It is possible that

Metro may write a regional plan to implement a collection system for yard debris once the Environmental Quality Commission rules have been adopted and the region's local governments assess their responsibilities in the matter and the resource they have available.

I. Bans on Disposal: Metro will ban disposal of source-separated yard debris from landfills under its control by January, 1989.

1986-87 Metro will institute such a ban if its reduction goals are not met.

1987-88 Metro may ban source separated yard debris from being disposed of in landfills, but this would only be done if the existing recovery system outlined above proves to be incapable of diverting a sufficient amount of the material to the yard debris processors.

**PROGRAM NAME: POST-COLLECTION RECYCLING/MATERIALS RECOVERY**

**Purpose:** To recover recyclable materials and reusable items from the waste stream through facilities which process waste which contains a high percentage of economically recoverable material. The mechanical processing of waste to produce compost, fuel or other by-products is considered Materials Recovery until it is looked at through the process outlined in Alternative Technologies.

**Action Elements:**

- A. **Material Recovery Centers:** Private, franchised or public facilities will be established for waste substream which contain material or items which it is technically and economically feasible to recovery.

1986-87 Metro currently has four private, franchised material recovery facilities operating in the region. The largest is the Oregon Processing and Recovery Center. In addition to being a full-line buy-back center, they accept high-grade loads of cardboard and office paper. Metro, with OPRC, has provided spotters at St. Johns to identify potential high-grade loads and divert them to the OPRC facility. East County Recycling received a franchise in August, 1986, to establish a processing center at N.E. 122nd and San Rafael to accept loads of waste from primarily private citizens. They are hand sorting the recyclable products and processing yard debris. East County is also hand sorting some commercially generated waste paper loads.

After several months of operation of Oregon Processing Center OPRC, it became clear that it would be economically prohibitive for waste collectors to deliver high-grade loads directly to OPRC from Clackamas and Washington Counties. As a result, several methods were tested to reload high-grade material at CTRC and deliver it to OPRC in larger trucks. In July a proposal was developed to modify CTRC by installing a stationery compactor to improve the efficiency of hauling high-grade corrugated loads.

1987-88 Oregon Processing and Recovery Center, currently a Metro franchisee, has been granted, an expansion of their capacity to 100,000 tons of material processing a year.

- B. Use of Transfer Stations: To maximize waste substream differentiation, salvage programs and post-collection separation of recyclables. CTRC will be redesigned, and WTRC designed to meet this objective.

1986-87 WTRC has been designed to allow segregation of several substances of the waste. The design allows for four materials to be stored and transported separate from the general solid waste stream. The different materials will be compacted for efficient transport to existing processing centers. Metro anticipates shipping corrugated loads and office paper to facilities such as OPRC or K-B Recycling, yard debris to facilities such as Grimms or McFarlanes and construction/demolition to limited-use landfills such as KFD or Lakeside Disposal.

Marine Drop Box Company operates a processing center which primarily deals with the marine shipping and repair industry. They hand-sort loads from the various docks and terminals. Their major reclaimed products include shipping dunnage, cables, ropes and other materials. Sunflower Recycling operates a very small composting operation under a franchise from Metro.

K-B Recycling has proposed adding a paper sorting operation to their new buy-back center at Hwy 224 and I-205.

1987-88 The Clackamas Transfer and Recovery Center contract will be rebid beginning in Fall of 1988 and a new contract will be signed by April of 1989. A part of that process will be asking for bids on material recovery processing.

There is an experimental project currently being conducted at CTRC. High-grade loads of corrugated cardboard are being diverted to a section of the facility where they are compacted and sent to the Oregon Processing and Recovery Center (OPRC) for further processing and ultimately being recycled.

- C. Waste Auditing and Consulting Service: Advise and assist or conduct audits and design programs for waste generators in cooperation with collectors to assist in the generation of high-grade loads.

1986-87 (See Materials Markets Assistance Program)

1987-88

Based on an analysis of the waste stream composition which includes an assessment of the amount of recyclable materials that would be available in the waste stream from the commercial sector, it was concluded that a waste auditing and consulting service could be jointly carried out by Metro, local jurisdictions and processing centers. Although the increased landfill tip fees will provide incentive to commercial generators to separate their waste whenever possible, an organized waste audit and consulting effort by the above parties can encourage even greater recycling. The solid waste management planning process, through consensus of local jurisdictions, will address the most appropriate design of waste audit and consulting programs.

**PROGRAM NAME: ALTERNATIVE TECHNOLOGIES**

**Purpose: To recover material and/or energy from the implementation of Alternative Technologies**

**Action Elements:**

Solicit proposals for Alternative Technologies that process up to 48 percent of the waste stream. Specific processes to recover material will be evaluated through a RFQ/RFP process including material recovery technologies, composting, refuse-derived fuel (RDF) and Mass Burn.

1986-87 In January, 1986, a Request for Proposals (RFP) was issued to secure management and technical consulting services. In February, the firm Gershman, Brickner and Bratton, Inc., was hired to work in this capacity.

In March, 1986, a Request for Qualification and Information (RFQ/I) was issued to systems contractors who provide waste processing techniques including composting, refuse-derived fuel (RDF) and mass burn. Thirteen responses were received, out of which six were selected for receipt of the RFP.

The six firms selected to continue in Metro's procurement process for resource recovery systems contractors include American Ref-Fuel, Combustion-Engineering, Fluor Engineers, Schnitzer-Ogden, and two compost technology firms, Riedel-DANO and Reuter-Buhler/Miag. These firms were notified of their selection and eligibility to receive Metro's RFP in late July. In addition, decisions were made on the potential waste allocation for each technology, and acceptable costs for inclusion of alternative technology(ies) in the solid waste disposal system.

Firms utilizing incineration technologies, RDF and mass burn, have been requested to propose 250,000 TPY, 350,000 TPY and 450,000 TPY volume size projects (800 TPD, 1,130 TPD and 1,450 TPD respectively).

Firms utilizing compost technologies have been requested to propose 100,000 TPY and 200,000 TPY volume size projects (320 TPD and 640 TPD respectively).

The Metro Council also concluded that any project or projects selected for procurement should not exceed the total system disposal cost of 20 percent. If costs presented do exceed 120 percent of the system cost, the



Council will evaluate the relative merits of including the project despite the increase in cost, so long as other necessary criteria are met.

Site information included in the RFQ/I responses was not transmitted to DEQ for inclusion in their waste disposal siting efforts. A joint decision was made by DEQ and Metro that preliminary site information supplied by the six systems contractors in July, 1986, would not provide adequate information in time for conducting a legally acceptable siting process. The siting process in SB 662 was not appropriate for Alternative Technologies.

The RFP for mass burn/RDF technologies was issued October 8, 1986. The RFP for compost technologies was issued October 24, 1986. All proposals are due on January 30, 1987.

1987-88 Responses were evaluated from February through March 1987 culminating in a Final Evaluation Report issued in June, 1987.

On September 27, 1987 the Metro Council authorized and directed the negotiation of a Memorandum of Understanding (MOU) with Riedel Environmental Technologies Inc. (RET) for a 160,000 ton per year mass composting facility and with Combustion Engineering, Inc. (C-E) for a 350,000 ton per year refuse derived fuel (RDF) facility.

The RET mass composting facility was proposed to be located at N.E. Columbia Boulevard in Portland, Oregon and the C-E RDF facility was proposed to be located in Columbia County, Oregon.

Concurrently with the directive to negotiate the two MOUs, the Metro Council called for ". . . an independent scientific review of the potential environmental and health impacts of a solid waste incinerator project . . ." <sup>1</sup> This directive was realized by the creation of the Health Impact Review Panel (HIRP) which completed its work on February 10, 1988. Due to findings of the HIRP report the Council passed Resolution No. 88-866A suspending MOU negotiations with C-E on May 12, 1988.

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<sup>1</sup>Resolution No. 87-809

The City of St. Helens voted against an incineration facility in May 1988. C-E then began pursuing a different site in another community without strong acceptance from a prospective host community. Metro cannot advocate further negotiations with C-E.

Negotiations with RET continued from October 1987 until early January 1988 at which point official negotiations were suspended due to the need for RET to develop greater specificity in the areas of 1) facility price, 2) financing, and 3) market and storage for compost. RET was given until April 15, 1988 to provide the supplementary information in satisfactory form. RET provided the additional information by April 15 in a form sufficient to justify resuming formal negotiations to finalize the MOU. From January through May 25, 1988, negotiations took place on MOU language, risk allocation and technical specifications.

Negotiations concluded on May 25, 1988. RET guarantees a waste throughput of 185,000 tons per year (delivered via direct haul) with a facility price of \$18,000,000 and an annual operation and maintenance fee of \$2,800,000. This results in a first year tip fee of \$41.20/ton in 1988 dollars and a system cost of \$42.61/ton (levelized cost). This is 1.7 percent less than the landfill-based system cost of \$44.61/ton.

The MOU was approved by the Metro Council on June 23, 1988. Final negotiation of long-term service contracts, as well as the financing of the facility is scheduled to be completed by March 1989. The facility should be operational 18 months after financing.

**PROGRAM TITLE: LEGISLATIVE PROGRAM**

**Purpose: Develop and pursue a legislative action package to facilitate the implementation of the Waste Reduction Program and achieve certain recycling and waste reduction goals.**

**Action Elements:**

**Legislative Program: Present packaging, plastics, effective public purchasing policies, and other proposals for legislative action.**

1986-87 The Metro Council reviewed and adopted legislative principles at their November 20, 1986 meeting. Specific bills that will be worked on, as a result of this action, include expansion of the Container Deposit Laws, State Purchasing Policies, Packaging Restrictions, Extension of Tax Credits for Recycled Plastic Manufacturing Processes, Solid Waste Facility Siting Authority, Hazardous Waste Disposal System Development, Letter of Credit Authority for Metro in siting Solid Waste Facilities.

1987-88 In the 1987 legislature Metro supported virtually all recycling legislation. Metro did not introduce any legislation. The Solid Waste Management Planning process has as one of its charges to develop legislative recommendations that are seen as being in the regions best interest for purposes of increasing the recovery rate of materials.

PROGRAM NAME: CERTIFICATION FOR LOCAL COLLECTION SERVICES

Purpose: To assure participation of local jurisdictions and the collection industry in waste reduction efforts to accomplish maximum feasible reduction through those programs which require changes in the collection system.

Action Elements:

Certification for Local Collection Services: Local jurisdictions, which have exclusive regulatory control over solid waste collection, will be encouraged to participate fully in waste reduction effort through Metro certification.

Standards and measurements will be developed to assure effective local collection programs which meet source separation goals for principle recyclable materials, remove yard debris from the waste stream, and provide high-grade loads of mixed waste.

The program will begin with the DEQ's standards to meet SB 405 requirements. The standards for the second year will address collection systems for yard debris and, if appropriate, the generation of high-grade loads. Each year in this phase new requirements for certification may be added depending on results of previous programs.

1986-87 I. Program Set-up

Tasks Completed:

The Solid Waste Policy Advisory Committee has been reorganized to address the certification program, the Local Government Advisory Committee on Certification has been formed and begun meeting, and the Tri-County Council is actively providing advice and assistance.

Future Tasks:

The three advisory committees will continue to serve as a resource for developing the program.

II. 1986 Standards

Tasks Completed:

DEQ has reported to SWPAC that the review of wasteshed reports is not completed, therefore, Metro is unable to proceed with certifying jurisdictions.

#### Future Tasks:

When reviews of wasteshed reports have been completed by DEQ, Metro will certify jurisdictions accordingly (See Section III).

### III. 1987 Standards

#### Tasks Completed:

The certification goal of developing collection systems for yard debris was adopted by Council as a part of the Waste Reduction Program. Options for yard debris collection systems were defined in November and a cost evaluation of all options in December.

#### Future Tasks:

Certification standards are proposed to be adopted in January. Notification to local jurisdictions and development criteria will follow in February and March. Local jurisdictions will be encouraged and assisted to develop programs which meet those standards. Several methods are being considered, for example, technical assistance services and grants and loans.

Each jurisdiction will submit a report by July '87 which details the programs which will be implemented to meet the standards. Metro will evaluate those reports and certify jurisdictions which meet the standards. Program implementation will begin in January '88.

### IV. Enforcement Mechanisms

#### Tasks Completed:

Methods to gain compliance from reluctant jurisdictions have evolved. Originally it was proposed that higher disposal rates would be paid by haulers from non-certified jurisdictions. It was determined, through the public involvement process, that this approach would be less effective and efficient than originally expected.

Rate differentials could not be implemented in an equitable manner, especially in unfranchised Portland and Multnomah County. Haulers would be in a position of collecting a fee for service they did not provide or control the quality of. In franchised areas, haulers must give the local government permission to increase

their fees. If a government choose not to allow a Metro-required service, a hauler would have to either pay the increased tipping fee or offer the service at their expense.

The rate differential could penalize the hauler rather than deal directly with the local government that has the primary authority to assure compliance with certification program standards.

The use of rate differentials was also limited in effect legally. Metro is required, by law, to base its rate structures on the cost of providing the service, not what it takes to bring about the behavior change. (Metro committed, in the Waste Reduction Program, to use the existing system until 1989 or until it was shown that the goals could not be reached. In 1989 Metro committed to make an assessment and seek appropriate changes in the system.)

Subsequent to these findings, the rate differential, to be adopted in December, 1986, will be implemented only if other efforts prove unproductive. An alternative approach has been implemented which is predicated on voluntary cooperation. In exchange for not implementing the rate differentials, the representatives of the hauling industry have signed a pledge of cooperation and are actively participating in the development of program standards for yard debris collection.

Local jurisdictions are also having a direct voice in the design of the program through the Local Government Advisory Committee on Certification. In addition, Metro has several options to assist and encourage them to meet the standards, e.g., technical assistance, grants and loans.

Metro's legal authorities (ORS 459.100 and .095) require that waste collection programs be consistent with the regional waste reduction program. If they fail to do so, Metro has recourse to legal channels. See accompanying memorandum titled "Certification Enforcement." The efficacy of this method is also being worked on and will be developed if necessary and/or appropriate.

#### Future Tasks:

The success of this cooperative approach will be monitored continuously. In October, 1987, a thorough review of the ability of the program to meet its purposes will be made and recommendations offered

concerning actions on the rate differential in the 1988 rate study.

#### Causes for Delay in Completing Program Tasks

The original time frame predicted that 1987 certification standards would be adopted in July '86. However, some delay has occurred. This was due to three reasons:

- Staffing vacancies - this included hiring new staff (4) to take on the additional work committed to in the Waste Reduction Program and replacing those who resigned (5) in the last 18 months.
- Schedule overruns in other programs, e.g. Washington County Transfer Station.
- Public Involvement - the unanticipated amount of time it took to involve and gain the cooperation of the collectors and local governments.

In spite of this, the submission deadline for local jurisdictions is expected to remain July '87, with the requirement for implementation of programs to begin in January '88.

1987-88

In examining the certification program for this year it is important to keep in mind the purpose of the program:

"To assure participation of local jurisdictions and the collection industry in waste reduction efforts."

Over the last year, Metro has invited every jurisdiction in the tri-county area, representatives from the recycling industry, citizens, and representatives from the collection industry to participate in the regional decision making process. The purpose is to gain consensus on programs and facilities for managing solid waste in the region. This is the first time in the history of Metro that all jurisdictions have come together to work on resolving solid waste issues. The first priority in developing the plan is waste reduction. As discussed under "System Measurements", the work on getting the regional committees to agree on specific waste reduction programs that Metro and the local governments will implement was begun in April, 1987. Metro believes that this cooperative decision making process will be carried out by local jurisdictions and the collection industry.

PROGRAM NAME: RATE INCENTIVES

Purpose: To establish a variety of rate incentives to achieve the goals and objectives of the Waste Reduction Program.

Status: Work scheduled in Action items A, B and C will be completed with the adoption of the 1987 rates. Due primarily to the review process required for the development of rate incentive programs, completion of the Rate Study was delayed three months.

Action Elements:

- A. Incentives for Post-Collection Recycling/Materials Recovery  
Specific changes will be made in the Metro Disposal Franchise Ordinance, Rate Ordinance and Rate Policies by July 1, 1986, to provide economic incentives for the Post-Collection Recycling/Materials Recovery features of the Framework Plan.

1986-87 Ordinance changes exempting waste received at materials processing and recycling facilities from Metro User Fees and Regional Transfer Charges are to be adopted in December, 1986. Additionally, Metro will be evaluating the rate differential between materials processing operations and Metro facilities to determine its effectiveness in diverting wastes. The differential which has existed during 1986 will more than double following the implementation of Metro's 1987 rates. Changes in waste flows at processing centers following this increase will be compared with data from the System Measurement Study to determine targeted goals for the high-grading of waste.

If it is found that the differential produced by the Metro rate increase in 1987 or future years is not effective in optimizing high-grade load generation, then processing facility operations will be evaluated to determine the best method of increasing their waste flows or improving efficiencies so that their tipping fees are kept low relative to land disposal rates. Rate regulations or assistance will be considered for these operations as appropriate.

1987-88 Metro's adopted 1987 rate study exempted material recovery centers from having to collect the user fee and regional transfer charge. This was done to provide a rate differential between what is charged for regular garbage coming into St. Johns Landfill and the material that could be recycled.



The conclusion of a recent analysis on this program was that more recyclable material in the system could be diverted to a processing center provided there was more of a rate incentive to the generators of the waste. It has been concluded, however, that the impending rate increases at the landfill, scheduled to go into effect in fall 1988, will in fact provide sufficient incentive to the generators of waste to use the processing centers in the region on a more regular basis.

- B. Rate Incentives to Assure Compliance by Local Collection Services with the Standards of the Certification Program  
Rate incentives which assure compliance with the Standards of the Certification of local collection service program will be developed. A variety of options will be examined and a specific program of rate structure modification will be developed for implementation by January 1, 1987.

1986-87 A certification non-compliance fee is scheduled for adoption with the 1987 rates. Initially the amount of the differential fee charged to haulers delivering waste from non-certified areas will be \$4.50 per ton. This incentive which is based on the cost of service should be adequate to encourage compliance with SB 405 standards in the first year. In future years the amount of this fee can be adjusted as needed to provide accessory incentives for making efforts required by added standards. Metro is required by state law to base rate structure incentives on the cost of service (See Certification Program).

As described in the discussion on the certification program, alternatives to this certification rate incentive are being used. Actual implementation of the certification rate differential will not occur until these approaches have been tested.

1987-88 The 1987 Metro rate study adopted a certification/non-compliance fee. That \$4.50 per ton fee was to be used in the event that local governments were found not to have implemented the recycling opportunity act. That situation did not occur. All jurisdictions in the region did in fact receive recognition for having implemented the recycling opportunity act, from the Department of Environmental Quality and the non-compliance fee was not necessary. This fee was also to be used for purposes of providing an incentive for other recycling goals. The first one of which was to be for yard debris collection. Since the Department of Environmental Quality and Environmental Quality

Commission have designated yard debris as recyclable

material and it is required to be collected at the curb, the use of this fee by Metro would not be necessary.

Additional recycling program goals were to also be adopted through the certification program. However, it has been replaced by the Solid Waste Management planning process. The results of the planning process will be the same as those sought from the certification program. Local governments would agree to creating programs and achieving material recovery goals. Consequently, the use or need of the non-compliance fee is not applicable at this time. (see certification program)

- C. Funding of Work Plan Commitments Through User Fee Rates  
Commitments made in the Work Plans for specific actions or programs will be assured of necessary funding through modification of Metro user fee rates as appropriate. A rate study incorporating these needs will be conducted prior to January 1, 1987.

1986-87 1987 disposal rates to be adopted in December, 1986, provide an increased level of support for waste reduction programs. The amount of the user fee will increase from \$2.04 per ton to \$3.20 per ton and will generate about \$1 million more than in the past year. The majority of this increase is required to fund new waste reduction programs committed to in the plan which was submitted to DEQ, such as: Alternative technology, system measurement, yard debris, recycling and marketing, recycling promotion and education as well as certification and materials recovery programs.

1987-88 (see Appendix J - FY 1988-89 Metro budget)

Metro provided for two other rate incentives as a result of their 1987 rate study. The first provides a rate differential for source separated yard debris that is brought into the facilities. The general public who self haul source separated yard debris to St. Johns Landfill pays \$2.00 per cubic yard and commercial haulers pay \$9.45 per ton for disposing of source separated yard debris. The public pays \$3.90 per cubic yard and the haulers pay \$19.90 per ton under normal conditions. (see yard debris program)

The second rate differential that is provided, waives

the minimum charge to public customers who deliver at least half a cubic yard of recyclables with their waste. The savings for the public on this amounts to \$5.43 for each two and a half cubic yards and \$2.17 for any amount over two and a half cubic yards. The public normally pays \$9.75 for each two and a half cubic yards.

**PROGRAM NAME: MATERIALS' MARKETS ASSISTANCE PROGRAM**

**Purpose:** To develop programs and services designed to stimulate demand for certain recyclable materials to meet expected increased supply of those materials generated through the implementation of SB 405 and Waste Reduction Program; to develop an annual information base on market conditions from which to evaluate market assistance programs.

**Action Element:**

The following projects are proposed as potential elements of the Materials' Markets Assistance Program:

- A. **Annual Market Analysis:** Annual evaluation of markets to identify strengths and weaknesses and impediments to their future growth.

1987-88      1987-88 and 1988-89 budget provided for this element to be conducted

- B. **Annual Market Survey:** Annual survey of companies which purchase recycled materials as service to material brokers.

1987-88      1987-88 and 1988-89 budget provided for this element to be conducted.

- C. **Annual Supply Profile:** Annual measurement of potential growth of supply for individual recyclable materials.

1987-88      1987-88 and 1988-89 budget provided for this element to be conducted.

- D. **Recycled Products Survey:** Survey of products made from recycled material available in the Metro market.

1987-88      1987-88 and 1988-89 budget provided for this element to be conducted.

- E. **Consumer Education:** Education program for consumer's on advantages of purchasing products made from recycled materials.

1987-88      Metro staff regularly gives presentations on office paper and yard debris recycling. During

the office paper recycling presentations the last main point is to emphasize purchasing recycled paper. Yard debris recycling presentations staff members also emphasize buying compost products from the processors. Special brochures and fact sheets have been developed to promote the purchase of yard debris compost products.

- F. **Institutional Purchasing:** Technical assistance and promotion for developing institutional purchasing policies that favor the use of recycled materials whenever possible.

1987-88 Worked with in-house purchasing supervisor to establish a system for purchase of recycled paper at "competitive rates." Coordinated collection of samples of types of recycled paper for "testing" in printers proposed for purchase by the agency.

- G. **Legislative Action:** Advocate legislative support for recycling tax credits and other legislative measures supporting development of recycling markets.

1987-88 (see legislative section)

- H. **Grants and Loans:** Research and Development: Target monies for research and development of new methods for utilizing secondary materials.

1987-88 (see grants and loans section and Recycle 405 materials section)

- I. **Grants and Loans:** User Assistance: Target monies to users of secondary materials to encourage the expansion of their use of recycled materials.

1987-88 (see grants and loans section and Recycle 405 materials section)

- J. **Materials Brokerage:** Provide a certainty of supply to markets for certain materials through the use of two primary strategies:

1. guarantee market (and price) for specified amounts of certain materials to collection systems; and
2. guarantee supply (and price) to material users to encourage them to invest in processes that utilize those materials.

A policy on these issues has not been established. Decisions on whether regional solid waste facilities will be publicly or privately owned and what recycling programs and goal are to be achieved by the region will determine this. These decisions are expected in fall 1988. The goals setting process will also determine what material markets to address in addition to yard debris.

1986-87 The Yard Debris Marketing Program is a successful public-private venture. (See attached description, Yard Debris Program, Certification Program and Rates Program.) Action items A, B, C, E, F, and G were all applied in its development.

Metro began a yard debris compost marketing program during March of 1986. In April of 1986, sales increased dramatically at both commercial compost processors; in fact, sales of composted yard debris during the peak annual sales period (May) increased by 100% from 1985 to 1986. On an annual basis compost sales in 1986 (through August) are running 96% ahead of 1985.

This experience and recommendations from private industry has caused some changes in the Markets Assistance Program design and methodology. The new program strategy will include a recommendation to hire a full-time staff person with experience and training in markets by July, 1987. This position will be responsible for:

- Designing and implementing a long-term plan for a Materials' Market Assistance Program.
- Develop and manage the audit consulting program.

An existing staff position is assigned to manage the yard debris markets element in FY 86-87.

A budget will be developed for FY 87-88 that includes funding for the staff increase, market analysis, market survey, supply profile, recycled products survey and consumer education.

A market assistance task force will be appointed to help identify problem areas and design an appropriate long-term program. The task force, composed of leaders in materials markets, will address the following tasks and time frame.

- Appoint task force members, establish operating rules, September, 1987.
- First task force meeting; priorities and research needs identified, September, 1987
- Preliminary conclusions drafted and general structure of program designed, November, 1987.
- Present long-term program design to Metro Council, December, 1987.

In addition, Metro is analyzing its use of paper products and will produce an Office Paper Recycling and Purchasing Policy Handbook to be distributed to other organizations. Target dates are January for draft and Council adoption of policy and distribution of Handbook in February.

#### SHORT-TERM MARKETING PROGRAM

During 1986, Metro aggressively implemented a short-term yard debris marketing program which serves as a foundation for a long-term (through 1991) task-specific marketing plan. In brief, the short term program has included the following activities:

- Workshops for the general public are being conducted to explain what compost is, how to use it and where to obtain it.
- Providing a booth at the following regional product and trade shows which promoted applications of composted yard debris. (Metro has already signed up for these same shows, or their equivalents, during 1987)
  - Far West Regional Trade Show (August, 1986)
  - Spring Landscape and Garden Show (March, 1986)
  - American Society of Landscape Architects Product Show (October, 1986)
- Set up a regular, periodic program of testing yard debris compost for the following general qualities: herbicide residuals, weed seeds, nutrients and toxicity. Technical reports have been prepared which describe the results of laboratory tests; two are complete and two other will be ready by the Spring of 1987.

- Displays of compost products have been set up at two commercial compost processing businesses.
- Compost sales trends are being recorded as a means of measuring progress toward goals and to identify flow problems.
- A 1,000 piece mail-out of selected informational literature has been made to target market industries.
- Promotional literature, in the form of pamphlets, glossary of terms relating to compost, etc., have been prepared and disseminated during the Spring and Fall Yard Debris Campaigns.
- Technical use specifications have been prepared: compost is now a formally specified product in Oregon Department of Transportation landscaping regulations and is nearing completion for both the Port of Portland and the City of Portland. This action fulfills the "institutional purchasing" policy goal of the Waste Reduction Plan and will have an extremely broad impact on the marketing of compost because hundreds of smaller users of landscape products "copy cat" the specifications prepared by these large institutional users.

However, additional, specifically tailored specification devices have also been prepared for landscape architects and landscapers and are being circulated for comments by experts in this field.

- Other marketing efforts include participation on radio talk shows, presentations to the local chapter of the American Society of Landscape Architects and direct communication with target market industries.

#### LONG-TERM MARKETING PLAN

Based upon the experience of the short-term marketing program, Metro is preparing a long-term plan for marketing yard debris compost. That plan, to be implemented in February of 1987, will guide Metro's efforts in pursuing its yard debris waste reduction goal through 1991 and contains the following elements.

- A comprehensive survey of market conditions for yard debris compost. The survey, completed in



September, showed that through aggressive marketing efforts, all of the yard debris, slated for recycling under the Waste Reduction Plan (75%), could be successfully marketed as new products;

- A task specific marketing plan for guiding Metro's actions during the 1986-91 period;
- Recommended business plan strategies for use by private compost processors in doing their part to market products made from yard debris.

1987-88 In September 1987 Metro hired a full-time Analyst to implement the Yard Debris Market Plan. The purpose of this 6-year plan is to decrease by 75% the annual amount of the yard debris going to the landfill by providing:

- technical information on the usefulness and viability of yard debris compost products to governments and the landscape and nursery industries;
- technical assistance and information to yard debris processors on methods to improve the product quality and usefulness;
- information to the public on the yard debris recycling system and its products.

In 1981 there was approximately one million cubic yards of yard debris landfilled in the region. In 1988 24 percent of that is now being recycled.

Note: processing reduces the volume of yard debris by a factor of seven. The numbers being used in this section reflect the amount of yard debris after processing unless otherwise noted. (see attached)

Yard debris processing expanded dramatically in 1985, increasing 581 percent over 1984 (from approximately 2,000 cubic yards to 13,000 cubic yards). Processing has nearly doubled each year since that time. Forty-eight thousand cubic yards were processed and sold by Grimm's Fuel and McFarlane's Bark in 1987.

In fact, from September 1987 through March 1988, McFarlane's Bark increased processing over the same period in the prior year by 283 percent (from 3,000 cubic yards to 13,000 cubic yards). Another

remarkable statistic during the same period is a 273 percent increase (from 36,000 to 135,000 cubic yards) in the amount of yard debris Grimm's Fuel received. (see attached)

While the winter months are slow for yard debris recycling and processing, the processors have demonstrated remarkable response to the assistance received as demonstrated by the increases in the amount processed or received from September through March. (See attached) At the same time, they have been busy making on-site improvements which will resolve problems or increase capacity. Grimm's Fuel, for example, has been installing an aeration facility and an additional grinder which they expect to cut processing time in half and increase processing capacity to one million cubic yards per year.

The following is a description of some tasks performed by the Marketing Analyst that contributed to the results cited above:

#### MARKET RESEARCH

- Conducted survey of retail and wholesale nurseries and provided analysis, including charts of statistical data.
- Conducted quarterly testing for herbicides, toxicity, weed seeds, nutrients; monitored contracts; distributed results to provide a base of knowledge about yard debris compost and its suitability for garden, landscape and nursery applications.
- Developed testing program, solicited proposals and managed contracts for the following:
  - a. OSU, weed seed identification and toxicity
  - b. Chinook Research, quarterly herbicides
  - c. Antech, quarterly herbicide/pesticide
  - d. Soil and Plant Laboratory, (1) summary analysis of two of testing for soil fertility and micro-nutrients with recommendations for end uses, (2) analysis of decomposition and recommendations for composting procedures and chemical additives, (3) revised format for monthly summaries to be used for marketing purposes.

- e. State Department of Agriculture Laboratory, Neilson and Antech, referee test for herbicide/ pesticide detection
- Solicited proposals, developed research designs and managed contracts for four demonstration plots to provide product development information and resolve target market (nursery) concerns.

#### TECHNICAL ASSISTANCE

- Developed an expanded computerized data base on yard debris flows, which is updated monthly.
- Developed forecasts, charts and graphs (e.g., generation rates, conversion tables, yard debris flows, market segment data, organic product prices, yard debris data formulas) and information packets for reports, meetings, and public information campaigns.
- Conducted periodic on-site inspections of processors, Environmental Learning Center, West Linn, Taulman, Beaverton Yard Debris Recycling, East County Recycling to evaluate alternative yard debris programs and resolve yard debris system problems.
- Provided technical information to processors relative to supply management, product development, compost testing, market research, quality control, legal and regulatory impacts on a periodic basis.
- Provided qualitative and quantitative information to other governmental entities (e.g., DEQ, counties and municipalities) relative to developing the yard debris system.
- Facilitated contract development between processors and St. John's Landfill relating to yard debris compost for landfill cover and removing contaminated yard debris from landfill.

## GRIMM'S AND MCFARLANE'S

## YARD DEBRIS FLOW

(CUBIC YARDS)

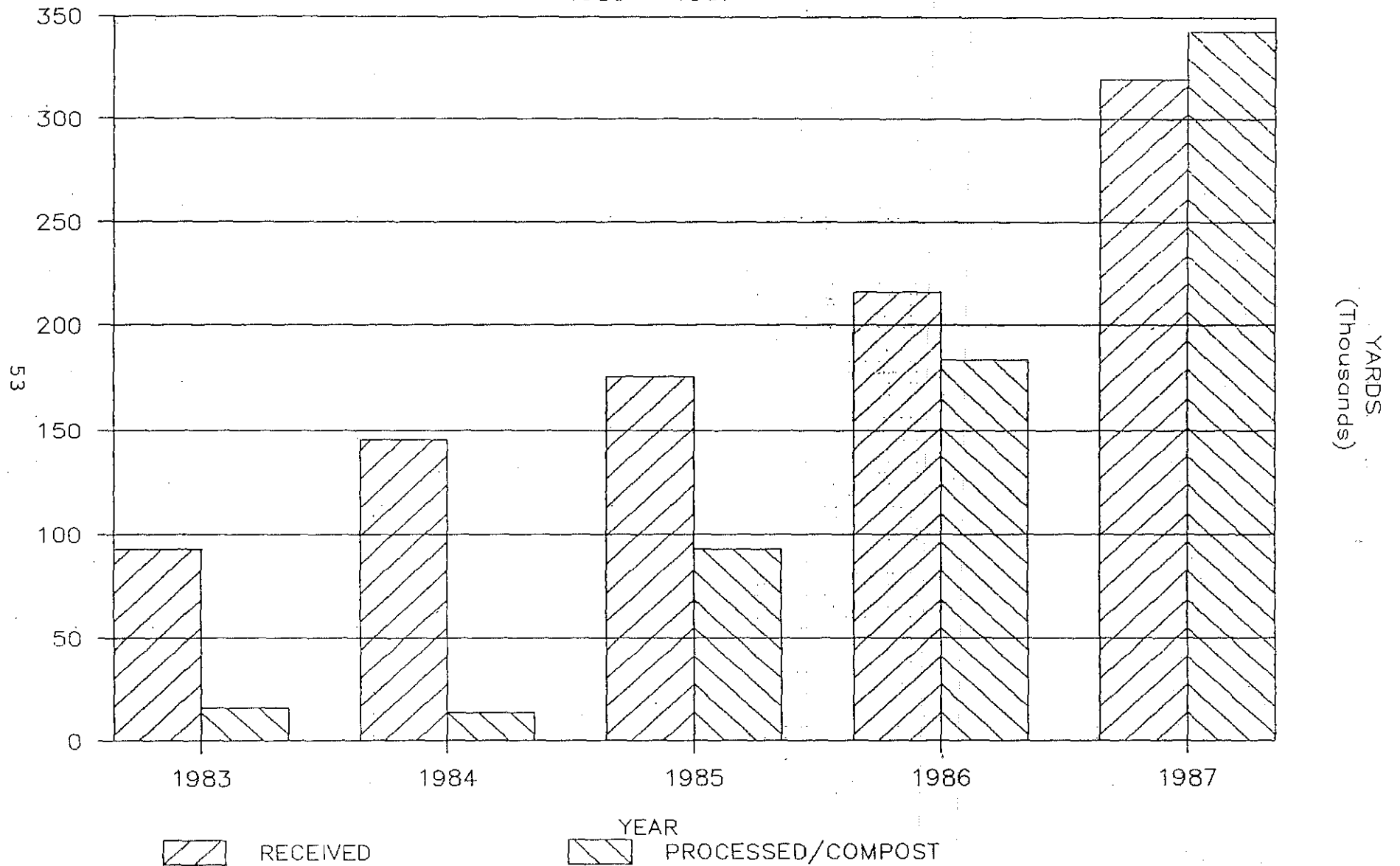
<u>YEAR</u>	<u>PROCESSOR</u>	<u>YARD DEBRIS INPUT</u>	<u>%INC- DEC</u>	<u>YARD DEBRIS COMPOST PROCESSED AND SOLD</u>		<u>%INC DEC</u>
1981	GRIMM'S	0	0	0	( 0 )*	0
	MCFARLANE'S	<u>79,191</u>	0	<u>1,080</u>	<u>( 7,557)</u>	0
	TOTAL	79,191	0	1,080	( 7,557)	0
1982	GRIMM'S	0	0	0	( 0 )	0
	MCFARLANE'S	<u>39,881</u>	-50	<u>2,089</u>	<u>( 14,625)</u>	94
	TOTAL	39,881	-50	2,089	( 14,625)	94
1983	GRIMM'S	20,704	0	0	( 0 )	0
	MCFARLANE'S	<u>72,312</u>	81	<u>2,298</u>	<u>( 16,089)</u>	10
	TOTAL	93,016	133	2,298	( 16,089)	10
1984	GRIMM'S	49,066	137	799	( 5,594)	0
	MCFARLANE'S	<u>96,280</u>	33	<u>1,152</u>	<u>( 8,061)</u>	-50
	TOTAL	145,346	56	1,951	( 13,655)	-15
1985	GRIMM'S	60,119	23	7,267	( 50,868)	809
	MCFARLANE'S	<u>115,178</u>	20	<u>6,018</u>	<u>( 42,124)</u>	423
	TOTAL	175,297	21	13,285	( 92,992)	581
1986	GRIMM'S	68,178	13	15,022	(105,157)	107
	MCFARLANE'S	<u>147,156</u>	28	<u>11,179</u>	<u>( 78,256)</u>	86
	TOTAL	215,334	23	26,201	(183,413)	97
1987	GRIMM'S	151,523	122	22,895	(160,263)	52
	MCFARLANE'S	<u>151,822</u>	3	<u>25,137</u>	<u>(175,956)</u>	125
	TOTAL	303,345	41	48,032	(336,219)	83

\*Output converted to input. Processing reduces volume by a factor of 7.  
10 cubic yards of yard debris input = 1 ton

05/26/88 HSS (REVISED)

# METRO REGION: YARD DEBRIS RECYCLING

1983 - 1987



**PROGRAM NAME    SYSTEM MEASUREMENT**

**Purpose:** To establish a system, based on analyses of waste compositions, for determining which programs and projects will obtain the maximum economically and technically feasible waste reduction through each level of the hierarchy.

**Action Elements:**

**A.    Waste Sub-stream Composition Study:**

This study will survey the volumes, composition and places of origin of waste generated by distinct generator types.

1986-87    Four full waste stream "sorts" to determine volumes and composition, will be completed by July, 1987. The first sort was completed on November 20, 1986. 180 samples ranging from 200 to 300 pounds were sorted into 27 categories. Three other sorts will occur in 1987 (February, April and July). Information on places of origin will be available January 2, 1987 (See B below). Information to make decisions on high-grade facilities, waste reduction goal setting, CTCRC redesign and certification standards will be available within the Waste Reduction Program's six month limits.

1987-88    The three final seasonal sorts were completed as scheduled. The final Waste Composition Study is included as Appendix E.

Metro will continue to conduct wastestream seasonal sorts to update the 1987 Waste Composition Study.

**B.    Sub-stream Resource Recovery Study:**

Based on the composition study, a set of waste sub-streams will be selected for a study of methods for the recovery of resources from those waste sub-streams.

1986-87    A planning meeting will be held on December 15, 1986 to review the fall sort results and discuss test methods for reviewing resources from specific waste sub-streams. A program will be drafted in January and finalized in February, 1987. Results will be available in April and May.

1987-88    Completed and included in December 1987 Final Composting Report

C. Set Waste Reduction Performance Goals:  
Specific performance goals for waste reduction will be defined as percentages of individual waste sub-streams.

These will be based on an analysis of the material composition of each sub-stream and the feasibility to recover that material. They will be reexamined periodically to assure that they are feasible. The Waste Reduction Program's effectiveness will be measured by the sub-stream percentage goals.

1986-87 Goals will be adopted upon completion of the four seasonal sorts and the results of the sub-stream study in 1987. Some goals and/or decisions will be made on specific sub-streams as data is produced by the study. These will be reviewed and adjusted as necessary, based on subsequent data. A draft of performance goals based on the first sort will be available by March 1, 1987.

1987-88 The tasks of evaluating processes for recovery of selected recyclable materials and establishing specific waste reduction performance goals were incorporated into the Solid Waste Management Planning process in August, 1987. A Waste Reduction Subcommittee, comprised of haulers, recyclers, processors, landfill operators, markets representatives and environmentalists, was charged with accomplishing these tasks.

The Subcommittee systematically reviewed the 1987 Waste Composition Study to determine which recyclable materials to target for recovery and performed extensive analysis of programs. That could effectively remove the identified materials from the wastestream. The initial target was recovery of 52 percent or greater of the total waste generated in the region. This is a 30 percent increase in the current rate.

The Subcommittee made preliminary program recommendations on May 18, 1987 calling for an integrated system of source separation and post collection programs. This integrated system will enhance the existing recycling collection system and provide supplementary mechanisms to insure the maximum feasible recovery rate for the Metro region. The relevant information pertaining to the program analysis can be found in Appendix L.

The combination of recommended programs, when completely on line, is estimated to recover an additional 21 percent of the waste generated in the region (268,930 tons) per year. This does not include the approximate 7 percent waste reduction achievable

through the proposed Metro composting facility, or the contribution of curbside pick up of yard debris which was just mandated by Administrative Rule C. The final program recommendations, including specific program designs and implementation tools will be released in July, 1987 for committee review. They will be presented to Metro Council in October 1988 for review and approval. (See Certification)

The projected annual goal over each of the next two years is 2-4 percent (25,500 - 51,100 tons) of the anticipated 21 percent additional recycling achievable through the recommended. This increase will be due to:

- increased commercial recycling prompted by higher tip fees.
- continued promotion and education efforts to encourage the public to use existing opportunities.
- funding by Metro of innovative recovery programs to enhance or expand the existing recovery system.
- Use of yard debris recovery options.

	<u>Tons Disposed</u>	<u>Tons Recycled</u>	<u>Percent Recycled</u>
1987	998,670	315,369	24
1988	1,001,637	351,637	26

D. Establish Ongoing Measurement of System Performance:

An ongoing system for the measurement of the effectiveness of the program in diverting waste from landfilling will be established, based on the Waste Sub-stream Composition Study and technical and economic feasibility.

- 1986-87 Personnel are currently being trained to enable Metro to conduct continuing system measurement analyses at the conclusion of the current contractual study. This program will be included in the FY 87-88 budget.
- 1987-88 The FY 1987-88 budget includes funds to conduct another study to determine the effectiveness of the waste reduction efforts.

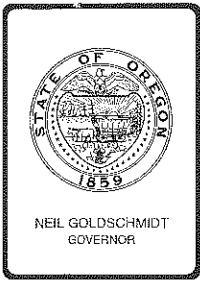


Director's Paragraph

Agenda Item No. 0: Proposed Adoption of LRAPA Conflict of Interest Rules, Title 12, "Duties and Powers of Board and Director", as a Revision to the State Implementation Plan, OAR 340-20-047.

This agenda item proposes to amend the State Implementation Plan (SIP) by adopting Lane Regional Air Pollution Authority (LRAPA) conflict of interest rules that incorporate by reference section 128 of the Clean Air Act. Section 128 requires a majority of public interest representatives on boards or bodies that enforce the Clean Air Act or issue permits, and disclosure of conflict of interest. LRAPA adopted these rules in response to a settlement agreement between Oregon Environmental Council and the Environmental Protection Agency. The intent of the settlement agreement is to correct any deficiency in the SIP, dealing with Clean Air Act conflict of interest requirements. Although LRAPA is subject to the state conflict of interest statute requiring disclosure, it needs to amend its rules and the SIP to conform directly with all requirements of section 128 of the Clean Air Act.

SVA:k  
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## Environmental Quality Commission

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

### EXECUTIVE SUMMARY

TO: Environmental Quality Commission

FROM: Fred Hansen, Director

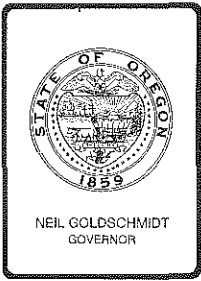
SUBJECT: Agenda Item O, September 9, 1988, EQC Meeting. Proposed Adoption of LRAPA Conflict of Interest Rule, Title 12, "Duties and Powers of Board and Director", as a Revision to the State Implementation Plan, OAR 340-20-047.

The Lane Regional Air Pollution Authority (LRAPA) is responsible for most air pollution sources in Lane County. Most of LRAPA's rules are part of the State Implementation Plan (SIP). The SIP is a plan, required by the Clean Air Act, which provides for maintenance and enforcement of national ambient air quality standards. To amend a rule that is a part of the SIP, LRAPA must receive authorization from the Commission or its representative to conduct a joint LRAPA/EQC rulemaking hearing. After LRAPA adopts the rule at this hearing, it submits the rule along with required documentation to the Department to submit to the Commission as a SIP revision. This agenda item is a proposed adoption of a new LRAPA rule that amends the State Implementation Plan.

In response to litigation and a subsequent settlement agreement between the Oregon Environmental Council (OEC) and the Environmental Protection Agency (EPA), LRAPA has adopted by reference the conflict of interest provision in section 128 of the Clean Air Act. In summary, section 128 requires a majority of public interest representatives on boards or bodies that enforce the Clean Air Act or issue related permits, and requires disclosure of any potential conflict of interest. Although LRAPA is covered by state conflict of interest laws pertaining to disclosure, this requirement and the Clean Air Act requirement for a majority of public interest representation are not applied to LRAPA in the SIP. LRAPA, therefore, agreed to adopt section 128 by reference.

It is proposed that the Commission incorporate this amendment into the SIP by adopting LRAPA's rule amendment. This would achieve consistency between DEQ and LRAPA regulations, and implement the settlement agreement between OEC and EPA. State conflict of interest rules in the SIP pertinent to the EQC were found adequate by EPA.

AK841



## Environmental Quality Commission

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

### MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item O, September 9, 1988, EQC Meeting

Proposed Adoption of LRAPA Conflict of Interest Rules, Title 12, "Duties and Powers of Board and Director", as a Revision to the State Implementation Plan, OAR 340-20-047.

### Background and Problem Statement

The Clean Air Act requires the development of a State Implementation Plan (SIP) providing for maintenance and enforcement of national ambient air quality standards. Section 128 of the Act requires that the SIP contain conflict of interest rules which insure that boards or bodies implementing the Act have a majority of members representing the public interest. Disclosure of any potential conflict of interest is required.

In 1978 the Department submitted conflict of interest rules (OAR 340-20-200 through 20-215) to EPA as a SIP revision. The rules were later returned to DEQ without action because of inadequate public notice prior to adoption. The rules remained in effect in Oregon but were not incorporated into the SIP because of the lack of action by EPA.

Subsequently, after adequate public notice, the Environmental Quality Commission (EQC) submitted to EPA the same conflict of interest rules that had been submitted in 1978. The rules apply only to the EQC and the Director.

On May 8, 1986, the Oregon Environmental Council (OEC) and Kathy Williams, a private citizen, filed suit alleging that EPA failed to approve or disapprove the 1978 submittal as required and, further, EPA failed to promulgate federal rules to implement section 128 in Oregon.

The conflict of interest rule and its application to DEQ was not an issue. The plaintiffs in the civil suit were concerned with the applicability of the conflict of interest requirements to the state Board of Forestry since the Department of Forestry administers a smoke management plan under the SIP. In order to determine whether the Board of Forestry, or any other boards or bodies in Oregon, issued permits or enforcement orders under the Act, EPA requested the Oregon Attorney General to identify each board or body which implemented any provision of the SIP. Based on the Attorney General's opinion, EPA found that the EQC and the Lane Regional Air Pollution Authority (LRAPA) are the only bodies in the state which issue

permits or enforcement orders as contemplated by section 128. LRAPA has jurisdiction over most air pollution sources in Lane County. Other boards or bodies do carry out portions of the SIP but do not issue permits or enforcement orders as contemplated by section 128. Independent of these actions, the legislature changed the constituency of the Board of Forestry to include more public interest representation.

On September 15, 1986, EPA entered into a settlement agreement with OEC, et al. Specifically, EPA agreed to take expeditious action on the Commission's May 30, 1986, SIP submittal. That action would include approved or disapproved Oregon's conflict of interest rules.

On August 25, 1987, EPA approved as a SIP revision the conflict of interest rules as they apply to DEQ and the EQC but disapproved the Oregon SIP for failure to meet the requirements of section 128 with respect to (and only with respect to) LRAPA and its Board of Directors. The current agenda item addresses this deficiency. Attachment 1 contains the new LRAPA rule. Attachment 2 is the LRAPA Staff Report explaining the need for the new rule. A Statement of Need for Rulemaking is included as Attachment 3, and Attachment 4 is a copy of the minutes from the March 8, 1988, LRAPA Board of Directors meeting during which the public hearing on the new rule was held.

#### Alternatives and Evaluation

##### ADOPT LRAPA RULES AS PART OF THE SIP

Although LRAPA is covered under the state conflict of interest statute relating to disclosure, it is required under Section 128 of the Clean Air Act to also cover disclosure and majority public interest representation in the SIP. The only reasonable alternative available to the Commission would be to adopt LRAPA rules as part of the SIP. As explained in LRAPA's Staff Report (attachment 2), the effects of the proposed conflict of interest amendment on LRAPA's Board of Directors would be minimal. Failure to adopt LRAPA's Title 12 amendment would result in continued EPA disapproval of Oregon's SIP.

##### Rulemaking Process

In a January 26, 1988 letter, the Department informed LRAPA that its proposed revisions to LRAPA Title 12 were at least as stringent as and consistent with corresponding Department regulations. The Department authorized LRAPA to act as the Commission's hearings officer for the proposed amendment.

The notice of public hearing for this rule was published in three Lane county newspapers at least 30 days before the hearing.

On March 8, 1988, the LRAPA board of Directors held the necessary hearing, and received no testimony on the proposed amendment. Attachment 4 contains the minutes of this Board meeting. The rule was adopted by the LRAPA Board, and forwarded to the Department for submission to the Commission.

Summation

1. The Commission authorized LRAPA to hold a concurrent LRAPA/EQC hearing on the proposed amendment of LRAPA Title 12 to incorporate by reference the conflict of interest provisions of the Clean Air Act. Incorporation of this amendment into the SIP will correct a deficiency in the SIP and implement a settlement agreement between OEC and EPA.
2. The LRAPA Board of Directors held a legal hearing on March 8, 1988, and adopted the Title 12 amendment incorporating by reference section 128 of the Clean Air Act.
3. LRAPA has requested that the Commission adopt the LRAPA Title 12 amendment as a revision to the SIP.

Director's Recommendation

Based on the Summation, it is recommended that the Commission adopt the revised LRAPA Title 12 rules section 12-025 as an amendment to the State Implementation Plan.

Fred Hansen

- Attachments
1. LRAPA Rule: Title 12, section 025, Conflict of Interest
  2. LRAPA Staff Report
  3. Statement of Need for Rulemaking
  4. Minutes of LRAPA Board meeting, March 8, 1988

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August 26, 1988

**DRAFT**

March 8, 1988

- (h) May enter, during operation hours, any property, premises, or place for the purpose of investigating either an actual or suspected air contaminant source or to ascertain compliance or noncompliance with these rules or any issued order.
- (i) May adopt administrative rules to manage the Authority.
- (j) Shall undertake a community education program to provide the citizens of the territory of the Authority with a better understanding of the nature of air pollution and its control.
- (k) Shall submit an annual report of activities undertaken by the Authority.
- (l) Shall issue permits, and register sources of air contaminants.
- (m) Shall prepare an annual budget for submission to the Budget Committee and Board, and submit required reports to the Environmental Quality Commission and U.S. Environmental Protection Agency.
- (n) Shall perform such other acts required by the Board.

#### Section 12-025 Conflict of Interest

The LRAPA Board of Directors and Director shall comply with Section 128 (A) of the federal Clean Air Act as amended in 1977, which pertains to majority makeup of the board and disclosures of potential conflict of interest.

Section 128 is made a part of these regulations by reference.

#### Section 12-030 Advisory Committee

- (1) An advisory committee shall be appointed by the Board annually in February, to advise the Authority in matters pertaining to its air pollution control program and particularly as to methods and procedures for the protection of public health and welfare and of property from the adverse effects of air pollution, and on matters relative to legislation.
- (2) The advisory committee shall consist of at least seven but no more than fifteen members appointed for a term of three years with at least one representative from each of the following groups from within the territory of the Authority:
  - (a) Public health agencies
  - (b) Agriculture
  - (c) Industry
  - (d) Community Planning
  - (e) Fire Suppression Agencies

## Agenda Item No. 13

## LRAPA Board of Directors Meeting

January 12, 1988

TO: Board of Directors  
FROM: Donald R. Arkell  
SUBJ: Conflict of Interest

Background

About two years ago, the Oregon Environmental Council (OEC) initiated suit challenging the U. S. EPA approval of the Oregon SIP. The suit contends that the SIP does not meet the requirements of Section 128 of the federal Clean Air Act which, in simple language, requires: (1) that boards or bodies which exercise permit or enforcement powers implementing the Clean Air Act have a majority of members who represent the public interest and who do not derive significant portions of their income from persons subject to permits or enforcement actions; and (2) that any potential conflict of interest by a member or executive officer be adequately disclosed.

This OEC suit was, essentially, directed at the Oregon Board of Forestry which, until the last legislature, had a majority of its members representing the timber industry. The state's smoke management plan is part of the SIP and is administered by the Oregon Department of Forestry. OEC's assertion is that the Board of Forestry is therefore subject to Section 128 of the Clean Air Act.

As part of its preparation of response, EPA requested the state's Attorney General to identify and describe the powers of all state and local boards, bodies and heads of agencies which approve permits and enforcement orders under programs included in the SIP. The conclusions were basically that all agencies, etc., involved in issuing permits were subject to the ethics statute, ORS 244. The LRAPA board and director are not listed among those required to file

Conflict of Interest  
January 12, 1988  
2

statements of economic interest under ORS 244.050 and 060. Despite this difference, state law appears to be more restrictive than Section 128 of the federal Clean Air Act.

#### Discussion

OEC is pressing the suit, and EPA is interested in settling. Part of the settlement would be that LRAPA corrects this technical deficiency. A simple solution would be to adopt a local rule as part of Title 12 as a SIP revision, as follows:

#### "Section 12-025 Conflict of Interest

The LRAPA Board of Directors and Director shall comply with Section 128 (A) of the federal Clean Air Act as amended in 1977, which pertains to majority makeup of the board and disclosures of potential conflict of interest.

Section 128 is made a part of these regulations by reference."

As indicated above, the effects on board policies, procedures and regulations are expected to be minimal, if any, because board members are already subject to conflict of interest statutes which require disclosures. It is not expected that additional disclosure statements need be filed. Moreover, it is unlikely that the participants in LRAPA would collectively appoint four or more members who would have conflicts of interest. If that were to happen, an arrangement could be made to resolve the matter among the entities involved. We have agreed with DEQ that the suggested rule change would satisfy the technical deficiency.

#### Recommendation

It is recommended that the board schedule public hearing on changes to Title 12 as a SIP revision at the March board meeting. We will ask for determination by DEQ that this rule is as stringent or more so than state rule



Conflict of Interest

January 12, 1988

3

and that it complies with the SIP requirements of the Clean Air Act. We will also request designation of LRAPA as hearings officer for EQC, under our previously-agreed-upon procedure.

DRA/mjd

RULEMAKING STATEMENTS FOR  
PROPOSED CHANGE IN LRAPA TITLE 12

It is proposed to add section 12-025, Conflict of Interest, in order to comply with Section 128(A) of the federal Clean Air Act.

Pursuant to ORS 183.335, the following statement provides information on the proposed action to amend Oregon's Revised State Implementation Plan (SIP) for Particulate Matter for the Eugene/Springfield Air Quality Maintenance Area.

STATEMENT OF NEED

Legal Authority

LRAPA is authorized to adopt the proposed rules by ORS 468.535, Title 12 of LRAPA Rules and Regulations, and the federal Clean Air Act Amendments of 1977 (PL 95-95).

Need for the Rules

Section 128(A) of the federal Clean Air Act requires: (1) that boards or bodies which exercise permit or enforcement powers implementing the Clean Air Act have a majority of members who represent the public interest and who do not derive significant portions of their income from persons subject to permits or enforcement actions; and (2) that any potential conflict of interest by a member or executive officer be adequately disclosed.

The LRAPA board members and the director are subject to Oregon conflict of interest statutes which require disclosures. This provision, as well as that requiring a public interest majority on the board, are not now contained in Oregon's State Implementation Plan (SIP). The addition of Section 12-025 to the LRAPA rules would incorporate Section 128(A) into LRAPA's rules and regulations. As a SIP revision, this amendment will correct the technical deficiency.

Principal Documents Relied Upon

- ° Federal Clean Air Act, PL 95-95, Section 128
- ° Oregon Revised SIP
- ° ORS 244.050, ORS 244.120 and ORS 468.535
- ° LRAPA Title 12

FISCAL AND ECONOMIC IMPACT STATEMENT

No fiscal or economic impact is anticipated as a result of this rule amendment.

LAND USE CONSISTENCY STATEMENT

The proposed rules do not affect land use as described in any applicable land use plan in Lane County.

## M I N U T E S

LANE REGIONAL AIR POLLUTION AUTHORITY  
 BOARD OF DIRECTORS MEETING  
 TUESDAY--MARCH 8, 1988  
 SPRINGFIELD CITY COUNCIL CHAMBERS

## ATTENDANCE:

Board Rich Gorman, Chair--City of Springfield; Rob Bennett--City of Eugene; Betty Horvath--City of Cottage Grove; Ben Reed--City of Springfield; Emily Schue--City of Eugene  
 (ABSENT: Ellie Dumdi--Lane County; Debra Ehrman--City of Eugene)

Staff Don Arkell--Director; Marty Douglass; Tim Mixon; Merrie Dintemar

Advisory Kathryn Barry  
 Committee

Other Rich Barrett, Willamette Industries; Rolf Anderson and Hubert Mapes, Willamette National Forest

OPENING: Gorman called the meeting to order at 12:24 p.m.

MINUTES: MSP (Horvath/Schue)(unanimous) approval of minutes of the February 9 meeting as submitted.

EXPENSE REPORT: MSP (Schue/Reed)(unanimous) approval of the expense and appropriations reports for February 1988 as presented.

DISCUSSION--  
 PROPOSED LAND  
 AND RESOURCE  
 MANAGEMENT  
 PLAN,  
 WILLAMETTE  
 NATIONAL  
 FOREST: Arkell introduced Rolf Anderson, Planning Staff Officer of the Willamette National Forest, who gave an overview of the proposed land and resource management plan for the Willamette National Forest. Anderson said the forest service was approximately halfway through the public comment period on the plan, designed to provide guidance over the next ten to fifteen years. over 2,000 comments have been received, to date. The four main issues addressed by this plan are:

1. Roadless areas--how to manage the areas that remain roadless outside of wilderness;
2. Timber supply--Willamette National is a major supplier of timber at local, regional and national levels;
3. Old growth--emotion vs economics; and
4. Wildlife habitat--timber harvesting and road building are greatest threats, and areas which are home to threatened or endangered species must be protected.

There was considerable discussion on the plan. Anderson said the objective of the forest service is so manage the forest lands for wise use over time of all resources. He described the nine management options put forth in the proposed plan and projected effects of each on various components of the four main issues described above. He said they are trying to decide which stands of timber should be managed on short-term basis for faster harvest and which on long-term to allow time for "old growth" characteristics to evolve. The old growth decays and replenishes the soil over a period of at least 200 to 250 years. There is little information available yet on soil conditions for third or fourth harvests in areas where harvesting is done as soon as the trees reach marketable size. Some European forests are beginning to get to the third harvest now, but none in this country have yet reached that point.

From an air quality standpoint, Anderson said the preferred option probably would not have a measurable effect on slash burning or availability of firewood. (These activity levels are directly related to actual timber cut option and would place allowable cut between current allowable and current actual.) He did say that, over time, WNF probably would be burning less slash, but how much less would be difficult to predict at this time. With regard to firewood, Anderson said they were considering doing some things next spring, such as having a week when people would be allowed to cut firewood at no charge, to encourage cutting at the right time of year to allow adequate seasoning prior to the next wintertime heating season. He added that this type of activity is operational in nature and could be done at any time, independent of any long-term planning.

PUBLIC HEAR-  
ING--PROPOSED  
AMENDMENT OF  
LRAPA TITLE 12,  
DUTIES AND  
POWERS OF BOARD  
AND DIRECTOR:

The proposed amendment of LRAPA Title 12 was precipitated by a lawsuit brought by the Oregon Environmental Council brought against the EPA. The OEC position is that the Oregon SIP approved by EPA does not comply with Section 128 of the federal Clean Air Act regarding conflict of interest. The suit was directed primarily at the Oregon Board of Forestry the time had a majority of its members representing the timber industry. During preparation of the EPA's response, it was revealed that the LRAPA board and director, while covered under state law, are not specifically covered in that regard in the SIP.

Arkell proposed addition of Section 12-025 which would adopt by reference Section 128 of the federal Clean Air Act.

Gorman opened the public hearing at 1:14 p.m. Arkell said the LRAPA board had been granted authority to act as hearings officer for EQC at this hearing. He also submitted for the record

affidavits of publication of hearing notice for today's public hearings in the Cottage Grove Sentinel, the Eugene Register-Guard, and The Springfield News.

There being no further testimony, the public hearing was closed at 1:15 p.m.

Motion

MSP (Bennett/Schue)(unanimous) incorporation into Title 12 of the suggested language regarding conflicts of interest of the board and director of LRAPA.

Arkell indicated the approved rule amendment would be submitted to EQC for its approval and then to EPA for approval as a SIP revision.

PUBLIC HEAR-  
-PROPOSED for  
AMENDMENT OF  
LRAPA TITLE 20,  
"INDIRECT  
SOURCES":

Arkell explained the proposed amendment to the fee schedule for indirect source permits, contained in LRAPA Title 20. At the request of the board, staff developed a new fee schedule designed to recover a greater percentage of the cost of operating the program and to make the charge more equitable, depending on the amount of time required for different types of permits. The proposed schedule was:

Filing Fee	\$ 100
Basic Application Processing Fee	500
Extended Analysis Fee	2,000

Arkell explained that the \$2,000 Extended Analysis Fee was a new fee category to be charged for the larger projects which require considerable staff time, such as Sacred Heart Hospital's expansion or the proposed shopping center on Gateway.

The board discussed the proposed fees and the need for government agencies to stress cost recovery in every area possible. Opinion was split among board members present between the desire to recover costs and the desire to provide service without making it so expensive that the smaller projects become too costly to accomplish.

Bennett and Reed felt strongly that cost recovery should be encouraged wherever possible, particularly in light of the continuing decline in federal resources. They contended that, especially with the larger projects, a larger fee would be accepted by contractors as a part of the cost of doing business. Bennett, in particular, expressed a desire to recover the full actual cost of these permitting processes, so long as the amount charged could be substantiated.

Gorman, Horvath and Schue felt that the proposed increase was adequate at this time. In the interest of encouraging economic development in Lane County, they were reluctant to place much more of a financial burden on developers. They agreed that cost recovery is important but felt that the smaller operator should be protected and that the fees could be raised further at a later time, if necessary.

Arkell said a sliding scale of fees had been considered, but that contractors want to know up front what the costs will be, instead of having LRAPA keep track of costs during the permit process and bill the company later.

Gorman opened the public hearing at 1:35 p.m. Rich Barrett of Willamette Industries asked whether the proposed fees were one-time-only processing fees. Arkell confirmed that they were.

There being no further testimony or questions, the public hearing was closed at 1:36 p.m.

Motion

Bennett MOVED to adopt a compromise fee schedule:

Filing Fee	\$ 100
Basic Application Process Fee	600
Extended Analysis Fee	3,000

Bennett said his reasons for this compromise were: (1) that the fees are very small part of the budget to begin with and need to represent a larger part; (2) a need to represent a greater cost recovery; and (3) a need to be sure we don't get further behind in cost recovery by not keeping fees up with costs. Reed SECONDED the motion.

Vote

Bennett and Reed voted for the motion; Horvath and Schue voted against.

Motion

Schue MOVED to adopt the staff's suggested fee schedule. Horvath SECONDED the motion. Horvath then AMENDED the motion to include provision for review by the board after one year of operations under this new fee schedule. The fee schedule could be changed again at that time.

Vote

The board voted unanimously in favor of Schue's motion, as amended by Horvath.

DIRECTOR'S  
REPORT:

Arkell suggested dispensing with review of the Director's Report for February, since there were still a number of items on the agenda requiring board action. He said he would answer any questions the board might have regarding February's activities. There were no questions or comments. (report available on file)

MINUTES  
LRAPA Board of Directors Meeting  
March 8, 1988

5

RESOLUTION        Arkell explained the need to transfer funds from equipment  
AUTHORIZING        repair and vehicles to travel, due to training costs incurred;  
REAPPROPRIATION    and to transfer funds from salaries to contract service, due to  
OF FUNDS:           a change in staffing.

Motion             MSP (Bennett/Horvath)(unanimous) adoption of LRAPA Resolution  
No. 88-2, authorizing reappropriation of funds.

ADVISORY COMMITTEE: No report at this time.

OLD BUSINESS:     None

NEW BUSINESS:     Bennett asked staff to check into the costs quoted to remove  
asbestos from the Equitable Building in downtown Eugene, which  
he said seemed excessive to him. Arkell said he would look into  
it.

PUBLIC PARTICIPATION: None

ADJOURNMENT:      There being no further business, the meeting adjourned at 1:52  
p.m. The next regular meeting of the LRAPA Board of Directors  
is scheduled for Tuesday, April 12, 1988 at 12:15 p.m.

Respectfully submitted,

*Merrie Dinteman*

Merrie Dinteman  
Recording Secretary

STATE OF OREGON

DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE MEMO

TO: Director  
Agency Management Group

DATE: August 24, 1988

FROM: William Jasper

SUBJECT: Attached Staff Report

In reviewing the attached staff report, please notice these issues of interest and/or controversy:

1. A change in the tampering inspection criteria for 1975-1979 vehicles and the revised engine change policy proposed was supported at the public hearings.
2. The issue of testing golf carts and ATVs (all terrain vehicles) was raised as a result of an inquiry by Rep. Eldon Johnson. The issue is how DEQ tests and certifies vehicles that are not motor vehicles under the definition of statute but have been given license and registration by Motor Vehicle Division. The report discusses the background and requests Commission guidance on this issue.
3. The last item is the decertification of the BAR-74 (BAR refers to California Bureau of Automotive Repair and 74 indicates the standard was developed in 1974) exhaust gas analyzers used by the licensed self-inspecting fleets. While many fleets privately support this move, since fleet management will benefit by the purchase of new equipment, all of the testimony received on this subject was in opposition to the Department's proposal. It is the staff's position that decertification of the BAR-74 equipment is the start of an upgrade for all fleet testing facilities. The end result of this upgrade would be electronic control of the fleet test machines. The staff believes that this is an appropriate move that will result in improved testing by the fleets and better management by DEQ.

AD3364



DIRECTOR'S PARAGRAPH

Proposed Adoption of amendments to the Vehicle Inspection Operation Rules and Test Procedure, OAR 340-24-300 through 24-350, SEPTEMBER 9, 1988 EQC MEETING

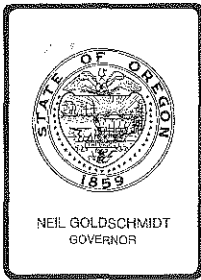
This agenda item requests adoption of amendments to the Vehicle Inspection Program operating rules. At the EQC meeting of June 10, 1988, public hearings were authorized. A series of three public hearings were scheduled and held in Medford, Portland, and Beaverton.

Highlights of the proposal changes are the correction of a typographical error in the legal description of the Medford-Ashland AQMA, changes in the information reported to the customer for failed vehicles, and a change in the tampering inspection criteria for 1975-1979 cars and trucks as well as a simplification of the number of test standards for some specific 1972-1974 vehicles. The procedural changes in test procedure and emission equipment examination received supportive testimony at the public hearings.

A more controversial aspect is the decertification of the "BAR-74" exhaust gas analyzers used by some of the licensed self-inspecting fleets. This decertification is another step in a process of improving the licensed fleet program. The expected end result will be electronic testing and recording of the data, in a similar manner to what is planned for the Department's operation. This was the only portion of the rule proposal that received opposing testimony.

Stan Sumich and Bill Jasper of the Vehicle Inspection Program are here to answer your questions.

August 24, 1988  
AD3365



## *Environmental Quality Commission*

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

### EXECUTIVE SUMMARY

PROPOSED ADOPTION OF AMENDMENT TO THE VEHICLE INSPECTION OPERATION RULES AND TEST PROCEDURE, OAR 340-24-300 THROUGH 24-350

At the June 10, 1988 EQC meeting, authorization was given to conduct public hearings on Vehicle Inspection Program rule revisions. Hearings were held in Medford, Portland, and Beaverton. The proposed rule revisions cover the following subjects: correction of the boundary designations for the Medford-Ashland AQMA; procedural changes in the test method that specifies how the test is conducted and what information is given to the customer; modifications to the test criteria covering inspection procedures for emission control equipment and engine exchanges for pre-1980 model year vehicles; simplification of the inspection standards for some 1972-1974 model year vehicles; and the decertification of the older series of exhaust gas analyzers currently used by some of the licensed self-inspecting fleets.

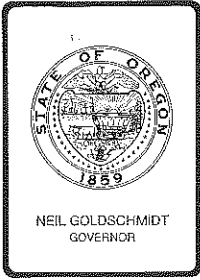
Comments at the public hearings were supportive of the staff proposals on the procedural changes and the test criteria changes. Comments on other aspects of the testing procedure and protocol not proposed for revision were received during the comment period. The Department's policy regarding testing of golf carts and all terrain vehicles (ATV) was questioned. Discussion contained in the staff report addresses the issues of golf cart and ATV testing.

Comments opposing the staff recommendation on decertifying the older "BAR-74" exhaust gas analyzers were made by three of the 55 licensed fleets. Two of those fleets opposing the action were school districts. These school districts cited the lack of need for upgrading the equipment and the inability of the school districts to fund the purchase of new equipment because of the inability of school districts to pass bond levies.

No comments were received on the other rule proposals.

The Director recommends adoption of the rule revisions proposed. As for the golf carts and ATV testing issue raised, the Department recommends the Commission take no action at this time.

AD3297



## Environmental Quality Commission

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

### MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item P , September 9, 1988, EQC Meeting  
Proposed Adoption of Amendments to the Vehicle Inspection  
Operating Rules and Test Procedure, OAR 340-24-300 Through 24-  
350.

### Background and Problem Statement

At the June 10, 1988 EQC Meeting, the Commission authorized a series of public hearings on Vehicle Inspection Program rule revisions. The revisions were proposed based upon the need to update provisions of the operating rules to keep them current and provide for continued operation of the Inspection Program into the 1990's.

The following sections of Administrative Rule were proposed for change:

- OAR 340-24-301 -- Boundary designation for the Medford-Ashland AQMA.
- OAR 340-24-310 -- Procedural changes to the test method section, specifying how failure reports are made to the customer.
- OAR 340-24-320 & 325 -- Modifications to the test criteria section that will affect the tampering inspection for older vehicles and the engine exchange policy for older vehicles.
- OAR 340-24-330 & 335 -- Simplification of the emission test standard for some limited production older vehicles.
- OAR 340-24-340 & 350 -- Decertification of the "BAR-74" series of exhaust gas analyzers effective January 1, 1990.

The proposed rule changes are contained in Attachment A. The Public Notice and Statements of Need and Fiscal Impact are contained in Attachment B. Hearings were held on July 26 and 28, 1988. The Hearing Officer's Report is contained in Attachment C. Attachment D is the hearings authorization report of June 10, 1988.

### Alternatives and Evaluation

The following summarizes the proposals for the rule revision and public comments received.

OAR 340-24-301 -- When the legal description of the boundaries for the Medford-Ashland AQMA were adopted, there was an inadvertent typographical error incorporated. The change proposed is to correct this error. The reference to "township 29 south" (T29S) would be corrected to "township 39 south" (T39S).

There was no specific comment on this section of the proposal at the public hearings.

OAR 340-24-310 -- This section of the rules covers the inspection program test procedure. The staff had recommended that paragraph (6) be changed to indicate that the entire testing sequence be completed. In the past, if a vehicle had missing pollution control equipment or was operating outside the test parameters such as idle speed or dilution, the rule required that the test be stopped. Under the proposal, all readings would now be completed, and a report containing all information obtained would be given to the customer. No comment on this part of the proposal was received during the hearing process.

OAR 340-24-320 & 325 -- This section of the rules establishes the inspection criteria; that is, the directions for what engine speed is allowed, how the inspection for emission control equipment is to be conducted, and how to attribute or characterize vehicles that have been modified substantially from original manufacture. The staff had proposed that the tampering part of the inspection test be changed for 1975-1979 vehicles. By amending the inspection criteria, these older vehicles would only be failed for the tampering part of the test if the leaded fuel filler restrictor and/or catalytic converter had been removed or disabled. Other items of emission control equipment that might become disabled and for which replacement parts have become unavailable would no longer be included. ORS 815.305 prohibits tampering with emission control equipment throughout the state. This proposed action to change the inspection criteria for these older vehicle classes now, averaging about eleven years of age, does not change the statute. It is still a misdemeanor under Oregon law for any person to tamper. This action is similar to action taken by the Commission in 1985 when requirements were amended for pre-1975 vehicles because replacement pollution control equipment was not available for a good share of those older vehicles.

The reason the staff initially proposed this action is because of the increasing difficulty of finding parts for some types of vehicles. For the past several years, inspection personnel have been working with a variety of vehicle owners and repair shops on "problem cars". Those problem cars would be failed at the inspection station because of failed parts. When checking dealership parts counters or aftermarket parts houses, the answer was often, "No Longer in Production". It was usually the smaller part, rather than the large component, that is the trouble maker. The staff position was supported in the hearing testimony by both Messrs. Robert Perry and Harold Kurlan, of S&P Automotive Repair, Portland. In written testimony, Mr. Gene Tierney, EPA, Ann Arbor, noted that "this seems a reasonable measure that will not reduce emission reduction

benefits substantially." Mr. Tierney's letter also offered corrections to the calculations by EPA that were included in the hearing authorization request. With the proposed change in tampering criteria, the engine change policy is also being changed to be consistent. Under the proposed policy, the model year of the vehicle will determine the test standards for pre-1980 model year vehicles. The amendments would result in a continuing requirement for compliance regarding the most essential control devices while recognizing the real world constraints created by the unavailability of certain other control devices. For 1980 and later light duty vehicles, the current policy remains unchanged.

The policy on engine exchange was also subject to comment at the hearings. Mr. Witherow, a citizen present at the hearing, indicated that he supported the change, as did the representatives of S&P Automotive.

In a related matter, the staff has received inquiries about the testing of all-terrain vehicles (ATVs) and golf carts from Representative Eldon Johnson. Testing these vehicles has become an issue, since the DMV is issuing passenger vehicle license plates to these vehicles when requested by vehicle owners. The reason that some individuals want their ATV or golf cart to have a license plate is so they can drive these vehicles on public roads.

The golf cart and ATV issue started up several years ago, with the golf cart issue most clearly identified in statute. ORS 801.295, 803.030, 803.305, 807.210, 810.070, 819.410, and 820.210-220 all regulate how cities can adopt local ordinances to provide for operation of golf carts on public streets. Two cities in Oregon provide examples of how these statutes are implemented. King City has passed ordinances to allow for golf cart operation. Medford, on the other hand, decided that it did not want to pass an ordinance to allow for golf cart operation on the roads. To bypass this local decision, some individuals obtained passenger registration for these vehicles. DEQ is involved because ORS 803.350 requires the Certificate of Compliance be obtained. This means that the inspection stations, primarily in Medford, are testing and issuing a Certificate of Compliance to golf carts.

The ATV owners have similarly desired on-the-road driving privileges and have been registering their vehicles, but in this instance there is not the same statutory provisions for on-road use, as with golf carts. DMV has issued a number of passenger registrations (license plates) to ATVs. The resulting need for testing has resulted in these vehicles arriving at inspection stations in both the Portland and Medford locations. To date, inspection staff has tested these vehicles under the applicable model year inspection category.

Two alternatives are available for Commission consideration. One is for the Commission to authorize specific testing standards and procedures for these vehicles. An other is to instruct the staff to continue testing these vehicles using the current "full size" vehicle standards, ie, to maintain the status quo. Staff discussions with DMV personnel have indicated that it is DMV's position

that the entire issue is a matter of police enforcement. Given the few vehicles of this type that are tested annually there is currently insufficient data to support the establishment of separate standards. While maintenance of status quo will result in some continued inconvenience to a few individuals (currently estimated at 10-15 per year), the Department believes the appropriate approach would be to take the time to compile sufficient data through continued testing to establish specific standards.

OAR 340-24-330 & 335

It is proposed to simplify the standards for certain vehicle makes in the 1972-1974 model year categories. These referenced vehicles are now generally out of service, and the simplification of the standards can be considered as housekeeping. There are provisions in the rules for specific exceptions to the standards. Based upon technical and vehicle design differences, should problems arise testing these vehicles, the standards can be adjusted. There was no comment received on this portion of the proposal at any of the hearings.

OAR 340-24-340 & 350

The final part of the proposal includes the decertification of a portion of the exhaust gas analyzers used by the licensed fleets. Under the staff proposal, the "BAR-74" series of exhaust gas analyzers would be decertified, effective December 31, 1989. In the report requesting hearing authorization, a plan was presented where all exhaust gas analyzers currently in use by the licensed fleets would be replaced by electronic "BAR-90" testers. Final changeover to the newest equipment is projected for approximately 1993.

Twenty-nine of the 55 fleets are affected by this proposal. Of these 29 fleets, 14 are government agencies and seven are school districts. The remaining affected fleets are private companies. At the public hearings, representatives of three of the licensed fleets presented testimony opposing the Department's position to decertify the "BAR-74" equipment currently in use by a portion of the fleets. The representatives of Northwest Natural Gas, Hillsboro Union High School District, and Reynolds School District all indicated that paying for the newer equipment would be a hardship and place an undue burden on the ratepayer and/or taxpayers. They indicated that they did not believe that the Department had adequately justified the need to upgrade the fleet procedures.

The issue of economic hardship, especially for the school districts and governmental fleets, has merit. However, the licensed fleet program was conceived to promote environmental benefit to the community, and to provide fleets a cost effective option, without having to take their cars to the inspection stations. These fleets have been licensed, some since the start of the inspection program. The costs for the exhaust gas analyzers should now have been amortized. Government entities as well as private companies, should remain current. The lead times allowed in the proposed rule revisions were noted as sufficient by those testifying against the proposal. It is important to point out that the proposed decertification does not require fleet owner/operators to

purchase new test equipment. They can, as is currently done by a few fleets, have their fleet vehicles tested at a state facility.

As indicated in the June 10, 1988, staff report Attachment D, these older style of exhaust gas analyzers pose significant accuracy problems in terms of calibration and testing for many fleets. Some of the licensed fleets are requesting that the Department staff assist them in both calibration instruction and maintenance trouble shooting. Most often these requests are based upon the fact that the original manufacturer no longer provides that service. One of the larger licensed fleets indicated informally, that they supported the Department's proposal since it will provide additional justification for upgrading their shop equipment.

By way of comparison, this level of exhaust gas analyzer has been decertified for testing purposes in all states, except Virginia, Maryland's fleet program, New Hampshire, North Carolina, Arizona's fleet program, and Idaho. There is strong pressure being exerted by EPA to have these units decertified in these states. While EPA has not commented directly on the use of these analyzers for the licensed fleet program in Oregon, it is prudent to start on a planned upgrade to fully automated testing equipment for the licensed fleets.

There was the suggestion that the older series of analyzer be used by the fleets to test and certify older cars and trucks. This might postpone the need of a fleet to upgrade the equipment. However, good fleet management practice would not segregate old and new vehicles or test schedules. The staff believes that such a compromise would result in confusion for fleet managers and not be beneficial. It is the belief of the staff that the orderly transition to new technology testing equipment for the licensed fleets should begin. The time frame allows over one year to start the first step.

#### Summation

Public hearings authorized by the Commission were held and testimony was received. There were no comments regarding the proposed section dealing with either the Medford-Ashland AQMA boundaries or the combining of test standards for some 1972-1974 model year specific vehicles. Comments from the public were supportive of improved reporting and of amending the tampering inspection requirements for 1975-1979 model year vehicles. Comments from three affected fleets opposed the proposed decertification of the "BAR-74" series equipment.

The issue of testing requirements for golf carts and ATVs was discussed and a recommendation to maintain status quo has been made by the Department.

The decertification of the "BAR-74" series of analyzers used by licensed self-inspecting fleets is the first step to upgrade the fleet program. While this

EQC Agenda Item P  
September 9, 1988  
Page 6

series of equipment is no longer satisfactory for use as a certification tool, the equipment could be retained and used as a diagnostic tool.

Director's Recommendation

Based upon the summation, it is recommended that the rule revisions be adopted. Program changes in testing procedures would be effective September 13, 1988, the first day after filing of the rules with the Secretary of State. The decertification of the "BAR-74" exhaust gas analyzers would be effective December 31, 1989.

Fred Hansen

Attachment A - Proposed Rule Changes  
Attachment B - Public Notice and Statements of Need and Fiscal Impact  
Attachment C - Hearing Officer's Report  
Attachment D - EQC Report, Agenda Item G, June 10, 1988

William Jasper:d  
AD3262  
229-5081  
August 26, 1988



ATTACHMENT A  
PROPOSED RULE REVISIONS

BOUNDARY DESIGNATIONS

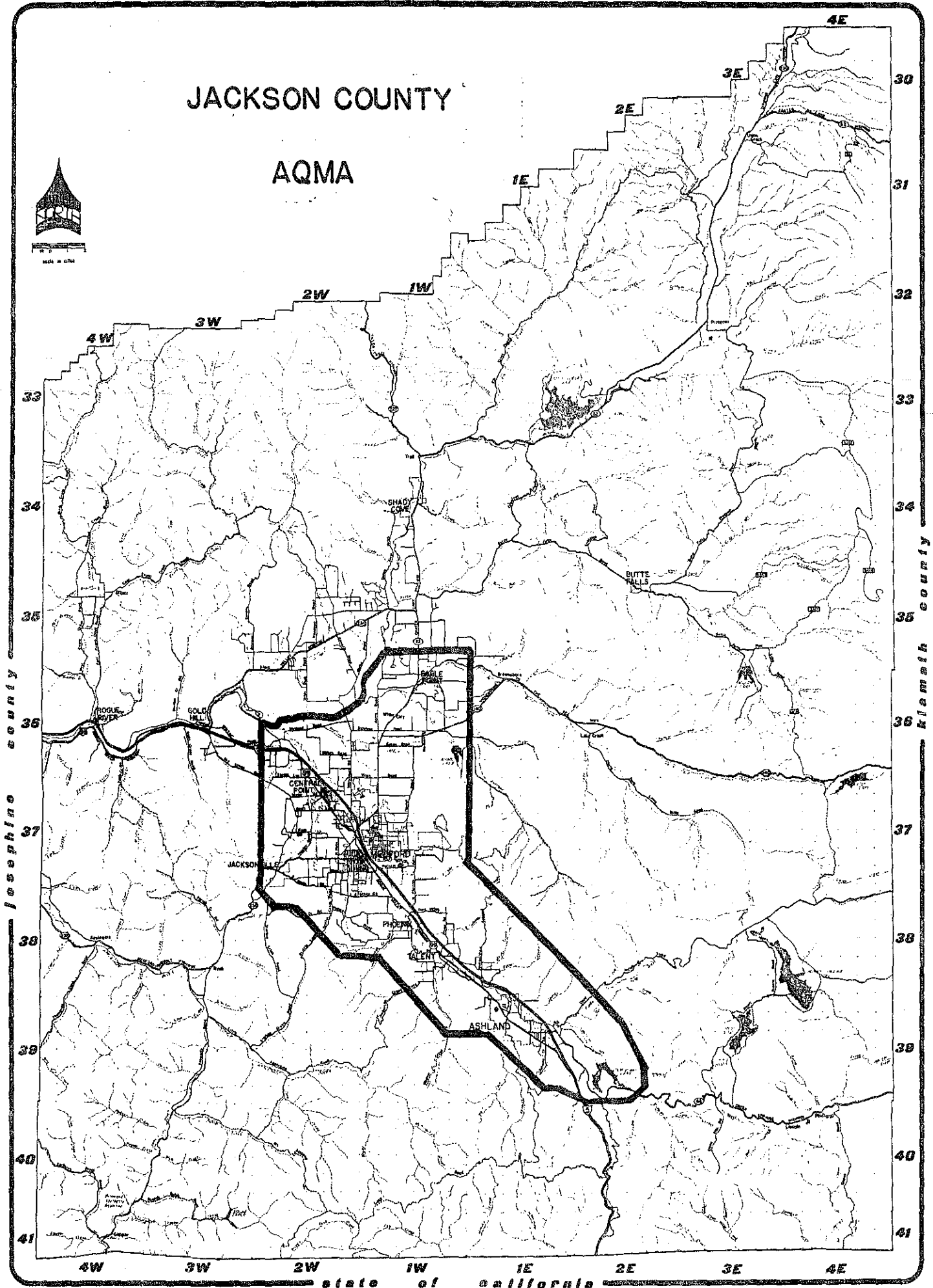
340-24-301

(1) In addition to the area specified in ORS 815.300 pursuant to ORS 468.397 the following geographical area, referred to as the Medford-Ashland AQMA, is designated as an area within which motor vehicles are subject to the requirement under ORS 815.300 to have a Certificate of Compliance issued pursuant to ORS 468.390 to be registered or have the registration of the vehicle renewed.

(2) As used in this paragraph, "Medford-Ashland Air Quality Maintenance Area" means the area of the state beginning at a point approximately one mile northeast of the town of Eagle Point, Jackson County, Oregon, at the northeast corner of section 36. T35S. R1W: thence south along the Willamette Meridian to the southeast corner of section 25. T37S. R1W: thence southeast along a line to the southeast corner of section 9. T39S. R2E: thence south-southeast to the corner of section 22. T39S. R2E: thence south to the southeast corner of section 27. T39S. R2E: thence southwest to the southeast corner of section 33. T39S. R2E: thence west to the southwest corner of section 31. T39S. R2E: thence northwest to the northwest corner of section 36. T39S. R1E: thence west to the southwest corner of section 26. ~~T29S~~T39S. R1E: thence northwest along a line to the southeast corner of section 7. T39S. R1E: thence west to the southwest corner of section 12. T39S. R1W: thence northwest along a line to the southwest corner of section 20. T39S. R1W: thence west to the southwest corner of section 24. T38S. R2W: thence northwest along a line to the southwest corner of section 4. T38S. R2W: thence west to the southwest

# JACKSON COUNTY

## AQMA



Light Duty Motor Vehicle Emission Control Test Method

340-24-310 (1) The vehicle emission inspector is to insure that the gas analytical system is properly calibrated prior to initiating a vehicle test.

(2) The Department approved vehicle information data form is to be completed at the time of the motor vehicle being inspected.

(3) Vehicles having coolant, oil, or fuel leaks or any other such defect that is unsafe to allow the emission test to be conducted shall be rejected from the testing area. The emission test shall not be conducted until the defects are eliminated.

(4) The vehicle transmission is to be placed in neutral gear or park position with the hand or parking brake engaged.

(5) All vehicle accessories are to be turned off.

(6) An inspection is to be made to insure that the motor vehicle is equipped with the required functioning motor vehicle pollution control system in accordance with the criteria of Section 340-24-320(3). Vehicles not meeting this criteria ~~[shall be rejected from the testing area without an emission test:~~

~~A report shall be supplied to the driver indicating the reason(s)~~

for rejection.], upon completion of the testing process, shall have a report issued to the driver stating all reasons for noncompliance.

(7) With the engine operating at idle speed, the sampling probe of the gas analytical system is to be inserted into the engine exhaust outlet.

(8) The steady state levels of the gases measured at idle speed by the gas analytical system shall be recorded. Except for diesel vehicles, the idle speed at which the gas measurements were made shall also be recorded.

(9) Except for diesel vehicles, the engine is to be accelerated with no external loading applied, to a speed of between 2,200 RPM and 2,700 RPM. The engine speed is to be maintained at a steady speed within this speed range for a 10 to 15 second period and then returned to an idle speed condition. In the case of a diesel vehicle, the engine is to be accelerated to an above idle speed. The engine speed is to be maintained at a steady above idle speed for a 10 to 15 second period and then returned to an idle speed condition. The values measured by the gas analytical system at the raised rpm speed shall be recorded.

(10) The steady state levels of the gases measured at idle speed by the gas analytical system shall be recorded. Except for diesel vehicles, the idle speed at which the gas measurements were made shall also be recorded.

(11) If the vehicle is equipped with a multiple exhaust system, then steps (7) through (10) are to be repeated on the other exhaust outlet(s).

The readings from the exhaust outlets are to be averaged into one reading for each gas measured for comparison to the standards of rule 340-24-330.

(12) If the vehicle does not comply with the standards specified in rule 340-24-330, and it is a 1981 newer Ford Motor Company vehicle, or if its a 1984 through 1986 Honda Prelude; the vehicle shall have the ignition turned off, be restarted, and have steps (8) through (11) repeated.

(13) If the vehicle is capable of being operated with both gasoline and gaseous fuels, then steps (7) through (10) are to be repeated so that emission test results are obtained for both fuels.

(14) If it is judged that the vehicle may be emitting propulsion exhaust noise in excess of the noise standards of rule 340-24-337, adopted pursuant to ORS 467.030, then a noise measurement is to be conducted and recorded while the engine is at the speed specified in Section (9) of this rule. A reading from each exhaust outlet shall be recorded at the raised engine speed. This provision for noise inspection shall apply only within inspection boundaries located within Clackamas, Multnomah and Washington Counties.

(15) If it is determined that the vehicle complies with the criteria of rule 340-24-320 and the standards of rule 340-24-330 and 340-24-337, then, following receipt of the required fees, the vehicle emission inspector shall issue the required certificates of compliance and inspection.

(16) The inspector shall affix any certificate of inspection issued to the lower left-hand side (normally the driver side) of the front windshield, being careful not to obscure the vehicle identification number nor to obstruct driver vision.

(17) No certificate of compliance or inspection shall be issued unless the vehicle complies with all requirements of these rules and those applicable provisions of ORS 468.360 to 468.405, 803.350, 815.295 to 815.325 and 467.030.

Light Duty Motor Vehicle Emission Control Test Criteria

340-24-320 (1) No vehicle emission control test shall be considered valid if the vehicle exhaust system leaks in such a manner as to dilute the exhaust gas being sampled by the gas analytical system. For the purpose of emission control tests conducted at state facilities, except for diesel vehicles, tests will not be considered valid if the exhaust gas is diluted to such an extent that the sum of the carbon monoxide and carbon dioxide concentrations recorded for the idle speed reading from an exhaust outlet is 8 percent or less, and on 1975 and newer vehicles with air injection systems 7 percent or less.

(2) No vehicle emission control test shall be considered valid if the engine idle speed either exceeds the manufacturer's idle speed specifications by over 200 RPM on 1968 and newer model vehicles, or exceeds 1,250 RPM for any pre-1968 model vehicle.

(3)(a) No vehicle emission control test for a 1975 or newer model vehicle shall be considered valid if any element of the following factory-installed motor vehicle pollution control systems have been disconnected, plugged, or otherwise made inoperative in violation of ORS 815.305(1), except that for 1975 through 1979 model year vehicles the inspection shall be limited to the Catalytic converter system and Fuel filler inlet restrictor listed below, and as noted in section (2) or as provided for by 40 CFR 85.1701-1709. Motor vehicle pollution control systems include, but are not necessarily limited to:



- (A) Positive crankcase ventilation (PVC) system;
  
- (B) Exhaust modifier system:
  - (i) Air injection reactor system;
  
  - (ii) Thermal reactor system;
  
  - (iii) Catalytic converter system.
  
- (C) Exhaust gas recirculation (EGR) systems;
  
- (D) Evaporative control system;
  
- (E) Spark timing system:
  - (i) Vacuum advance system;
  
  - (ii) Vacuum retard system.
  
- (F) Special emission control devices. Examples:
  - (i) Orifice spark advance control (OSAC);

- (ii) Speed control switch (SCS);
- (iii) Thermostatic air cleaner (TAC);
- (iv) Transmission controlled spark (PCS);
- (v) Throttle solenoid control (TSC);
- (vi) Fuel filler inlet restrictors;
- (vii) Oxygen Sensor;
- (viii) Emission Control Computer;

(b) The Department may provide alternative criteria for (a) and (b) of this section when it can be determined that the component or an acceptable alternative is unavailable. Relief may be granted on the basis of the nonavailability of the original part, replacement part, or comparable alternative solution.

(4) No vehicle emission control test for a ~~{1975}~~1980 or newer model vehicle shall be considered valid if any element of the factory-installed motor vehicle pollution control system has been modified or altered in such a manner so as to decrease its efficiency or effectiveness in the control of air pollution in violation of ORS 815.305(1), except as noted in section (2). For the purposes of this section, the following apply:

(a) The use of a non-original equipment aftermarket part (including a rebuilt part) as a replacement part is not considered to be a violation of ORS 815.305, if a reasonable basis exists for knowing that such use will not adversely effect emission control efficiency. The Department will maintain a listing of those parts which have been determined to adversely affect emission control efficiency.

(b) The use of a non-original equipment aftermarket part or system as an add-on, auxiliary, augmenting, or secondary part or system, is not considered to be a violation of ORS 483.825(2), if such a part or system is listed on the exemption list of "Modifications to Motor Vehicle Emission Control System Permitted Under California Vehicle Code Section 27156 granted by the Air Resources Board," or is on the list maintained by the U.S. Environmental Protection Agency of "Certified to EPA Standards," or has been determined after review of testing data by the Department that there is no decrease in the efficiency or effectiveness in the control of air pollution.

(c) Adjustments or alterations of a particular part or system parameter, if done for purposes of maintenance or repair according to the vehicle or engine manufacturer's instructions, are not considered violations of ORS 815.305.

(5) A ~~[1975]~~1980 and newer model motor vehicle which has been converted to operate on gaseous fuels shall not be considered in violation of ORS 815.305 when elements of the factory-installed motor vehicle air pollution control system are disconnected for the purpose of conversion to gaseous fuel as authorized by ORS 815.305.

(6) The following applies:

~~(a) [to 1975 through 1979 motor vehicles: - When a motor vehicle is equipped with other than the original engine and the factory installed vehicle pollution control systems, it shall be classified by the model year and manufacture make of the non-original engine and its factory installed motor vehicle pollution control systems; except that when the non-original engine is older than the motor vehicle any requirement for evaporative control system and fuel filler inlet restrictor and catalytic converter shall be based on the model year of the vehicle chassis: - Diesel (compression ignition) engine powered vehicles changed to gasoline (spark ignition) engine power shall be required to maintain that model year's equivalent or better factory pollution control system; including, but not limited to; catalytic converters; unleaded fuel requirements; and computer controls:]~~ to vehicles older than the 1980 model year. If these vehicles are now equipped with other than the original engine and factory installed

vehicle pollution control systems, the vehicle for the purposes of determining test standards, shall be classified by the vehicle's original model year classification and current fuel system.

(b) to 1980 and newer motor vehicles. These motor vehicles shall be classified by the model year and make of the vehicle as designated by the original chassis, engine, and its factory-installed motor vehicle pollution control systems, or equivalent. This in no way prohibits the vehicle owner from upgrading the engine and emission control system to a more recent model year category including a diesel (compression ignition) power plant providing the equivalent factory-installed pollution control system is maintained.

Heavy Duty Gasoline Motor Vehicle Emission Control Test Criteria

340-24-325 (1) No vehicle emission control test shall be considered valid if the vehicle exhaust system leaks in such a manner as to dilute the exhaust gas being sampled by the gas analytical system. For the purpose of emission control tests conducted at state facilities, tests will not be considered valid if the exhaust gas is diluted to such an extent that the sum of the carbon monoxide and carbon dioxide concentrations recorded for the idle speed reading from an exhaust outlet is 8 percent or less.

(2) No vehicle emission control test shall be considered valid if the engine idle speed either exceeds the manufacturer's idle speed specifications by over 200 RPM on 1970 and newer model vehicles, or exceeds 1000 RPM for any age model vehicle.

(3)(a) No vehicle emission control test for a [~~1975~~1980 or newer model vehicle shall be considered valid if any element of the following factory-installed motor vehicle pollution control systems have been disconnected, plugged, or otherwise made inoperative in violation of ORS 815.305(1) except as noted in section (2):

- (A) Positive crankcase ventilation;
- (B) Exhaust modifier system. Examples:
  - (i) Air injection system;

- (ii) Thermal reactor system;
  
- (iii) Catalytic converter system.
  
- (C) Exhaust gas recirculation (EGR) systems;
  
- (D) Evaporative control system;
  
- (E) Spark timing system. Examples:
  - (i) Vacuum advance system;
  
  - (ii) Vacuum retard system.
  
- (F) Special emission control devices. Examples:
  - (i) Orifice spark advance control (OSAC);
  
  - (ii) Speed control switch (SCS);
  
  - (iii) Thermostatic air cleaner (TAC);

(iv) Transmission controlled spark (TCS);

(v) Throttle solenoid control (TSC);

(vi) Fuel filler inlet restrictor.

(b) The Department may provide alternative criteria for (a) and (b) of this section when it can be determined that the component or an acceptable alternative is unavailable. Relief may be granted on the basis of nonavailability of the original part, replacement part, or comparable alternative solution.

(4) No vehicle emission control test conducted for a ~~1975~~1980 or newer model vehicle shall be considered valid if any element of the factory-installed motor vehicle pollution control system has been modified or altered in such a manner so as to decrease its efficiency or effectiveness in the control of air pollution in violation of ORS 815.305 except as noted in section (2). For the purposes of this section, the following apply;

(a) The use of a non-original equipment aftermarket part (including a rebuilt part) as a replacement part is not considered to be a violation of ORS 815.305, if a reasonable basis exists for knowing that such use will not adversely effect emission control efficiency. The Department will maintain a listing of those parts which have been determined to adversely affect emission control efficiency.



(b) The use of a non-original equipment aftermarket part or system as an add-on, auxiliary, augmenting, or secondary part or system, is not considered to be a violation of ORS 483.825(2), if such part or system is listed on the exemption list maintained by the Department.

(c) Adjustments or alterations of a particular part or system parameter, if done for purposes of maintenance or repair according to the vehicle or engine manufacturer's instructions, are not considered violations of ORS 815.305.

(5) A ~~{1975}~~1980 or newer model motor vehicle which has been converted to operate on gaseous fuels shall not be considered in violation of ORS 815.305 when elements of the factory-installed motor vehicle air pollution control system are disconnected for the purpose of conversion to gaseous fuel as authorized by ORS 815.305.

~~{(6) For the purposes of these rules, a 1975 or newer motor vehicle with an exchange engine shall be classified by the model year and manufacturer make of the exchange engine, except that any requirement for evaporative control systems shall be based upon the model year of the vehicle chassis.}~~

LIGHT DUTY MOTOR VEHICLE EMISSION CONTROL CUTPOINTS OR STANDARDS

340-24-330

- (1) Light Duty Diesel Motor Vehicle Emission Control Cutpoints  
All: 1.0% CO No HC Check
- (2) Light Duty Gasoline Motor Vehicle Emission Control Cutpoints  
Two Stroke Cycle  
All: 6.5% CO No HC Check
- (3) Light Duty Gasoline Motor Vehicle Emission Control Cutpoints  
Four Stroke Cycle - Passenger Cars

Pre-1968 Model Year

4 or less cylinders		
All:	6.5% CO	1550 ppm HC
More than 4 cylinders		
All:	6.0% CO	1250 ppm HC

1968 - 1969 Model Year

4 or less cylinders		
All:	5.5% CO	850 ppm HC
More than 4 cylinders		
All:	5.0% CO	650 ppm HC

1970 - 1971 Model Year

All:	4.5% CO	550 ppm HC
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1972 - 1974 Model Year

[General Standards]

4 or less cylinders		
All:	4.0% CO	450 ppm HC
More than 4 cylinders		
All:	3.0% CO	350 ppm HC

[Specific Standards]

-----BL-MG-----	4.5% CO	450 ppm HC
-----BL-Other-----	4.5% CO	450 ppm HC
-----Golt,-Dodge-----	5.5% CO	450 ppm HC
-----Grieket,-Plymouth--		
-----Single-Cab-Only-----	7.5% CO	450 ppm HC
-----Fiat-----	4.5% CO	450 ppm HC
-----Honda-Automobile-1972-----	5.5% CO	450 ppm HC
-----Jensen-Healy-----	5.0% CO	350 ppm HC
-----Mazda--Piston-Engine-----	4.5% CO	450 ppm HC
-----Porsche-914-1974-----	5.5% CO	450 ppm HC
-----Volkswagen--Type-4-----	4.5% CO	450 ppm HC

1975 - 1980 Model Year

Catalyst Equipped

All: 0.5% CO 175 ppm HC

Non-Catalyst Equipped

All: 2.0% CO 250 ppm HC

1981 and Newer Model Year

All: At idle 0.5% CO 175 ppm HC

At 2500 rpm 0.5% CO 175 ppm HC

(4) Light Duty Gasoline Motor Vehicle Emission Control Cut Points -  
Light Duty Trucks

(a) 6000 GVWR or less

Pre-1968 Model Year

4 or less cylinders

All: 6.5% CO 1550 ppm HC

More than 4 cylinders

All: 6.5% CO 1250 ppm HC

1968 - 1969 Model Year

4 or less cylinders

All: 5.5% CO 850 ppm HC

More than 4 cylinders

All: 5.0% CO 650 ppm HC

1970 - 1971 Model Year

All: 4.5% CO 550 ppm HC

1972 - 1974 Model Year

4 or less cylinders

All: 4.0% CO 450 ppm HC

More than 4 cylinders

All: 3.0% CO 350 ppm HC

1975 - 1980 Model Year

Catalyst Equipped

All: 0.5% CO 175 ppm HC

Non-Catalyst Equipped

All: 2.0% CO 250 ppm HC

1981 and Newer Model Year

All: At idle 0.5% CO 175 ppm HC

At 2500 rpm 0.5% CO 175 ppm HC

(b) 6001 to 8500 GVWR

Pre-1968 Model Year

All: 6.0% CO 1250 ppm HC

<u>1968 - 1969 Model Year</u>		
All:	5.0% CO	650 ppm HC
<u>1970 - 1971 Model Year</u>		
All:	4.5% CO	550 ppm HC
<u>1972 - 1974 Model Year</u>		
All:	3.0% CO	350 ppm HC
<u>1975 - 1978 Model Year</u>		
All:	2.0% CO	250 ppm HC
<u>1979 - 1980 Model Year</u>		
Catalyst Equipped		
All:	0.5% CO	175 ppm HC
Non-Catalyst Equipped		
All:	2.0% CO	250 ppm HC
<u>1981 and Newer</u>		
All: At idle	0.5% CO	175 ppm HC
At 2500 rpm	0.5% CO	175 ppm HC

- (5) An enforcement tolerance of 0.5% carbon monoxide and 50 ppm hydrocarbon will be added to the above cutpoints.
- (6) There shall be no visible emission during the steady-state unloaded and raised rpm engine idle portion of the emission test from either the vehicle's exhaust system or the engine crankcase. In the case of diesel engines and two-stroke cycle engines, the allowable visible emission shall be no greater than 20% opacity.
- (7) The Director may establish specific separate standards, differing from those listed in subsections (1), (2), (3), (4), (5) and (6) for vehicle classes which are determined to present prohibitive inspection problems using the listed standards.

GAS ANALYTICAL SYSTEM LICENSING CRITERIA

340-24-350 (1) To be licensed, an exhaust gas analyzer must:

(a) Conform substantially with either:

(A) All specifications contained in the document "Specifications for Exhaust Gas Analyzer System Including Engine Tachometers" dated July 9, 1974, prepared by the Department and on file in the office of the Vehicle Inspection Program of the Department,

(B) The technical specifications contained in the document "Performance Criteria, Design Guidelines, and Accreditation Procedures for Hydrocarbon (HC) and Carbon Monoxide (CO) Analyzers Required in California Official Motor Vehicle Pollution Control Stations," issued by the Bureau of California, and on file in the office of the Vehicle Inspection Program of the Department. Evidence that an instrument model is approved by the California Bureau of Automotive Repair will suffice to show conformance with this technical specification, or

(C) If a gas analytical system is purchased after January 1, 1982, the technical specifications contained in the document "The California Bureau of Automotive Repair Exhaust Gas Analyzer Specification - 1979" on file in the office of the Vehicle Inspection Program of the Department.

(D) Notwithstanding any of the above certifications, no license shall

be issued or renewed for any battery powered exhaust gas analyzer after December 31, 1984.

(E) Notwithstanding any of the above certifications, no license shall be issued or renewed for any exhaust gas analyzer which does not conform to subsection (C) after December 31, 1989.

(b) Be owned by the licensed motor vehicle fleet operation or the Department.

(c) Be span gas calibrated and leak checked within a 14 calendar day period prior to the test date by the licensed inspector. The calibration and leak check is to be performed following the analyzer manufacturer's specified procedures. The manufacturer's operation manual and calibration and leak check procedures are defined as an integral part of the analyzer, and shall be kept with the analyzer at all times. The date of calibration and leak check and the inspector's initials are to be recorded on a form provided by the Department for verification prior to any day of testing for the purposes of issuing a Certificate of Compliance. The analyzer shall be mechanically checked and corrected for zero and span drift once a day prior to performing the day's first vehicle exhaust gas inspection.

(2) Application for a license must be completed on a form provided by the Department.

(3) Each license issued for an exhaust gas analyzer shall be valid through December 31 of each year, unless returned to the Department or revoked.

(4) A license for an exhaust gas analyzer system shall be renewed upon submission of a statement by the motor vehicle fleet operation that all conditions pertaining to the original license issuance are still valid and that the unit has been gas calibrated and its proper operation verified within the last 30 days by a vehicle emission inspector in their employment.

(5) Grounds for revocation of a license issued for an exhaust gas analyzer system include the following:

(a) The unit has been altered, damaged, or modified so as to no longer conform with the specifications of subsection (1)(a) of this rule.

(b) The unit is no longer owned by the motor vehicle fleet operation to which the license was issued.

(c) The Department verifies that a Certificate of Compliance has been issued to a vehicle which has been emission tested by an analyzer that has not met the requirements of subsection (1)(c) of this section.

(6) No license shall be transferable.

(7) No license shall be issued until all requirements of section (1) of this section are fulfilled and required fees paid.

ATTACHMENT B  
NOTICE OF PUBLIC HEARING  
and  
STATEMENTS OF NEED  
and  
FISCAL IMPACT



*Oregon Department of Environmental Quality*

# A CHANCE TO COMMENT ON...

## NOTICE OF PUBLIC HEARING

Date Prepared: May 25, 1988  
Comments Due: July 29, 1988

- WHO IS AFFECTED:** All Motor Vehicle owners in areas that require vehicle inspection, and motor vehicle fleets licensed by the Department for self inspection.
- WHAT IS PROPOSED:** DEQ is conducting public hearing to receive comments on changes to the operating rules for the inspection program.
- WHAT ARE THE HIGHLIGHTS:**
- (1) Corrects a typographical error in the legal description of the Medford-Ashland Air Quality Maintenance Area;
  - (2) Makes the reports given to customers at vehicle emission inspection stations more complete;
  - (3) Eases the criteria for examining emission control equipment, and the engine exchange policy for pre-1980 model year motor vehicles, and combines emission tailpipe standards for certain 1970-1974 model year vehicles into generic standards; and
  - (4) decertifies a portion of the existing exhaust gas analyzers used by the licensed fleets.

**HOW TO COMMENT:** Written or oral comments should be presented to DEQ by July 29, 1988. The full copy of the proposed rule changes are available from the Vehicle Inspection Program, 811 S.W. Sixth Avenue, Portland, Oregon, 97204-1334, phone (503) 229-6235.

Public hearings are scheduled as follows:

Tues., July 26, 1988 - 6 p.m.  
Jackson County Courthouse  
Auditorium  
10 South Oakdale  
Medford, Oregon

Thurs., July 28, 1988 - 10 a.m.  
Department of Environ. Quality  
Headquarters  
Conference Room 4  
811 SW Sixth Avenue  
Portland, Oregon

Thurs., July 28, 1988 - 6 p.m.  
City of Beaverton/Oper. Center  
Hoffman Room  
9600 SW Allen Blvd.  
Beaverton, Oregon

**WHAT IS THE NEXT STEP:**

The hearing officers report will be presented to the Environmental quality commission at a regularly scheduled meeting. The commission may choose to adopt the proposed rule changes, different changes, or not act. These rules if adopted will be submitted to the US Environmental Protection Agency as part of the State Clean Air Act Implementation Plan update.

AD2747.A



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

11/1/86

### FOR FURTHER INFORMATION:

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

## Statement of Need for Rulemaking

Pursuant to ORS 183.357(7), this statement provides information on the Environmental Quality Commission's intended action to adopt a rule.

### (1) Legal Authority

Legal authority for this actions contained in ORS 468.370 through 468.405.

### (2) Need for the Rule

The proposed rule (1) corrects a typographical error in the legal description of the Medford-Ashland Air Quality Maintenance Area; (2) Makes the reports given to customers at vehicle emission inspection stations more compare (3) Eases the criteria for examining emission control equipment, eases the engine exchange policy used by the inspection program, and combines emission tailpipe standards for certain 1970-1974 model year vehicles into generic standards; and (4) decertified a portion of the existing exhaust gas analyzers used by the licensed fleets.

### (3) Principal Documents Relied upon in this Rule Making

Vehicle Inspection Program rules, OAR 340-24-300 through 24-250, Equipment Tool Institute Model Specifications, internal memorandum from inspection staff on operational improvements and suggestions, and letters and comments from the general public. Letters from the public are contained in Attachment C of the EQC authorization report. Other documents are on file at the Department office.

## Land Use Compatibility Statement

The proposed rule does not appear to affect land use.

## Fiscal and Economic Impact

This proposal will directly impact and affect all motor vehicle owners, including private individuals, small businesses, large businesses, all DEQ licensed fleet self inspection operations, and government vehicle operations. Owners of older vehicles will generally benefit financially by the easing of the equipment inspection portion of the test, but they will still have general cost associated with vehicle maintenance. Motor vehicle fleets licensed for self inspection will be significantly impacted. About 60% of the test equipment used by self inspecting fleets will be decertified after almost 15 years use. Cost for replacement analyzers will be \$7,000-10,000 each.

ATTACHMENT C  
HEARING OFFICER REPORT

MEMORANDUM

To: Environmental Quality Commission

From: Hearings Officer

Subject: Public Hearing on Proposed Adoption of Amendments to the Vehicle Inspection Operating Rules and Test Procedure, OAR 340-24-300 Through 24-350.

Background

Public hearings were held during the last week of July, 1988 in both the Medford and Portland areas for the purposes of receiving comments on the proposed rule changes. The following summarizes the comments received at these meetings.

July 26, 1988 -- Medford, Oregon 6:00 p.m.

A public hearing was held at the Jackson County Courthouse Auditorium in Medford, Oregon at 6:00 pm on July 26, 1988. There were four people plus DEQ staff and two TV reporters at the hearing.

Comments by Mr. Charles Kleinhaus of Medford question whether governmental vehicles comply with the testing process. Mr. Kleinhaus stated that all vehicles should go through the inspection stations.

Mr. Jack Fox of Medford was concerned with the air quality improvements attributable to the inspection program, and wanted additional information on air quality benefits achieved in the Rogue Valley. Neither Mr. Kleinhaus or Mr. Fox made any direct comment on the proposed rule changes. The meeting was adjourned to an informal question and answer period.

July 28, 1988 -- Portland, Oregon 10:00 a.m.

A second public hearing was held in the Department's main conference room. Five people, besides Department staff, were present.

Paul Stover, Northwest Natural Gas, indicated that the decertification of the older series of exhaust gas analyzer imposes a hardship on Northwest Gas and will impose extra costs on their operation. He indicated that the year and a half lead time provided in the proposed rule was an adequate lead time, but objected to the need to change. He indicated that a large part of their fleet is composed of older vehicles, and that the older style of analyzer is still satisfactory for testing these older trucks. Mr. Stover stated that equipment improvement should be delayed until it can be incorporated into electronic recording of the test information, when the final plan is ready for implementation.

Donald Allison, Hillsboro Union High School District, discussed several items, including fleet size and the licensed fleet decertification proposal. Mr. Allison stated that it was his opinion that more fleets should be qualified to self-inspect, and it shouldn't be our concern as to who does the inspections as long as they are done. (However, he supports keeping automotive retailers from being licensed for self inspection.) Mr. Allison stated that it was his opinion that the purpose of decertifying the exhaust gas analyzers was not to put new technology into place, but to rather limit the number of licensed fleets because of the cost burden for the new equipment. Mr. Allison stated that DEQ should do more to monitor its licensed fleets through the development of improved checks and balances. Don Witherow, Portland, Oregon, recently relocated from Idaho, supports the staff recommendation for changing the engine exchange policy. That policy changes as a result of the easing of the tampering part of the inspection procedure.

Mary Witherow, Portland, Oregon, wants to see increased enforcement against vehicles that smoke and operate on the public streets.

Dolores Backus, Reynolds School District, opposes the decertification of the BAR-74 analyzers. Her concerns are based upon the cost of replacement and lack of documentation of need. Ms. Backus' opinion is that most of the fleets that have the older equipment are public agencies. In order to improve the equipment it will need to be funded from public dollars, and school districts have a terrible time getting money to do proper maintenance. Ms. Backus believes that an alternative should be put forward that DEQ increase its surveillance of the older analyzers, documenting problems, and requiring repairs.

July 28, 1988 -- Beaverton, Oregon 6:00 p.m.

The final public hearing was held at the City of Beaverton, Operations Center, Hoffman Room. Three people attended this meeting.

Robert Perry, S&P automotive Repair, Portland, supports the proposed change in inspection procedure that would ease the tampering criteria for 1975-1979 model year vehicles.

Harold Kurlan, S&P Automotive Repair, supports the easing of the inspection criteria for the 1975-1979 model year vehicles. Mr. Kurlan stated that the firm he works for has a great deal of problems obtaining the very small plastic parts that often make the bigger emission control components function correctly. As examples he cited problems associated with the repair of a Ford pickup that needed a new vacuum amplifier for the EGR system and a Chrysler with a "Lean Burn" engine system.

EQC Agenda Item P  
September 9, 1988  
Page 3

#### Written Testimony

Written testimony was received from Eugene Tierney, USEPA Ann Arbor, Michigan. A copy of the memorandum is attached. In summary Mr. Tierney noted some problems with the original estimates provided DEQ in the letter from Deanna Hughes, dated May 12, 1988 and part of the original authorization request. Mr. Tierney supplied corrected estimates for the easing of the inspection procedure for the Portland area and noted that these estimates do not apply directly to the I/M operation in Medford. Mr. Tierney concluded that this change seems to be a reasonable measure that will not reduce emission reduction benefits substantially. He notes that such would not be the case if the DEQ has recommended dropping the catalyst inspection from the test.

William Jasper

Attachments: EPA Memorandum, Eugene Tierney, dated July 29, 1988

William Jasper:d  
AD3263  
229-5081  
August 15, 1988



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
ANN ARBOR, MICHIGAN 48103

RECEIVED  
JUL 29 1988

OFFICE OF  
AIR AND RADIATION

AIR QUALITY CONTROL

JUL 29 1988

MEMORANDUM

SUBJECT: Impact of Dropping Selected Anti-Tampering Inspections from the Oregon I/M Program

FROM: Eugene J. Tierney, Project Manager  
State and Regional Support Group *Eugene Tierney*

TO: Mike Lidgard, I/M Contact  
Air Programs Development Section, Region 10

In response to your request, we have analyzed the impact of changing the anti-tampering program in Oregon. I reviewed the letter to William Jasper from Deanna Hughes, dated May 12, 1988. There were some errors in the modeling done for that letter and some assumptions implicit in the work that were not made clear. We have re-run the analysis and would like to provide you with the emission factors, a discussion of the limitations of the analysis, and our best guess of the impact on emission reductions from the program change.

The analysis we conducted looks at the impact of dropping the biennial underhood tampering checks on 1975-1979 vehicles. As I understand, Oregon will continue catalyst checks on these vehicles. The other assumptions we made are: program start of 1975, stringency of 35%, all model years of LDVs and LDTs to 8500 lbs. inspected, and two speed testing of 1981 and later vehicles using the 207(b) outpoints. A local VMT mix was used but all other assumptions were MOBILE3 default. The latter is one factor that limits the accuracy of this analysis. If the national default registration distribution underestimates the number of 1975-1979 vehicles in Oregon, then impacts calculated in this analysis would be underestimated, as well. The table that follows shows the emission factors and the reductions associated with the change taking effect January 1989.

The MOBILE model does not easily take into account changes in program design mid-stream. Part of this is a reflection of our lack of information on what actually happens after such a change. In the case of Oregon, what can we expect to happen to underhood tampering rates after these checks are dropped? Will they return to levels comparable to the national average tampering rates for these components in I/M areas? Or, will there be a residual effect from the existing program, and if so how much? These are questions we simply cannot answer and the

model does not handle. Therefore, the best we can do is pick an approach with the understanding that the assumption may or may not reflect actual events in the program.

OREGON INSPECTION PROGRAM

1992 Highway Mobile Source Emission Factors

<u>CASE</u>	<u>NMHC</u>		<u>CO</u>		<u>NOx</u>
	<u>g/m</u>	<u>%</u>	<u>g/m</u>	<u>%</u>	<u>g/m</u>
Base (NO Program)	2.61		20.82		2.53
Current Program	2.06		13.15		2.45
Reduction	.55	21.1	7.67	36.8	.08
Proposed Program	2.07		13.19		2.45
Reduction	.54	20.7	7.63	36.7	.08

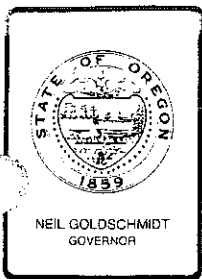
The approach we chose was to look at the difference in emission reductions from the program with and without underhood inspections of 1975-1979 vehicles. The difference in emission factors between these two scenarios represent the benefit of the underhood inspections on 1975-1979 vehicles. This difference was then subtracted from the current program emission factors to yield the proposed program emission factors, as shown in the table. The basic assumption implicit in this approach is that the underhood tampering rates for 1975-1979 vehicles will return to the national default level for these vehicles by 1992. In general, we are planning on assuming for post-1987 SIP purposes that this return to default rates takes four years after a model year passes out of moving model year window.

As you can see from the table, the impact of the proposed change is not excessive. Oregon officials cite increasing difficulty obtaining parts as the basis for eliminating the underhood inspections on older vehicles, as well as improving lane throughput. Given the low tampering rates in Oregon, this seems to be a reasonable measure that will not reduce emission reduction benefits substantially. It should be noted, however, that dropping catalyst checks for pre-1980 vehicles would have a far more substantial impact on the program benefits, something we would definitely discourage. Finally, MOBILE3 does not calculate a NOx effect from the EGR tampering check, thus no change is evident although in reality one would occur.

I hope this clarifies the impact of the proposed changes in the Oregon inspection program. Feel free to contact me if you wish to discuss this further. I recommend that the State be provided with the corrected emission factors. Also, this analysis does not apply to Medford. A separate analysis would be necessary for that part of the program.



ATTACHMENT D



## Environmental Quality Commission

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

### EXECUTIVE SUMMARY

To: Environmental Quality Commission

From: Fred Hansen, Director *Ful*

Subject: Agenda Item G, June 10, 1988, EOC Meeting. Executive Summary of Staff Report Authorization for Public Hearing on Vehicle Inspection Program Operating Rules, Test Procedure, and Licensed Exhaust Analyzers. OAR 340-24-300 through -350.

Vehicle Inspection Program operating rules are reviewed periodically. Review is complete, and a number of changes are proposed. As a first step in implementing these changes, the Department is requesting authorization to conduct a series of public hearings. The purpose of the hearings is to gather public input on the suggested changes to the operating rules for the Vehicle Inspection Program.

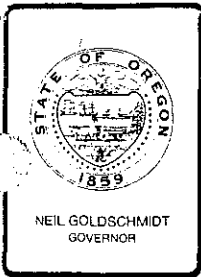
Some of the items are more housekeeping in nature, such as the correction of the legal description of the boundary of the Medford-Ashland AQMA. Other changes are more substantive. These include a proposal to ease the tampering part of the inspection for 1975-1979 model year vehicles. Tampering is the "buzz word" used to describe the inspection for emission control equipment. If eased, much of the inspection for emission control equipment for these vehicles would be omitted from the test procedure. This action would result in an approximate 5% increase in overall vehicle pass rate. EPA has indicated that this action will not significantly impact air quality.

The engine exchange policy would be simplified to be consistent with this action. Separate standards for certain makes of vehicles with very little marked penetration are being combined into the overall base standards for the 1972-1974 model year group. This should not change the pass rates for these vehicles affected. However, current regulations provide an exemption procedure from the base standard, should that be necessary.

The other items under discussion concern those fleets licensed for self inspection by the Department. The Commission is being asked to reaffirm some of the aspects of the licensed fleet policy. Specifically, the policies to be reaffirmed deal with the number of vehicles established in the rule which are necessary to qualify as a licensed fleet and the policy that licensed fleets not be allowed to certify any vehicle that is being held for resale. (Licensed fleets need 100 vehicles, 50 vehicles for government operations.)

The final item, and potentially most significant as it applies to the licensed fleets, is the proposed decertification of the older series of exhaust gas analyzers used by the licensed fleets. The staff is recommending that the oldest series, BAR-74, be decertified as of January 1, 1990. At this time, the Department wants to work with the licensed fleets and develop a new inspection system, utilizing new computer controlled testers. It is planned that the new series of testers would be available and operational in the licensed fleets by January 1, 1993.

AK580 (5/88)



## Environmental Quality Commission

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

### MEMORANDUM

**To:** Environmental Quality Commission  
**From:** Director  
**Subject:** Agenda Item G, June 10, 1988, EQC Meeting

REQUEST FOR AUTHORIZATION TO CONDUCT PUBLIC HEARING ON  
VEHICLE INSPECTION PROGRAM OPERATING RULES, TEST PROCEDURE,  
AND LICENSED EXHAUST GAS ANALYZERS, OAR 340-24-300 THROUGH  
24-350

### BACKGROUND

It has been over two years since the Vehicle Inspection Program rule changes have been presented to the Commission for review and consideration. The rules had been presented to the Commission on an annual basis, but as the program matured, the need for the annual review decreased. This year, there are several items up for consideration. Some of the rule proposals are due in part to changing times, necessitating review of internal program operations to meet these changes. Others being proposed are part of a bigger plan that will involve the automation of the inspection process and the information handling. As elements of that plan evolve, additional operational changes, reflected by rule revisions, will need to be presented to the Commission for their review.

The staff is proposing several changes in the operating rules. Also incorporated in the discussion are suggestions made from several individuals. The changes discussed are as follows:

- OAR 340-24-301 -- Boundary designation for Medford-Ashland AQMA
- OAR 340-24-310 -- Procedural changes to the test method section, specifying how failure reports are made to the customer.
- OAR 340-24-320&325 -- Modifications to the test criteria section that will affect the tampering inspection for older vehicles and the engine exchange policy for older vehicles.
- OAR 340-24-330&335 -- Simplification of emission test standards for older vehicles.
- OAR 340-24-340&350 -- Discussion of licensed fleet program criteria and the decertification of "BAR-74" series analyzers. Effective date for decertification of these analyzers would be Jan. 1, 1990.

The proposed rule changes are contained in Attachment A. These proposed rules and their effects are described below. The changes range from housekeeping changes and corrections, to significant changes in policy that will affect owners of vehicles about 10 years old. The Commission is also being asked to reaffirm other aspects of rule and policy, specifically as it

relates to the fleet inspection program. The draft notice of public hearing and Statement of Need and Fiscal Impact are attached as Attachment B.

#### ALTERNATIVES AND EVALUATION

OAR 340-24-301 When the legal description of the boundaries for the Medford-Ashland AQMA were adopted, there was an inadvertent typographical error incorporated. The first change proposed is the correction of this error. Legal counsel has indicated to staff that the error was not substantive, especially in light of the fact, that a map had also been adopted as part of the rule. The error involved the specification of township 29 south (T29S) Douglas County, in lieu of township 39 south (T39S) Jackson County, in only one phrase of the legal description. This action does not affect the boundary as shown in the map, Exhibit 1 of the rule.

OAR 340-24-310 This section covers the test procedure used in the inspection lanes. The staff is proposing that paragraph 6 of section 310 be modified to indicate that the entire testing procedure be completed, rather than stopping the test at the first observable failure point. This will allow more information to be given to the customer. Doing such, will create some difficulties, particularly with those vehicles that are passing one mode of the test, but are being rejected for another cause. It is believed that the extra effort that will be required on the part of the inspection staff, will be worth the extra information that is given to the customer.

It is intended that the complete emission reading and all other items observed during the inspection would be reported.

OAR 340-24-320 & 325 This section of the rules establishes the inspection criteria. This section contains the directions for what rpm range is allowed, how the inspection for emission control equipment is to be conducted, and how to attribute or characterize vehicles that have been modified substantially from original manufacture. Examples would include how to categorize vehicles that have had an engine exchange for the purpose of re-powering; or been reconstructed or remanufactured after having been destroyed. Or other necessary guidelines for inspection personnel or individuals on the appropriateness of certain actions. Less than 5% of all vehicle tests need the direction provided, yet this part of the rule causes a lot of consternation.

To make the rule simple and understandable, the staff is proposing the following changes.

(1) A change in OAR 340-24-320(3) and 24-325(3) to eliminate most of the tampering portion of the inspection on 1975 through 1979 vehicles. Wording is proposed that for this model year group of vehicles, only the unleaded fuel restrictor and catalyst check need be made. The tampering check would remain unchanged for 1980 and newer vehicles.

The reason that the staff is proposing easing the tampering check on this older class of vehicles is in response to a growing problem of parts availability and the reluctance and refusal of the vehicle owners to expend

money for emission related repairs on vehicles over 10 years old. The older group of vehicles has the highest failure rate of all the vehicle categories tested. Under the proposed procedural change a 1975-1979 vehicle would not be failed for the sole reason of having tampered emission control equipment. The tailpipe emission standards (or cut points) for these vehicles would not change.

The air quality impact of this action has been modeled. Based upon the results of the Mobile 3 analysis, this modification would produce negligible (2%) change in non-methane hydrocarbon reductions attributable to the program. Similarly, there would be only a (1%) reduction of CO and no reduction in NO<sub>x</sub> emissions. A copy of the correspondence from EPA on this subject is attached with other correspondence in Attachment C. The tailpipe emission standards for these vehicles will not change.

(2) OAR 340-24-320(4) and (5) and 24-325(4) and (5) would be changed to be consistent with the change in paragraph (3).

(3) The engine exchange policy OAR 340-24-320(6) and 24-325(6) would be rewritten so that the Department would not make a change of model year determination in emission tailpipe standard, if the vehicle has a different engine. The effect of this change is illustrated by the following example. Under current rule, a vehicle owner could install a newer 1983 engine in their 1973 passenger car. Under current rule the 1973 car is judged against 1983 standards. Under the proposal it would be judged against 1973 values, regardless of the model year of the power plant.

A different approach for engine exchanges has been put forward by Mr. John Jeleneo of Crash Parts International, Inc. Attachment C. He had proposed a more complex mechanism for dealing with a smaller part of vehicle repowering - used engines imported from Japan. In the past, the staff has warned consumers to use caution when purchasing any used product. While the proposal does not change statute ORS 815.305, which still makes tampering with emission control equipment a Class A Misdemeanor, it removes the inspection staff from making a "tampering" decision on the older cars. By allowing the vehicle owner more latitude for engine exchange on these older vehicles, the Department wishes to remove the source of "picky this and that" that has been the norm for this aspect of the rule since the program's start.

The engine exchange update, would be consistent with the emission equipment inspection change proposed. The effect of this change would be that for 1979 and older vehicles, the model year is the absolute governing criteria for the tailpipe emission standard, regardless of modifications made by the vehicle owner. At the same time, the stricter engine exchange guidelines in effect for 1980 and newer vehicles would remain.

OAR 340-24-330 & 335 This section covers the inspection program test standards. The staff is proposing that the tailpipe numbers for the older vehicles be combined into simpler categories. In the past, there were complex arrays of standards. It was appropriate since these vehicles were new and constituted a majority of the vehicles subject to testing. Such is

not now the case. The pre-1975 vehicles subject to the inspection account for about 23% of the tests.

There are also ten specific year groups/makes of vehicles that have separate inspection standards. These vehicles represent less than 2,000 vehicles out of the more than 600,000 vehicles subject to the inspection test. Without computerized testing control, the separate standards are more often than not overlooked, and the general standards applied. It is proposed to eliminate these specific categories and combine them into the general category. If there is a problem with specific vehicle, current administrative oversight encompassed in both sections 24-320/5 and 24-330/5 can be utilized to handle individual instances for these vehicles.

OAR 340-24-340 This section deals with the criteria for the licensing of fleets for self inspection. The Department has received a request that the fleet size limit of 100 vehicles be reviewed, or that an exemption procedure be developed. In letters, Mr. Dennis Marsh requested that the fleet size requirement currently in rule be reduced to a smaller number so that his firm might qualify as a licensed fleet for self inspection. This correspondence is also in Attachment C.

"Motor Vehicle Fleet Operation" is defined in administrative rule OAR 340-24-305(24) as "ownership by any person of 100 or more Oregon registered, in-use, motor vehicles, excluding those vehicles held primarily for the purposes of resale." The motor vehicle fleet operation was implemented to allow large fleets flexibility with their testing and maintenance needs. The Department administers a fleet testing program with over 50 fleet participants. The vehicles that the licensed private and government fleets inspect is approximately 2% of the Department's total test volume.

The fleet size limits were chosen to provide large organizations with an alternative to having their vehicles tested at inspection stations. Some inspection programs in the United States do not offer this option. The 100 vehicle size limit is still a good delimiter. Staff is concerned that if the fleet size limits are reduced to a number lower than 100, the number of fleets that could qualify would increase substantially. This would place an extra burden on existing resources, the current level of quality and oversight could not be maintained. The 100 vehicle limit still appears appropriate.

Statute requires that special consideration be given to government fleet operations. Statute also requires all government vehicles to be certified on an annual basis, rather than biennially. That was part of the justification for reducing the size of government fleets, licensed for self inspection to 50. The staff is concerned that if the limit is lowered the expense to the Department to correctly administer this part of the I/M program would require personnel increase. The staff does not have an estimate of how many new fleets might apply if the size limit is reduced. The staff is recommending to the Commission, that no change be made in the size limits as they exist in the rule.

There have also been discussions that the rule be changed to allow fleet licensing and testing by car dealers. The rule specifically excludes "vehicles held for the purposes of resale." The original advisory committees that assisted the Department in developing the operating guidelines for the inspection program, wanted the testing separated from retail repair. This committee also believed that car dealers should not be in the position to issue Certificates for the used cars in their lots. Nothing has occurred in the ensuing years to offer evidence that changing this position would benefit the public or improve air quality.

There has been some informal discussions about which staff has been advised, that some new/used car dealers have expressed interest in self-inspecting and certifying cars for emission compliance. Other dealers and dealer organizations have expressed informal opposition, stating that they continue to support the concept of separation of testing and repair. If dealers were to be licensed for self-inspection there would also be the problem of audit and enforcement. In captive fleets the vehicles remain. In a "dealer fleet" the tested vehicles would disperse, inhibiting effective audit, and enforcement efforts. That being the case, it is requested that the Commission reemphasize that the current guideline for a licensed fleet remain the same.

OAR 340-24-350 The staff is proposing a change in the equipment specifications for the licensed fleets. The staff is recommending the decertification of the "BAR-74" level exhaust gas analyzers. Decertification means that after January 1, 1990, fleets licensed for self inspection cannot use a BAR-74 series piece of equipment for testing or certification purpose. Table 1 lists the licensed fleets affected. The BAR designation refers to a level of specification developed by the California Bureau of Automotive Repair.

The effect of this action is significant. Almost two-thirds of the licensed fleets have exhaust gas analyzers classified under the BAR-74 certification. The remaining equipment is classified under a BAR-80 and BAR-84 classifications. This older style equipment poses significant accuracy and reliability problems for a licensed fleet that uses this equipment both as a shop tool and a Certification device; and for the Department which is licensing the fleet to act as our agent. Spare parts and service is becoming a problem for this equipment. Program staff has had to assume a role of training many of the licensed fleet personnel in proper operational techniques of this old equipment. There are recent experiences where the trouble shooting available to the licensed fleet inspector will not adequately diagnose a problem, so that the testing results are incorrect.

At this time, the regulation is being proposed that would not allow BAR-80 or BAR-84 equipment to be purchased for testing after December 31, 1991. By that time, equipment that meets specifications referred to as BAR-90 (or equivalent) should be available on the marketplace. The staff believes that all testing by the licensed fleets should utilize this newer type of testing equipment, and will be proposing in the future, regulations that would

specify a BAR-90 (or equivalent) series of exhaust gas analyzers for all licensed fleet applications. The staff would like comments from the licensed fleets on this subject.

The cost associated with de-certifying the BAR-74 series of equipment is significant. Minimum costs for these testers will be in the range of \$7,000-10,000.

**SUMMATION** The Department is requesting authorization for public hearings to receive testimony on a wide range of rule changes. These changes proposed include items that are more housekeeping in nature, to items that will have significant fiscal impact on the licensed fleets. They are as follows:

(1) Provide better information to the customers of the vehicle inspection program.

(2) Ease the emission equipment tampering check on 1975-1979 vehicles, along with the implications that this action would have on the engine exchange policy.

(3) Simplify the emission standards for the pre-1975 vehicles.

(4) Reaffirm the policy for qualifications as a licensed fleet inspection operation.

(5) De-certify the BAR-74 series of exhaust gas analyzers.

**DIRECTOR'S RECOMMENDATION**

Based upon the summation, the Director recommends that the Commission authorize the Department to schedule public hearings to receive testimony on the Vehicle Inspection Program rules.



Fred Hansen

Attachments: Table I  
Attachment A - Draft Rules  
Attachment B - Draft Notice of Public Hearing and Statement of Need and fiscal impact.  
Attachment C - Relevant Correspondence

WPJasper  
229-5081  
AD2731  
May 25, 1988



TABLE 1

Exhaust Gas Analyzers  
Licensed For  
Fleet Inspection Operations  
As of April 1, 1988

Fleet #	Fleet Name	Analyzer Mfg.	Model
001	Portland Motor Pool	Sun	EPA 75*
		Sun	EPA 75*
002	Mobil Chef, Inc.	Marquette	42-076*
003	City of Portland	Sun	1115*
		Sun	1215*
		Sun	1115*
		Sun	1215*
004	US Postal Service	Sun	1805-9*
005	Oregon Highway Division	Snap-On	MT 498
		Stewart-Warner	3160-AC-1*
006	Washington County Fleet	Bear	42-904
007	GTE Northwest, Inc.	Sun	EET 910-1*
		Sun	1115*
009	N. W. Natural Gas	Sun	EPA 75*
		Bear	42-904
010	Portland General Elec  Oregon City Beaverton	Sun	EPA 75*
		Sun	EPA 75*
		Sun	EPA 75*
		Sun	EPA 75*
		Sun	EPA 75*
		Sun	EPA 75*
		Sun	EPA 75*
		Sun	EPA 75*
011	Pacific N W Bell	Sun	EPA 75*
		Sun	EPA 75*
		Sun	SGA 9000
012	Clackamas County	Sun	EPA 75*
		Bear	42-904
013	Multnomah County	Sun	U-912-1*
		Sun	1215*

014	United Parcel Service	Bear	42-090
015	Port of Portland	Bear	42-904
		Stewart-Warner	3160-AC-1*
		Bear	42-090
		Sun	1805-9
016	Portland School Dist		
	Bus Shop	Sun	1115*
	Fleet Garage	Stewart-Warner	3160-AC-1*
		Bear	42-090
017	Pacific Power & Light	Sun	EPA 75*
018	Beaverton School Dist.	Bear	42-090
020	Carnation Company	Allen	23-360CA*
021	Laidlaw Transportation	Bear	42-090
022	City of West Linn	Bear	42-904
023	Power Rents, Inc.	Sun	EPA 75*
024	Tri-Met Transportation	Bear	42-904
026	City of Lake Oswego	Sun	1042
027	North Clackamas School	Sun	EPA 75*
028	Washington County Fire	Marquette	42-706*
		Bear	42-904
029	Lake Oswego School Dist.	Marquette	42-706*
		Bear	42-904
031	City of Oregon City	Allen	23-390
032	Oregon City School Dist.	Marquette	42-076*
033	City of Milwaukie	Sun	EPA 75*
		Bear	42-904
034	Portland Bottling Co.	Sun	MGA-90
035	Unified Sewage Agency	Sun	EPA 75*
036	Parkrose School Dist.	Sun	MGA-90
037	Tektronix, Inc.	Bear	42-904
038	David Douglas Sch Dist.	Allen	23-360*

039	City of Forest Grove	Bear	42-904
040	Army National Guard	Sun	EPA 75*
041	Reynolds School Dist.	Sun	EPA 75*
042	City of Beaverton	Sun	U-912-I*
043	Hillsboro School Dist.	Sun	1115*
044	Oregon Air Nat Guard	Allen	23-360*
045	Tualatin Rural Fire	Sun	1115*
046	City of Hillsboro	Peerless Bear	675* 42-924
047	City of Tualatin	Sun	MGA-90
049	City of Gresham	Bear	42-900B
050	McCracken Motor Freight	Sun	1115-9

(\*) DENOTES BAR-74 LEVEL  
 FLTALYZ May 25, 1988

**ERRATA**

**TO:** Environmental Quality Commission

**SUBJECT:** Agenda Item P, September 9, 1988 EQC Meeting

Proposed Adoption of Amendments to the Vehicle  
Inspection Operating Rules and Test Procedure, OAR 340-  
24-300 through 24-350

Pages 2-3 of Attachment A should be replaced with the attached page. The map was missing from this attachment.

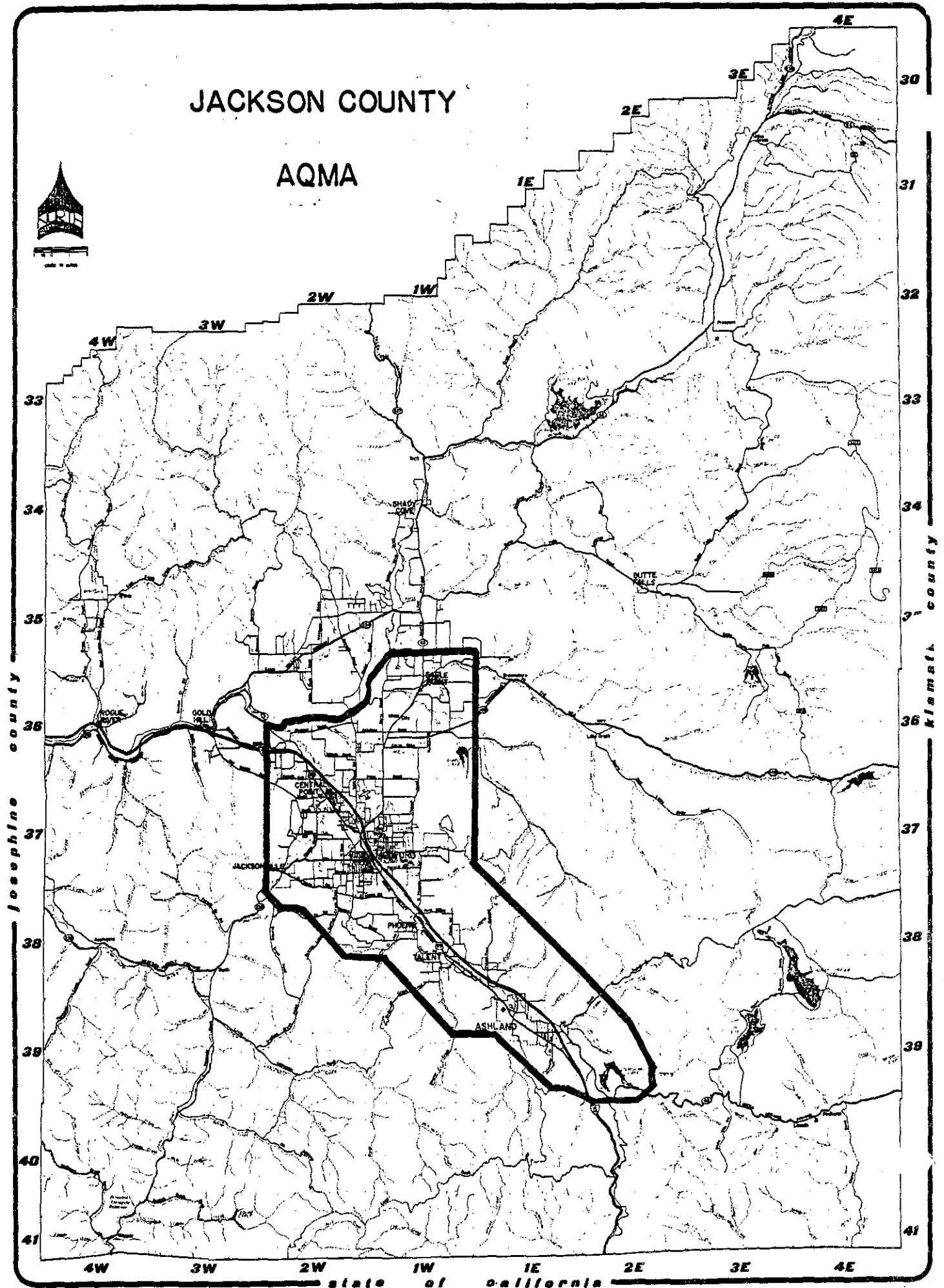
Page 5--not numbered--of Attachment C should be added. This is the second page of the memo from Eugene J. Tierney. The back of this page is blank.

corner of section 5. T38S, R2W: thence northwest along a line to the southwest corner of section 31. T37S. R2W: thence north along a line to the Rogue River, thence north and east along the Rogue River to the north boundary of section 32. T35S. R1W: thence east along a line to the point of beginning.

(3) The above area is shown in Exhibit 1 of this section.

# JACKSON COUNTY

## AQMA



model does not handle. Therefore, the best we can do is pick an approach with the understanding that the assumption may or may not reflect actual events in the program.

OREGON INSPECTION PROGRAM

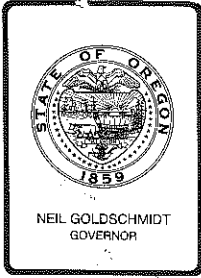
1992 Highway Mobile Source Emission Factors

<u>CASE</u>	<u>NMHC</u>		<u>CO</u>		<u>NOx</u>
	<u>g/m</u>	<u>%</u>	<u>g/m</u>	<u>%</u>	<u>g/m</u>
Base (No Program)	2.61		20.82		2.53
Current Program	2.06		13.15		2.45
Reduction	.55	21.1	7.67	36.8	.08
Proposed Program	2.07		13.19		2.45
Reduction	.54	20.7	7.63	36.7	.08

The approach we chose was to look at the difference in emission reductions from the program with and without underhood inspections of 1975-1979 vehicles. The difference in emission factors between these two scenarios represent the benefit of the underhood inspections on 1975-1979 vehicles. This difference was then subtracted from the current program emission factors to yield the proposed program emission factors, as shown in the table. The basic assumption implicit in this approach is that the underhood tampering rates for 1975-1979 vehicles will return to the national default level for these vehicles by 1992. In general, we are planning on assuming for post-1987 SIP purposes that this return to default rates takes four years after a model year passes out of moving model year window.

As you can see from the table, the impact of the proposed change is not excessive. Oregon officials cite increasing difficulty obtaining parts as the basis for eliminating the underhood inspections on older vehicles, as well as improving lane throughput. Given the low tampering rates in Oregon, this seems to be a reasonable measure that will not reduce emission reduction benefits substantially. It should be noted, however, that dropping catalyst checks for pre-1980 vehicles would have a far more substantial impact on the program benefits, something we would definitely discourage. Finally, MOBILE3 does not calculate a NOx effect from the EGR tampering check, thus no change is evident although in reality one would occur.

I hope this clarifies the impact of the proposed changes in the Oregon inspection program. Feel free to contact me if you wish to discuss this further. I recommend that the State be provided with the corrected emission factors. Also, this analysis does not apply to Medford. A separate analysis would be necessary for that part of the program.



## Environmental Quality Commission

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

### EXECUTIVE SUMMARY

TO: Environmental Quality Commission

FROM:

Fred Hansen, Director

SUBJECT: Agenda Item 6, September 9, 1988, EOC Meeting. Executive Summary of Staff Report Proposing Adoption of Revisions to OAR Chapter 340, Division 12, Civil Penalty.

### BACKGROUND

On June 10, 1988, the Commission authorized the Department to conduct a public hearing to receive testimony on the proposed rule revisions to Oregon Administrative Rules (OAR) Chapter 340, Division 12 and revisions to the Clean Air Act State Implementation Plan (SIP). The proposed revisions would establish civil penalty schedules for polychlorinated biphenols and hazardous waste remedial action, allow the Department to assess a civil penalty without warning notice for violations of asbestos abatement project work standards, make the list of factors considered when assessing a civil penalty consistent with statute and revise civil penalty rules in the SIP.

The public hearing was held in Portland, Oregon, on August 3, 1988. No written or oral testimony concerning the proposed revisions was offered.

### SUMMARY OF STAFF REPORT KEY ISSUES

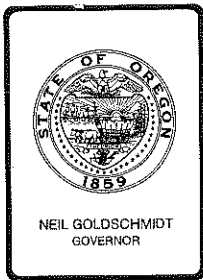
1. On June 10, 1988, the Commission authorized the Department to conduct a public hearing on the proposed revisions to OAR Chapter 340, Division 12 and the SIP.
2. The authorized hearing was held in Portland on August 3, 1988.
3. No oral testimony or written comments concerning the proposed revisions were received.

### DIRECTOR'S RECOMMENDATION

Based upon the summary, it is recommended the Commission adopt the proposed revisions to the civil penalty rules, OAR Chapter 340, Division 12, and proposed revisions to the SIP.

Yone C. McNally  
229-5152  
August 12, 1988





## Environmental Quality Commission

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

### MEMORANDUM

**To:** Environmental Quality Commission  
**From:** Director *Rydia Taylor*  
**Subject:** Agenda Item ④, September 9, 1988, EQC Meeting

Proposed Adoption of Revisions to Oregon Administrative Rules, Chapter 340, Division 12, Civil Penalties, and the Clean Air Act State Implementation.

### BACKGROUND

On June 10, 1988, the Commission authorized the Department to conduct a public hearing to receive testimony on the proposed rule revisions to Oregon Administrative Rules (OAR) Chapter 340, Division 12 and revisions to the Clean Air Act State Implementation Plan (SIP). The proposed revisions would establish civil penalty schedules for polychlorinated biphenols and hazardous waste remedial action, allow the Department to assess a civil penalty without warning notice for violations of asbestos abatement project work standards, make the list of factors considered when assessing a civil penalty consistent with statute and revise civil penalty rules in the SIP.

Notice of public hearing was given by publication in the Secretary of State's bulletin on July 1, 1988. In addition, public notices were mailed to the Air and Water Quality divisions mailing lists.

The public hearing was held in Portland, Oregon, on August 3, 1988. The hearings officer's report is contained as Attachment A. Additional background information on the proposed rule revisions, statement of need for rulemaking, statement of land use consistency, and public hearing notice are contained in the June 10, 1988, EQC Agenda Item E (Attachment B).

### EVALUATION OF TESTIMONY

No written or oral testimony concerning the proposed revisions was offered.

### SUMMATION

1. On June 10, 1988, the Commission authorized the Department to conduct a public hearing on the proposed revisions to OAR Chapter 340, Division 12 and the SIP.

2. Public Notice concerning the proposed rule revisions and the date and time of the public hearing was filed in the Secretary of State's bulletin on July 1, 1988, and mailed to various interested parties.
3. The authorized hearing was held in Portland on August 3, 1988.
4. The hearings officer's report is contained in Attachment A.
5. No oral testimony or written comments concerning the proposed revisions were received.

**DIRECTOR'S RECOMMENDATION**

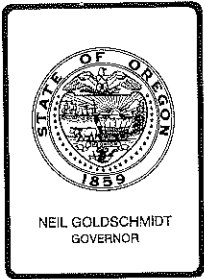
Based on the summation, the Director recommends the Commission adopt the proposed revisions to OAR 340, Division 12 (Attachment C) and revisions to the Clean Air Act State Implementation Plan.

Fred Hansen

**Attachments**

- A. Hearings Officer's Report.
- B. Staff Report and Attachments for Agenda Item E, June 10, 1988, EQC Meeting.
- C. Proposed Rule Revisions to OAR Chapter 340, Division 12.

Yone C. McNally  
229-5152  
August 9, 1988



## Environmental Quality Commission

ATTACHMENT A

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

### MEMORANDUM

To: Environmental Quality Commission

From: Larry M. Schurr, Presiding Officer

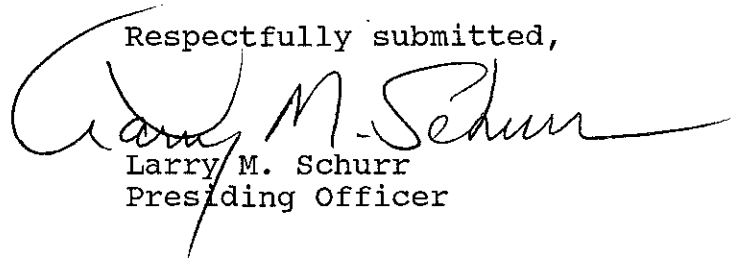
Subject: Presiding Officer's Report Following Public Hearing  
Held August 3, 1988.

Proposed Revisions to Oregon Administrative Rules  
Chapter 340, Division 12, Civil Penalties, and to the  
Clean Air Act State Implementation Plan (SIP).

The subject public hearing was commenced shortly after 2:00 p.m. on August 3, 1988, in the fourth floor conference room at DEQ Headquarters, 811 S.W. Sixth Avenue, Portland, Oregon.

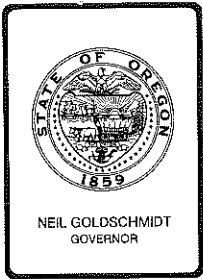
No oral or written testimony was offered.

Respectfully submitted,



Larry M. Schurr  
Presiding Officer

Larry M. Schurr  
229-6932  
August 8, 1988



## Environmental Quality Commission

ATTACHMENT B

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

### MEMORANDUM

**To:** Environmental Quality Commission

**From:** Director

**Subject:** Agenda Item E, June 10, 1988, EQC Meeting

Request for Authorization to Conduct a Public Hearing on Revisions of Oregon Administrative Rule Chapter 340, Division 12, Civil Penalties, and Revisions to the Clean Air Act State Implementation Plan (SIP)

### BACKGROUND

Oregon Revised Statutes (ORS) 468.130 authorizes the Commission to adopt civil penalty schedules for violations and lists factors which the Commission is required to consider when imposing civil penalties. ORS 468.125(2) lists specific violations for which a civil penalty may be assessed without a prior warning notice.

In recent years, the Oregon Legislature has amended and adopted several laws which affect the Department's civil penalty authority. In 1985, the Legislature adopted legislation concerning the disposal of polychlorinated biphenols (PCBs) which included civil penalty authority. In 1987, the Legislature amended ORS 468.125(2) to include violations which related to the release of asbestos fibers into the environment. It also created new programs concerning waste tires and remedial action which included civil penalty authority. It also amended ORS 468.130(2) requiring the Commission to consider additional factors before imposing a civil penalty. Because of these changes and new programs, the Department is proposing to revise OAR chapter 340, division 12 so it would be consistent with controlling statutes and establish penalty schedules necessary to make the new penalty authorities enforceable.

### PROPOSAL

#### 1. Proposed State Rule Revision.

Division 12 was last revised in 1984. As part of this revision process, the entire division has been reviewed. As a result, several changes beyond those made necessary by the Legislature are being recommended that would make the division more clear.

ORS 468.130(1) authorizes the Commission to adopt civil penalty schedules. Several new civil penalty schedules are proposed for the disposal of PCBs, hazardous waste remedial action and waste tires storage and disposal. Adoption of civil penalty schedules for these areas would be necessary before the Department could exercise civil penalty authority for violations. Waste tire civil penalties are being added to the Solid Waste Management Schedule of Civil Penalties.

Pursuant to ORS 468.125(1), before a penalty can be assessed, the Department must first inform a violator that it plans to assess a penalty in the future should the violation continue, or a similar violation occur, five or more days after the violator receives notice before a penalty can be assessed. ORS 468.125(2) lists exceptions to this requirement. The 1987 Legislature amended ORS 468.125(2) to include violations which relate to the release of asbestos fibers into the environment as an exception to this requirement. It is proposed to add this exception to Division 12 also so it would be consistent with the statute. The Department is proposing to add violations of asbestos abatement work practice standards to the Air Quality Schedule of Civil Penalties.

ORS 468.130(2) was amended in 1987 to include additional factors to be considered by the Commission when imposing a civil penalty. It is proposed to revise Division 12 to reflect these changes and make the Department's rules consistent with the statute. Previously, the Commission was required to consider only three factors. The 1987 Legislature extended the list to eight factors including the cause, gravity and magnitude of the violation, and the violators cooperativeness and efforts to correct the violation.

Finally, several housekeeping changes to Division 12 have been proposed. These include updating references to statutes, making language consistent throughout the division, and renumbering sections for clear organization.

## 2. Proposed Clean Air Act State Implementation Plan Revision

Certain proposed changes in the state civil penalty rules must be incorporated into the SIP in order to meet federal requirements. As new authority concerning air quality has been added to Division 12, this is an appropriate time to bring the SIP rules relating to civil penalties up to date. The Department, therefore, is proposing the following SIP actions:

- Retain the following existing rules with proposed modifications: OAR 340-12-040 (Notice of Violation), 340-12-045 (Mitigating and Aggravating Factors), and 340-12-050 (Air Quality Schedule of Civil Penalties).
- Renumber the following existing rules: OAR 340-12-070 (Written Notice of Assessment of Civil Penalty) to 340-12-046, and 340-12-075 (Compromise or Settlement of Penalty) to 340-12-047.
- Retain the following existing rules:

OAR 340-12-030 (Definitions) and 340-12-035 (Consolidation of Proceedings).

ALTERNATIVES AND EVALUATION

1. Do not revise Division 12.

If Division 12 is allowed to remain as is, some civil penalty authorities and schedules would not be listed. Further, because statutory changes affecting Division 12 have been made, not revising Division 12 could result in inconsistency and confusion in its application.

2. Revise Division 12 as proposed.

If Division 12 is revised as proposed, this will eliminate the confusion and inconsistency that might otherwise result, add the schedules necessary for assessing civil penalties, and list newly created categories of violations in the areas such as waste tire storage and disposal and hazardous waste remedial action.

3. Do not revise the Oregon SIP.

The Department must have current and appropriate civil penalty rules in the SIP in order to meet federal requirements. Failure to incorporate proposed changes to the state civil penalty rules in the SIP or bring the existing rules in the SIP up to date with current state rules would put the state in technical violation of the Clean Air Act requirements and ultimately force EPA to take remedial or sanction action.

4. Revise the Oregon SIP as proposed.

This alternative would make the federally enforceable SIP rules consistent with current state rules.

SUMMATION

1. The 1985 and 1987 Legislatures created additional programs with civil penalty authority. New penalty schedules need to be adopted in order for the Commission to exercise this authority.
2. The 1987 Legislature amended ORS 468.125(2) to authorize the Department to assess civil penalties without prior warning for violations relating to the release of asbestos fibers into the environment.
3. The 1987 Legislature amended ORS 468.130(2) to include additional factors to be considered by the Commission before imposing a civil penalty.

4. The civil penalty rules in the federally-enforceable SIP must be revised to be consistent with current and proposed modifications to the state rules.

DIRECTOR'S RECOMMENDATION

Based upon the summation, it is recommended the Commission authorize a public hearing to take testimony on the proposed revisions to the civil penalty rules, OAR Chapter 340, Division 12, and proposed revisions to the SIP.

Fred Hansen

Attachments

Statement of Need for Rulemaking  
Statement of Land Use Consistency  
Public Hearing Notice  
Proposed Revision to OAR Chapter 340, Division 12

Yone C. McNally:ycm  
229-5152  
May 6, 1988

## CHAPTER 340, DIVISION 12

## Definitions

340-12-030

Unless otherwise required by context, as used in this Division:

- (1) "Commission" means the Environmental Quality Commission.
- (2) "Director" means the Director of the Department or the Director's authorized deputies or officers.
- (3) "Department" means the Department of Environmental Quality.
- (4) "Order" means:
  - (a) Any action satisfying the definition given in ORS Chapter 183; or
  - (b) Any other action so designated in ORS Chapter 454, 459, 466, 467, or 468.
- (5) "Person" includes individuals, corporations, associations, firms, partnerships, joint stock companies, public and municipal corporations, political subdivisions, the state and any agencies thereof, and the Federal Government and any agencies thereof.
- (6) "Respondent" means the person against whom a civil penalty is assessed.
- (7) "Violation" means a transgression of any statute, rule, standard, order, license, permit, compliance schedule, or any part thereof and includes both acts and omissions.

(Statutory Authority: ORS CH 468)

## Consolidation of Proceedings

340-12-035

Notwithstanding that each and every violation is a separate and distinct offense, and in cases of continuing violation, each day's continuance is a separate and distinct violation, proceedings for the assessment of multiple civil penalties for multiple violations may be consolidated into a single proceeding.

(Statutory Authority: ORS CH 468)

## Notice of Violation

340-12-040

- (1) Except as provided in section (3) of this rule, prior to the assessment of any civil penalty the Department shall serve a Notice of Violation upon the respondent. Service shall be in accordance with rule 340-11-097.
- (2) A Notice of Violation shall be in writing, specify the violation and state that the Department will assess a civil penalty if the violation continues or occurs after five days following receipt of the notice.
- (3) (a) A Notice of Violation shall not be required where the respondent has otherwise received actual notice of the violation not less than five days prior to the violation for which a penalty is assessed.
  - (b) No advanced notice, written or actual, shall be required under sections (1) and (2) of this rule if:
    - (A) The act or omission constituting the violation is intentional;
    - (B) The violation consists of disposing of solid waste or sewage at an unauthorized disposal site;

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(C) The violation consists of constructing a sewage disposal system without the Department's permit;

(D) The water pollution, air pollution, or air contamination source would normally not be in existence for five days;

(E) The water pollution, air pollution, or air contamination source might leave or be removed from the jurisdiction of the Department; [or]

(F) The penalty to be imposed is for a violation of ORS 466.005 to 466.385[459.410 to 459.450 and 459.460 to 459.690], or rules adopted or orders or permits issued pursuant thereto[.]; or

(G) The penalty to be imposed is for a violation of ORS 468.893(8) relating to the control of asbestos fiber releases into the environment, or rules adopted thereunder.

(Statutory Authority: ORS CH 459, 466 & 468)

Mitigating and Aggravating Factors  
340-12-045

(1) In establishing the amount of a civil penalty to be assessed, the Director may consider the following factor:

(a) Whether the respondent has committed any prior violation[, ] of statutes, rules, orders or permits pertaining to environmental quality or pollution control [regardless of whether or not any administrative, civil, or criminal proceeding was commenced therefore];

(b) The past history of the respondent in taking all feasible steps or procedures necessary or appropriate to correct any violation;

(c) The economic and financial conditions of the respondent;

(d) The gravity and magnitude of the violation;

(e) Whether the violation was repeated or continuous;

(f) Whether a cause of the violation was an unavoidable accident, or negligence, or an intentional act of the respondent;

[(g) The opportunity and degree of difficulty to correct the violation;]

(g) [(h)] The respondent's cooperativeness and efforts to correct the violation for which the penalty is to be assessed; or

(h) [(i)] Any relevant rule of the commission. [The cost to the Department of investigation and correction of the cited violation prior to the time the Department receives respondent's answer to the written notice of assessment of civil penalty]; or]

[(j) Any other relevant factor.]

(2) In imposing a penalty subsequent to a hearing, the Commission shall consider factors (a) through (h) [, (b), and (c), or section (1) of this rule, and each other factor cited by the Director. The Commission may consider any other relevant factor].

(3) Unless the issue is raised in respondent's answer to the written notice of assessment of civil penalty, the Commission may presume that the economic and financial conditions of respondent would allow imposition of the penalty assessed by the Director. At the hearing, the burden of proof and the burden of coming forward with evidence regarding the respondent's economic and financial condition shall be upon the respondent.

(Statutory Authority: ORS CH 468)

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Written Notice of Assessment of Civil Penalty; When Penalty Payable  
340-12-046 [070]

(1) A civil penalty shall be due and payable when the respondent is served a written notice of assessment of civil penalty signed by the Director. Service shall be in accordance with rule 340-11-097.

(2) The written notice of assessment of civil penalty shall be in the form prescribed by rule 340-11-098 [100] for a notice of opportunity for a hearing in a contested case, and shall state the amount of the penalty or penalties assessed.

(3) The rules prescribing procedure in contested case proceedings contained in Division 11 shall apply thereafter.

(Statutory Authority: ORS CH 468)

Compromise of Settlement of Civil Penalty by Director  
340-12-047 [075]

Any time subsequent to service of the written notice of assessment of civil penalty, the Director is authorized to seek to compromise or settle any unpaid civil penalty which the Director deems appropriate. Any compromise or settlement executed by the Director shall not be final until approved by the Commission.

(Statutory Authority: ORS CH 468)

Air Quality Schedule of Civil Penalties  
340-12-050

In addition to any liability, duty, or other penalty provided by law, the Director, or the director of a regional air quality control authority, may assess a civil penalty for any violation pertaining to air quality by service of a written notice of assessment of civil penalty upon the respondent. The amount of such civil penalty shall be determined consistent with the following schedule:

(1) Not less than one hundred dollars (\$100) nor more than ten thousand dollars (\$10,000) for violation of an order of the Commission, Department, or regional air quality control authority.

(2) Not less than fifty dollars (\$50) nor more than ten thousand dollars (\$10,000) for:

(a) Violating any condition of any Air Contaminant Discharge Permit, Hardship Permit, Letter Permit, Indirect Source Permit, or variance;

(b) Any violation which causes, contributes to, or threatens the emission of any air contaminant into the outdoor atmosphere;

(c) Operating any air contaminant source without first obtaining an Air Contaminant Discharge Permit; [or]

(d) Any unauthorized open burning; or [.]

(e) Any violation of the asbestos abatement project statutes ORS 468.875 to 468.899 or rules adopted or orders issued pursuant thereto pertaining to asbestos abatement.

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(3) Not less than twenty-five dollars (\$25) nor more than ten thousand dollars (\$10,000) for any other violation.

(Statutory Authority: ORS CH 468)

Noise Control Schedule of Civil Penalties

340-12-052

In addition to any liability, duty, or other penalty provided by law, the Director may assess a civil penalty for any violation pertaining to noise control by service of a written notice of assessment of civil penalty upon the respondent. The amount of such civil penalty shall be determined consistent with the following schedule:

(1) Not less than one hundred dollars (\$100) nor more than five hundred dollar (\$500) for violation of an order of the Commission or Department.

(2) Not less than fifty dollar (\$50) nor more than five hundred dollars (\$500) for any violation which causes, substantially contributes to, or will probably cause:

(a) The emission of noise in excess of levels established by the Commission for any category of noise emission source; or

(b) Ambient noise at any type of noise sensitive real property to exceed the levels established therefor by the Commission.

(3) Not less than twenty-five dollars (\$25) nor more than five hundred dollars (\$500) for any other violation.

(Statutory Authority: ORS CH 467 & 468)

Water Pollution Schedule of Civil Penalties

340-12-055

In addition to any liability, duty, or other penalty provided by law, the Director may assess a civil penalty for any violation relating to water pollution by service of written notice of assessment of civil penalty upon the respondent. The amount of such civil penalty shall be determined consistent with the following schedule:

(1) Not less than one hundred dollars (\$100) nor more than ten thousand dollars (\$10,000) for any violation of an order of the Commission or Department.

(2) Not less than fifty dollars (\$50) nor more than ten thousand dollars (\$10,000) for:

(a) Violating any condition of any National Pollutant Discharge Elimination System (NPDES) Permit or Water Pollution Control Facilities (WPCF) Permit;

(b) Any violation which causes, contributes to, or threatens the discharge of a waste into any waters of the state or causes pollution of any waters of the state; or

(c) Any discharge of waste water or operation of a disposal system without first obtaining a National Pollutant Discharge Elimination System (NPDES) Permit or Water Pollution Control Facilities (WPCF) Permit.

(3) Not less than five hundred dollars (\$500) nor more than ten thousand dollars (\$10,000) for failing to immediately clean up an oil spill.

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ATTACHMENT C

(4) Not less than twenty-five dollars (\$25) nor more than ten thousand dollars (\$10,000) for any other violation.

(5) (a) In addition to any penalty which may be assessed pursuant to sections (1) through (4) of this rule, any person who intentionally causes or permits the discharge of oil into the waters of the state shall incur a civil penalty of not less than one thousand dollars (\$1,000) nor more than twenty thousand dollars (\$20,000) for each violation.

(b) In addition to any penalty which may be assessed pursuant to sections (1) through (4) of this rule, any person who negligently causes or permits the discharge of oil into the waters of the state shall incur a civil penalty of not less than five hundred dollars (\$500) nor more than twenty thousand dollars (\$20,000) for each violation.

(Statutory Authority: ORS CH 468)

On-Site Sewage Disposal Systems Schedule of Civil Penalties

340-12-060

In addition to any liability, duty, or other penalty provided by law, the Director may assess a civil penalty for any violation pertaining to on-site sewage disposal activities [systems] by service of a written notice of assessment of civil penalty upon the respondent. The amount of such civil penalty shall be determined consistent with the following schedule:

(1) Not less than one hundred dollars (\$100) nor more than five hundred dollars (\$500) upon any person who:

(a) Violates [a final] an order of the Commission [requiring remedial action];

[(b) Violates an order of the Commission limiting or prohibiting installation of an on-site sewage disposal systems in an area;]

(b) [(c)] Performs, or advertises or represents one's self as being in the business of performing, sewage disposal services, without obtaining and maintaining a current license form the Department, except as provided by statute or rule;

(c) [(d)] Installs or causes to be installed an on-site [a subsurface alternative or experimental] sewage disposal system or any part thereof, without first obtaining a permit from the Agent;

(d) [(e)] Fails to obtain a permit from the Agent within three days after beginning emergency repairs on an on-site [a subsurface, alternative or experimental] sewage disposal system.

(e) [(f)] Disposes of septic tank, holding tank, chemical toilet, privy or other treatment facility sludges in a manner or location not authorized by the Department;

(f) [(g)] Connects or reconnects the sewage plumbing form any dwelling or commercial facility to an existing system without first obtaining an Authorization Notice from the Agent;

(g) [(h)] Installs or causes to be installed a nonwater-carried waste disposal facility without first obtaining written approval from the Agent therefor;

(h) [(i)] Operates or uses an on-site sewage disposal system which is failing by discharging sewage or septic tank effluent onto the ground surface or into surface public waters; or

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ATTACHMENT C

(i) [(j)] As a licensed sewage disposal service worker, performs any sewage disposal service work in violation of the rules of the Department.

(2) Not less than twenty-five dollars (\$25) nor more than five hundred dollars (\$500) upon any person who:

(a) Installs or causes to be installed an on-site sewage disposal system, or any part thereof, which fails to meet the requirements for satisfactory completion within thirty (30) days after written notification or posting of a Correction Notice at the site;

(b) Operates or uses a nonwater-carried waste disposal facility without first obtaining a letter of authorization from the Agent therefore;

(c) Operates or uses a newly constructed, altered or repaired on-site sewage disposal system, or part thereof, without first obtaining a Certificate of Satisfactory Completion from the Agent, except as provided by statute or rule;

(d) Fails to connect all plumbing fixtures from which sewage is or may be discharged to a Department approved system; or

(e) Commits any other violation pertaining to on-site sewage disposal systems. [;]

(Statutory Authority: ORS CH 468)

Solid Waste Management Schedule of Civil Penalties  
340-12-065

In addition to any liability, duty or other penalty provided by law, the Director may assess a civil penalty for any violation pertaining to solid waste management by service of a written notice of assessment of civil penalty upon the respondent. The amount of such civil penalty shall be determined consistent with the following schedule:

(1) Not less than one hundred dollars (\$100) nor more than five hundred dollars (\$500) for violation of an order of the Commission or Department.

(2) Not less than fifty dollars (\$50) nor more than five hundred dollars (\$500) for:

(a) Disposing of solid waste at an unauthorized site;

(b) Establishing, operating or maintaining a solid waste disposal site without first obtaining a Solid Waste Disposal Permit;

(c) Violating any condition of any Solid Waste Disposal Permit or variance;

(d) Disposing of waste tires at an unauthorized site; or

(e) Establishing, operating or maintaining a waste tire storage site without first obtaining a Waste Tire Storage Permit.

(3) Not less than twenty-five (\$25) nor more than five hundred dollars (\$500) for any other violation.

(Statutory Authority: ORS CH 459)

Underground Storage Tank Schedule of Civil Penalties  
340-12-067

In addition to any liability, duty, or other penalty provided by law, the Director may assess a civil penalty for any violation pertaining to management of or releases from underground storage tanks by service of a written Notice of

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Assessment of Civil Penalty upon the respondent. The amount of such civil penalty shall be determined consistent with the following schedule:

(1) Not less than two thousand five hundred dollars (\$2,500) nor more than ten thousand dollars (\$10,000) for each day of the violation upon any person owning or having control over a regulated substance who fails to immediately cleanup releases as required by ORS 466.705 through ORS 466.995 and OAR 340 - Division 150.

(2) Not less than one thousand dollars (\$1,000) nor more than ten thousand dollars (\$10,000) for each day of the violation upon any person owning or having control over a regulated substance who fails to immediately report all releases of a regulated substance as required by ORS 466.705 through ORS 466.995 and OAR 340 - Division 150.

(3) Not less than one hundred dollars (\$100) nor more than ten thousand dollars (10,000) per day of the violation upon any person who:

(a) Violates an order of the Commission or the Department; or [,]

(b) Violates any underground storage tank rule or ORS 466.705 through ORS 466.995.

(Statutory Authority: ORS Chapter 466)

Hazardous Waste Management Schedule of Civil Penalties  
340-12-068

In addition to any liability, duty, or other penalty provided by law, the Director may assess a civil penalty for any violation pertaining to hazardous waste management by service of a written Notice of Assessment of Civil Penalty upon the respondent. The amount of such civil penalty shall be determined consistent with the following schedule:

(1) Not less than two thousand five hundred dollars (\$2,500) nor more than ten thousand dollars (\$10,000) for each day of the violation upon any person who:

(a) Establishes, constructs or operates a geographical site in which or upon which hazardous wastes are disposed without first obtaining a license from the Commission; [.]

(b) Disposes of a hazardous waste at any location other than at a licensed hazardous waste disposal site; [.]

(c) Fails to immediately collect, remove or treat a hazardous waste or substance as required by ORS 466.205 and OAR Chapter 340 division 108; [.]

(d) Is an owner or operator of a hazardous waste surface impoundment, landfill, land treatment or waste pile facility and fails to comply with the following:

(A) The groundwater monitoring and protection requirements of Subpart F of 40 CFR Part 264 or Part 265;

(B) The closure plan requirements of Subpart G of 40 CFR Part 264 or Part 265;

(C) The post-closure plan requirements of Subpart G of 40 CFR Part 264 or Part 265;

(D) The closure cost estimate requirements of Subpart H of 40 CFR Part 264 or Part 265;

(E) The post-closure cost estimate requirements of Subpart H of 40 CFR Part 264 or Part 265;

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ATTACHMENT C

(F) The financial assurance for closure requirements of Subpart H of 40 CFR Part 264 or Part 265;

(G) The financial assurance for post-closure care requirements of Subpart H or 40 CFR Part 264 or Part 265; or

(H) The financial liability requirements of Subpart H or 40 CFR Part 264 or Part 265.

(2) Not less than one thousand dollars (\$1,000) nor more than ten thousand dollars (\$10,000) for each day of the violation upon any person who:

(a) Establishes, constructs or operates a geographical site or facility upon which, or in which, hazardous wastes are stored or treated without first obtaining a license from the Department; [.]

(b) Violates a Special Condition or Environmental Monitoring Condition of a hazardous waste management facility license; [.]

(c) Dilutes a hazardous waste for the purpose of declassifying it; [.]

(d) Ships hazardous waste with a transporter that is not in compliance with OAR Chapter 860, Division 36 and Division 46 or OAR Chapter 340, Division 103 or to a hazardous waste management facility that is not in compliance with OAR Chapter 340, Divisions 100 thru 106; [.]

(e) Ships hazardous waste without a manifest; [.]

(f) Ships hazardous waste without containerizing and marking or labeling such waste in compliance with OAR Chapter 340, Division 102; [.]

(g) Is an owner or operator of a hazardous waste storage or treatment facility and fails to comply with any of the following:

(A) The closure plan requirements of Subpart G of 40 CFR Part 264 or Part 265;

(B) The closure cost estimate requirements of Subpart H of 40 CFR Part 264 or Part 265;

(C) The financial assurance for closure requirements of Subpart H of 40 CFR Part 264 or Part 265; or

(D) The financial liability requirements of Subpart H of 40 CFR Part 264 or Part 265;

(3) Not less than one hundred dollars (\$100) nor more than ten thousand dollars (\$10,000) for each day of the violation upon any person who:

(a) Violates an order of the Commission or Department; or [.]

(b) Violates any other condition of a license or written authorization or violates any other rule or statute.

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

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

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

(c) Each elk, \$750.

(d) Each silver gray squirrel, \$10.

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

(f) Each wild turkey, \$50.

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

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ATTACHMENT C

- (h) Each salmon or steelhead trout, \$125.
- (i) Each fur-bearing mammal other than bobcat or fisher, \$50.
- (j) Each bobcat or fisher, \$350.
- (k) Each specimen of any wildlife species whose survival is specified by the wildlife laws or the laws of the United States as threatened or endangered, \$500.
- (l) Each specimen of any wildlife species otherwise protected by the wildlife laws or the laws of the United, but not otherwise referred to in this section, \$25.

(Statutory Authority: ORS CH [459 &] 466)

Oil and Hazardous Material Spill and Release Schedule of Civil Penalties.  
340-12-069

In addition to any liability, duty, or other penalty provided by law, the Director may assess a civil penalty for any violation pertaining to oil or hazardous materials spills or releases or threatened spills or releases by service of a written Notice of Assessment of Civil Penalty upon the respondent. The amount of such civil penalty shall be determined consistent with the following schedule:

- (1) Not less than two thousand five hundred dollars (\$2,500) nor more than ten thousand dollars (\$10,000) for each day of the violation upon any person owning or having control over oil or hazardous material who fails to immediately cleanup spills or releases or threatened spills or releases as required by ORS 466.205, 466.645, 468.795 and OAR 340- Divisions 47 and 108.
- (2) Not less than one thousand dollars (\$1,000) nor more than ten thousand dollars (\$10,000) for each day of the violation upon any person owning or having control over oil or hazardous material who fails to immediately report all spills or releases or threatened spills or releases in amounts greater than the reportable quantity listed in rule 340-108-010 to the Oregon Emergency Management Division.
- (3) Not less than one hundred dollars (\$100) nor more than ten thousand dollars (\$10,000) for each day of the violation upon any person who:
  - (a) Violates an order of the Commission or Department; or
  - (b) Violates any other rule or statute.

(Statutory Authority: ORS CH 466)

PCB Schedule of Civil Penalty  
340-12-071

In addition to any liability, duty, or other penalty provided by law, the Director may assess a civil penalty for any violation pertaining to management of or disposal of PCBs by service of a written Notice of Assessment of Civil Penalty upon the respondent. The amount of such civil penalty shall be determined consistent with the following schedule:

- (1) Not less than two thousand five hundred dollars (\$2,500) nor more than ten thousand dollars (\$10,000) for:
  - (a) Treating or disposing of PCBs anywhere other than at a permitted PCB disposal facility; or

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(b) Establishing, constructing or operating a PCB disposal facility without first obtaining a permit;

(2) Not less than one hundred dollars (\$100) nor more than ten thousand dollars (\$10,000) for:

(a) Any violation of an order issued by the Commission or the Department;

(b) Violating any condition of PCB disposal facility permit; or

(c) Any other violation.

(Statutory Authority: ORS Chapter 466)

Remedial Action Schedule of Civil Penalty  
340-12-073

In addition to any liability, duty, or other penalty provided by law, the Director may assess a civil penalty for any violation pertaining to remedial action required by the Department by service of a written Notice of Assessment of Civil Penalty upon the respondent. The amount of such civil penalty shall be not less than one hundred dollars (\$100) nor more than ten thousand dollars (\$10,000) for violation of any order issued by the Commission or the Department requiring remedial action.

(Statutory Authority: ORS Chapter 466)

**PROPOSED REVISION OF CIVIL PENALTY RULES**

**NOTICE OF PUBLIC HEARING**

Date Prepared: May 6, 1988  
Hearing Date: August 3, 1988  
Comments Due: August 3, 1988

**WHO IS AFFECTED:** People who may violate Oregon's air quality, noise pollution, water quality, solid waste, on-site sewage disposal and hazardous waste regulations.

**WHAT IS PROPOSED:** The DEQ is proposing to revise the civil penalty rules, OAR 340-12-030 through 12-075, and to revise the federally-enforceable Oregon State Implementation (SIP) to be consistent with state rules.

**WHAT ARE THE HIGHLIGHTS:**

1. Proposed State Rule Revisions:

- >Violations related to the control of asbestos fibers into the environment are being added to the category of violations for which a civil penalty may be assessed without a prior warning notice.
- >Civil penalty schedules are being added for violations hazardous waste remedial action orders, and disposal of polychlorinated biphenols (PCBs).

2. Proposed State Implementation Plan (SIP) Revisions:

- >The following existing rules with proposed modifications are being retained: OAR 340-12-040, 340-12-045, and 340-12-050.
- >The following existing rules for procedures to assess a civil penalty and mitigate/settle a civil penalty are being renumbered: OAR 340-12-070 to 340-12-046, and 340-12-075 to 340-12-047.
- >The following existing rules are being retained: OAR 340-12-030 and 340-12-035.

**HOW TO COMMENT:** Copies of the complete proposed rule package may be obtained from the Regional Operations Division, Enforcement, in Portland (811 S.W. Sixth Avenue, Tenth Floor) or the regional office nearest you. For further information, contact Yone C. McNally at 229-5152.

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

2:00 p.m.  
Wednesday August 3, 1988  
DEQ Offices, Fourth Floor  
811 S.W. Sixth Avenue, Portland, Oregon

ATTACHMENT B

Oral and written comments will be accepted at the public hearing. Written comments may be sent to the DEQ Enforcement Section, 811 S.W. Sixth Avenue, Tenth Floor, Portland, OR 97204. Written comments must be received no later than 5:00 p.m., August 3, 1988.

**WHAT IS THE  
NEXT STEP:**

After public hearing, the Environmental Quality Commission may adopt rule amendments identical to the proposed amendments, adopt modified rule amendments on the same subject matter, or decline to act. The Commission's deliberation may come on October 7, 1988, as part of the agenda of the regularly scheduled Commission meeting. If adopted, the proposed SIP revisions will be submitted to the U.S. Environmental Protection Agency as a revision of the Clean Air Act SIP.

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

Agenda Item E, June 10, 1988, EQC Meeting

STATEMENT OF NEED FOR RULEMAKING

Pursuant to ORS 183.335(1), this statement provides information on Environmental Quality Commission's intended action to adopt a rule.

(1) Legal Authority:

ORS 468.125(2) identifies categories of violations for which the Department is not required to provide prior notice before assessing a civil penalty. The 1987 Legislature amended ORS 468.125(2) to include violations of asbestos abatement work standards.

ORS 468.130(2) lists factors the Commission is required to take into account when imposing a civil penalty. The 1987 Legislature amended ORS 468.130(2) to require the Commission specific factors before imposing a civil penalty.

ORS 468.130(1) requires the Commission to adopt by rule civil penalty schedules establishing amounts which may be imposed for particular violations.

(2) Need for Rule:

A schedule of civil penalties is required in order for the Commission to impose civil penalties for violations. A schedule also gives guidance for determining penalty levels in particular cases, and provides notice to the regulated community as to the types of violations that could result in civil penalties.

The proposed schedules achieve this goal by establishing schedules for new authorities.

Revisions are needed in the Clean Air Act SIP to make this federally enforceable rules consistent with existing and proposed state rules.

(3) Principal Documents Relied Upon:

The existing schedules of civil penalties for all programs, and ORS Chapters 454, 459, 466, and 468. These documents are available for review at the Department of Environmental Quality, Regional Operations, 10th floor, 811 SW Sixth Avenue, Portland, OR 97204.

(4) Fiscal and Economic Impact:

The newly proposed schedules would only have a fiscal and economic impact on individuals, public entities, and small and large businesses if a penalty were imposed for a violation of Oregon's environmental statutes or the Commission's rules concerning the disposal of polychlorinated biphenols and hazardous waste remedial action orders.

ATTACHMENT B

Agenda Item E, June 10, 1988, EQC Meeting

LAND USE CONSISTENCY STATEMENT

The proposed rule does not affect land use as defined in the Department's coordination program approved by the Land Conservation and Development Commission.

Yone C. McNally  
229-5152  
May 6, 1988



## Environmental Quality Commission

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

### MEMORANDUM

To: Environmental Quality Commission

From: Director *Hydro Taylor*

Subject: Agenda Item No. R, September 9, 1988, EQC meeting

Proposed Adoption of Rules Establishing Plan Requirements and Implementation Compliance Schedules for Achieving the Phosphorus and Ammonia Criteria for the Tualatin Basin Established in OAR 340-41-470(3) Special Policies and Guidelines.

### Background

On July 8, 1988 the Environmental Quality Commission adopted rules establishing special policies and guidelines for the Tualatin River basin. The new rules set ammonia-nitrogen and total phosphate criteria for the Tualatin River. These criteria are used to set the total maximum daily load (TMDLs), waste load allocations (WLAS), and load allocations (LAs) for phosphorus and ammonia-nitrogen. These two constituents have been determined to be the primary cause of the water quality standards violations in the Tualatin River.

In addition to specific criteria for the Tualatin subbasin, the Commission also considered at the July 8, 1988 meeting proposed rules that would specify the implementation plan and compliance schedule for achieving the criteria. This portion of the proposed rules was discussed extensively by the Commission and a number of suggested amendments were received from the public. The Commission did not adopt this portion of the proposed rules, but authorized the Department to hold public hearings on these proposed rules. The Commission also directed the Department to return to the Commission at the September 9, 1988 meeting for consideration of the proposed compliance schedule. Proposed compliance rules were developed and hearings were held on August 17 and 18, 1988. A copy of the Hearing's Officer's report is contained in Attachment D. The Department has also included the April hearings as a part of the record for the August hearings and this report is included in Attachment C.

After completion of the public hearings, the Department believed that the parties in the Tualatin were not far apart on how to meet the criteria. Therefore, the Department formed a group of the interested parties to review the proposed compliance rules in light of the suggestions and comments

received during the public testimony. Such a group was assembled and included representatives of Washington County, Unified Sewerage Agency, Lake Oswego Corporation, the Cities of Tualatin, Portland, and Lake Oswego, agriculture and forestry (representatives of the Departments of Forestry and Agriculture were invited for the last meeting on September 1, 1988) and NEDC. This group, which will be referred to as the Tualatin work group in this report, met four times prior to the writing of this staff report. Much was accomplished in these meetings. At the time this staff report was prepared, the Department believes that most in the group found the proposed language of the rule (Attachment A) to be generally acceptable. At the time this staff report was drafted, a final proposed draft was being mailed to members of the group for review. Although no additional meetings were scheduled, the Department was willing to consider more meetings if necessary to resolve further concerns.

#### Public Hearings

The Department, in the public notice for the hearings, asked the public to examine four specific questions. These included:

1. Should there be a date specified in the rules for the plans to be implemented and the criteria to be met? What is an appropriate date? Should specific technical information be provided to support selection of a final date?
2. Should the counties recommend a designated agency for the agricultural nonpoint source control plan? What agency should this be?
3. Should the final approved compliance schedules and water quality control plans be codified in Oregon Administrative Rules?
4. Should the criteria for phosphorus and ammonia-nitrogen apply during a specific time for the year or should criteria be regulated by specific flow and temperature conditions?

In addition, the proposed rules in the public notice also contained suggested wording to require the Oswego Lake drainage to be included with the Tualatin subbasin requirements for urban runoff control.

#### Major Issues Identified During the Hearings and Work Group Meetings

The following is a discussion of the major issues that were raised during both the public hearings and work group meetings.

## COMPLIANCE SCHEDULES

Commenters at the hearings felt that the proposed compliance period was overly aggressive. During the work group meetings, much of the discussion also focused on the timeframe for implementation. People on one side of the issue felt that everyone should have a specified date when the Tualatin will be in compliance with the adopted rules. This would give the public and public agencies a goal and show polluters that we were serious about cleaning-up the river. On the other side of the issue, there was considerable concern as to whether the date could be reached with all the work which needs to be done. People felt that the schedule did not allow for a complete review of potential options, enough time to develop a cost effective strategy, nor allow the regulated community enough time to establish a funding base to address pollution control. Commenters felt that a problem that took generations to create will take longer than five years to correct.

Commenters from the Lower Tualatin Valley Homeowners Association, River Grove, and several other individuals felt that compliance should begin immediately. They felt that additional planning is simply an excuse for not doing anything and that river conditions will just get worse and more difficult to fix while the planning continues.

Others felt that one could not criticize the June 30, 1993 date until one had reviewed the proposed plans to be sure that all reasonable steps were being taken to meet the criteria as soon as possible.

### Department's Response:

The Department believes that a final compliance date and a realistic compliance schedule are necessary for successful implementation of controls to meet the ammonia-nitrogen and phosphorus criteria. The Department also believes that it is difficult to determine what an appropriate compliance schedule is until the local entities have provided plans. However, the Department believes that providing a final compliance date defines the time frame for producing results. As such, the date would provide guidance during the planning process. The date of June 30, 1993 established in the adopted rule provides this guidance to the entities in preparing the "program plans". The Tualatin work group discussed this issue extensively and concluded that the rules should concentrate on the submittal of "program plans" which will present a particular entity's approach to defining the problem, reviewing alternatives, and selecting a preferred solution.

Once the program plans are submitted, reviewed, and approved by the Commission, the actual compliance schedule will be much better delineated. The program plans submitted by the entities would also provide additional information which could allow the final compliance date to be reassessed. Consequently, the Department has included in section (3)(i) of the proposed



rule a provision for the Commission to consider changing the final compliance date based on the information presented in the program plans. This would give the cities and counties the opportunity to determine what is specifically required of each of them and time to develop well-conceived program plans which the Commission will have the opportunity to review to see if the compliance date needs to be modified.

**SHOULD TMDLS NOT APPLY WHEN RIVER CONDITIONS ARE SUCH THAT WATER QUALITY PROBLEMS WILL NOT OCCUR?**

The issue here is whether the rules should apply for a given set period of the year (May 1 through October 31, for example) or should the rule identify specific conditions that describe the beginning and ending of the low flow period.

The adopted rule sets a specific time period for which the rules would apply. This time period was established after considering those specific times where standards were violated and water quality was affected. The period surrounds that time of year when lower river flows, higher water temperatures, sun light, and other conditions combine to cause water quality standards violations. The concern expressed during the hearings and during the Tualatin work group meetings was that there are periods when low flow conditions may extend beyond the established time period. There are also times when high flow conditions exist during the May 1 to October 31 time period established in the rules.

Washington County and USA requested specific flow conditions for initiating and ending the "summer low flow period" be included in the rule. Concerns were raised that the proposed conditions may not be an accurate measurement of "low flow conditions". One commenter felt that the dates should stay in the rule and if the polluter felt a change was necessary, they should apply for a special change.

**Department's Response:**

The dates defining the critical low flow period in the Tualatin Basin were intended to surround that time of year when lower river flows exist. Obviously, these conditions will vary from year to year. However, the dates do provide a definite period for compliance. Exceptions to the date may be justified depending on the requirements of the control strategy selected. The permit process provides the Department the opportunity to address exceptions with the special conditions section. The Department, therefore, does not propose to recommend including flow related triggers in the proposed rule. The proposed rule, however, would allow for exceptions to be applied for in proposed program plans and included as permit conditions, if approved by the Commission.

Specifically, the Department proposes to modify the rule adopted by the Commission on July 8, 1988 to add the word approximately before May in sections (3)(a) and (b) and by adding a specific footnote in both section (3)(a) and (3)(b) which describes when and how the Department may consider different time periods for specific sources.

#### NONPOINT SOURCE POLLUTION FROM AGRICULTURAL AND SILVICULTURAL ACTIVITIES

In the hearing notice the Department specifically requested comment on how the rules should address nonpoint pollution control. In order for the Tualatin River to maintain compliance with the water quality standards and specifically, the criteria for phosphorus and ammonia-nitrogen, nonpoint source(NPS) pollution from agricultural and forestry have to be addressed in the rules. The practical issue is how to identify the appropriate agencies and develop and implement the needed controls.

In the proposed rules that were taken before the Commission on July 8th, the counties were asked to recommend an agency to control agricultural NPS. During the hearings, testimony was received that the Oregon Departments of Agriculture and Forestry should be the designated agency for agricultural and forestry nonpoint source problems, respectively.

The Tualatin work group felt that the Oregon Departments of Agriculture and Forestry were the appropriate lead agencies for agriculture and forestry nonpoint source controls. This suggestion is reasonable in that both of these agencies have been previously designated as statewide management agencies for these particular NPS activities. The Department is concerned that these agencies have not had much time to consider this approach. The work in the Tualatin has focused on urban stormwater runoff and agriculture NPS problems, but the counties and cities, and local Soil and Water Conservation District have been the key players and not the state agencies for forestry and agriculture. Therefore, these agencies need some time to become familiar with the issues and commitments they need to make.

Both of these agencies have been very cooperative in helping the Department review and modify its approach to controlling nonpoint source pollution as required by Section 319 of the Water Quality Act of 1987. The Department believes that it would be reasonable to allow these agencies to develop their Tualatin plans within the process developed out of Section 319.

#### Department's Response:

The Department has modified the proposed rules to require that program plans for forestry and agriculture be required in the Memorandums of Understanding that the Department will develop with the Departments of Forestry and Agriculture as a result of the Section 319 process. This approach is specifically described in section (3)(h) of the proposed rules.

#### CONTAINER NURSERIES

During the hearings two individuals felt that container nurseries should be identified in the rule as industrial sources, be given specific waste load allocations, and specific permits. Several representatives of the container nursery industry testified that they are an agricultural nonpoint source. These representative felt that container nurseries should be regulated by the Soil Conservation Service or Department of Agriculture.

Container nurseries have the potential to discharge nutrients to the Tualatin River and could have an adverse effort on the cleanup effort. The Tualatin work group discussed various ways of addressing this issue. Currently, the Department, outside the Tualatin River process, has been working with a technical advisory committee whose task it has been to assess the problem and develop a control strategy to address container nurseries statewide. The Department has been collecting data to determine the significance of this particular wastewater source and various ways that could be employed to control it. Container nurseries do need to be evaluated in the Tualatin Basin and the Department needs to define how load, or waste load, allocations will be made for individual nurseries.

#### Department's Response:

The Department proposes rule modifications in section (3)(j)(D) that require the Department to develop a control strategy for this potential source within 180 days of adoption of these rules.

#### OSWEGO LAKE SUB-BASIN DRAINAGE

Several commenters felt that the Oswego Lake sub-basin should be included in the rule as part of the Tualatin Basin. They felt that if urban runoff is to be controlled in the Tualatin Basin for the purpose, in part of helping to keep Oswego Lake clean, it is only appropriate that those drainage areas that drain directly to the lake should also do their share.

#### Department's Response:

No one either in hearing testimony or in the Tualatin work group objected to Oswego Lake being included in the proposed rules. Therefore, the Department has included it in the rules where appropriate.

#### ESTABLISHMENT OF WASTE LOAD ALLOCATIONS AND LOAD ALLOCATION

The adopted rules establish the instream criteria for phosphorus and ammonia-nitrogen and the formula for calculating the TMDL, WLA, and LA. Several people testified during the hearings that the Department did not distribute waste load allocations or load allocation to the various sources in the basin as required by the consent decree between EPA and NEDC and

federal regulations. Several members of the Tualatin work group also stated that they wanted to know what specific loads were to be allocated to each source. This issue was discussed extensively among the Tualatin work group members. Most felt it would be very difficult for entities to prepare program plans without knowing their specific waste load or load allocation.

**Department's Response:**

The Department agrees with the need to establish specific WLAs and IAs, and proposes wording in the rules in section (3)(j)(A) that would require the Department to establish initial WLAs and IAs within 90 days of adoption of the proposed rules.

**CONTROLS ON URBAN RUNOFF FROM NEW DEVELOPMENT**

There will be a time period from the adoption of the rules and the implementation of the rules when new developments will be built in the Tualatin and Oswego Lake drainage basins. How these developments will be controlled so they do not significantly increase the pollution problems in the river while the plans are being developed and implemented is an issue. At least one testifier thought the Department should develop rules using its permit authority to require new development in the subbasins to provide stormwater controls. It was felt that action taken early on in this regard would prevent expensive retrofitting of technology later when each entity began to implement its stormwater control programs.

This issue also received attention during the Tualatin work group meetings. Representatives of the cities and Washington County did not feel that they had the expertise to develop an effective program. The Department felt that a permit program for individual developments would be resource intensive and thought that such a program could best be handled through the building permit program conducted by the counties and some of the larger cities.

**Department's Response:**

To address this issue the rules were modified to include under section (3)(j)(C) the requirement that the Department will propose rules for permits to control stormwater from new developments.

**COSTS FOR REACHING COMPLIANCE WITH THE CRITERIA HAVE NOT BEEN ADEQUATELY CONSIDERED**

The Department recognizes that detailed cost estimates have not been calculated in preparing these proposed rules. The established criteria are based on a technical analysis of the data collected by the Department and provided by cooperating agencies. This information indicates that a phosphorus level of 70 ug/l in the Lower Tualatin is necessary to prevent nuisance algal growth at all existing flow conditions in the lower Tualatin

River and in Oswego Lake. The ammonia criteria is designed to attain the dissolved oxygen standard in the lower Tualatin River. The criteria provide long-term planning guidelines.

The Clean Water Act of 1988 does address cost-benefit analysis in Section 302(b). This section allows EPA's Administrator, with concurrence of the state, to issue a permit which modifies the effluent limitations required by TMDLs if the applicant demonstrates at a hearing that (whether or not technology or other control strategies are available) there is not reasonable relationship between the economic and social costs and benefits to be obtained (including attainment of the objective of this act) from achieving such limitation.

**Department's Response:**

The Department believes that the program plans are the appropriate place for describing how and when cost-benefit analysis will be conducted. Cost-benefit analysis may influence the compliance schedule as well as the established criteria. Program plans, and subsequent compliance plans, may include reassessment of the established criteria at key points. Key points could include, completion of pilot projects and analysis of available options, achievement of interim limits, or demonstration of a change in the assimilative capacity of the river by flow modification or other methods.

**NEW OR ADDITIONAL LOADS**

Two Commenters felt that new or additional loads needed to be further addressed in the proposed rule. One commenter felt that a moratorium on new sources should be imposed until compliance is attained. Another commenter felt that new loads should only be allowed where existing capacity is available.

**Department's Response:**

Although the Department recognizes that some water quality standards are being violated in the Tualatin River, the violation do not constitute a threat to public health or welfare. Therefore, a moratorium does not seem warranted at this time.

The Department recognizes that once a TMDL has been established and once the final compliance date has been reached, no additional discharges of ammonia-nitrogen or phosphorus can be allowed unless the total loading is within the TMDL. However, the Department also believes that orderly growth within the Tualatin basin should be allowed as long as steady progress is being made towards ultimate compliance with meeting the TMDL. The proposed rule allows the Director, subject to Commission approval, to allow additional discharges from the Unified Sewerage Agency facilities provided the Director finds that the facilities requiring the additional discharges are not inconsistent or

would impede compliance with the final deadline. The Tualatin work group did not object to the allowance of temporary increases in discharge loadings as long as Commission approval was necessary and the discharge was strictly temporary.

### The Final Proposed Rules

The final proposed rules are contained in Attachment A. They represent modifications in the rules adopted by the Commission at the July 8, 1988 meeting, and they propose specific implementation plan requirements and compliance schedules. While the rules require considerable work from various agencies within the Tualatin and Oswego Lake subbasins, the Department has also committed itself to additional work including:

- Within 90 days, the Department must allocate waste loads allocations and load allocations to the various point and nonpoint sources in the basin;
- Within 120 days the Department must develop guidance for the preparation of the program plans to be submitted by the management entities;
- Within six months, the Department must develop a control strategy for container nurseries; and
- Finally, within six months, the Department must propose rules to control the runoff from new development that will be occurring in the two basins between now and the time the implementation programs are instituted.

In order to accomplish these activities, the Department will probably have to shift resources from other activities. No decisions have been made as to what activities or projects will be dropped or postponed to provide the necessary resources.

### Summation

1. The Tualatin River is a tributary to the Willamette River, and it has been identified as a water quality limited stream segment because it does not meet established water quality standards to protect its identified beneficial uses.
2. The Department has conducted an intensive water quality study and has developed specific water quality criteria for phosphorus and ammonia-nitrogen in order to bring the river back into compliance with the established standards.

3. The Commission, at its July 9, 1988 meeting, adopted specific water quality criteria for phosphorus and ammonia-nitrogen for the purpose of setting total maximum daily loads, waste load allocations, and load allocations for the Tualatin subbasin.
4. The Commission directed the Department to rewrite the implementation and compliance portion of the proposed rules and take them out to hearing and return to the Commission at the September 9, 1988 meeting with a new proposed rule.
5. The proposed rules were rewritten and public hearings were held on August 17 and 18, 1988.
6. The Department also formed a work group of interested and affected parties who have met on several occasions to review and discuss various rule revisions.
7. The proposed rules include provisions for implementing TMDLs, WLAs, and LAs for the controlling phosphorus and ammonia-nitrogen within the Tualatin River and Oswego Lake subbasins.
8. Point and nonpoint sources including urban, agricultural, and silvicultural runoff are addressed in the proposed rules.
9. The proposed rules require the Department to establish LAs and WLAs, prepare guidance for the preparation of program plans, propose rules to control runoff from new development in the basin, and to develop a control strategy for container nurseries.
10. The June 30, 1993 date for achieving the phosphorus and ammonia-nitrogen criteria, remains in the rule but the proposed rules require the Commission to reconsider the final date when it approves the program plans for achieving the criteria.
11. The proposed rules add the Oswego Lake drainage basin and require that an urban runoff control program be developed by the appropriate local jurisdiction.

#### Director's Recommendation

Based on the summation, it is recommend that the Commission adopt the proposed rules for establishing plan requirements and implementation compliance schedules for achieving the phosphorus and ammonia criteria for

EQC Agenda Item No. R  
September 9, 1988  
Page 11

the Tualatin Basin established in OAR 340-41-470(3) Special Policies and Guidelines.

Fred Hansen

Attachments (4)

- Attachment A - Proposed Rule
- Attachment B - Need for Rulemaking
- Attachment C - Hearings Officer's Report for the April Hearings
- Attachment D - Hearings Officer's Report for the August Hearings

Neil J. Mullane:hs  
WH2945  
229-5284  
September 6, 1988



## SPECIAL POLICIES AND GUIDELINES

340-41-470

(3) In order to improve water quality within the Tualatin River subbasin to meet the existing water quality standard for dissolved oxygen, and the 15 ug/l chlorophyll a action level stated in OAR 340-41-150, the following special rules for total maximum daily loads, waste load allocations, load allocations, and implementation plans are established.

- (a) After completion of wastewater control facilities and implementation of management plans approved by the Commission under this rule and no later than June 30, 1993, no activities shall be allowed and no wastewater shall be discharged to the Tualatin River or its tributaries without the specific authorization of the Commission that cause the monthly median concentration of total phosphorus at the mouths of the tributaries listed below and the specified points along the mainstem of the Tualatin River, as measured during the low flow period between ~~approximately~~ May 1 and October 31\* of each year, to exceed the following criteria:

Mainstem (RM)	ug/l	Tributaries	ug/l
Cherry Grove (67.8)	20	Scoggins Cr.	60
Dilley (58.8)	40	Gales Cr.	45
Golf Course Rd. (52.8)	45	Dairy Cr.	45
Rood Rd. (38.5)	50	McKay Cr.	45
Farmington (33.3)	70	Rock Cr.	70
Elsner (16.2)	70	Fanno Cr.	70
Stafford (5.4)	70	Chicken Cr.	70

\*Precise dates for complying with this rule may be conditioned on physical conditions (i.e. flow, temperature) of the receiving water and shall be specified in individual permits or memorandums of understanding issued by the Department. The Department shall consider system design flows, river travel times, and other relevant information when establishing the specific conditions to be inserted in the permits or memorandums of understanding. Conditions shall be consistent with Commission-approved program plans\*\*and the intent of this rule.

- (b) After completion of wastewater control facilities and implementation of management plans required approved by the Commission under this rule and no later than June 30, 1993, no activities shall be allowed and no wastewater shall be discharged [discharge of wastewater] to the Tualatin River or its tributaries without the specific authorization of the Commission [shall-be-allowed] that cause[s] the monthly median concentration of ammonia-nitrogen at the mouths of the tributaries listed below and the specified points along the mainstem of the Tualatin River, as measured between approximately May 1 and November 15\*, to exceed the following target concentrations:

Mainstem (RM)	ug/l	Tributaries	ug/l
Cherry Grove (67.8)	30	Scoggins Cr.	30
Dilley (58.8)	30	Gales Cr.	40
Golf Course Rd. (52.8)	40	Dairy Cr.	40
Rood Rd. (38.5)	50	McKay Cr.	40
Farmington (33.3)	1000	Rock Cr.	100
Elsner (16.2)	850	Fanno Cr.	100
Stafford (5.4)	850	Chicken Cr.	100

\*Precise dates for complying with this rule may be conditioned on physical conditions (i.e. flow, temperature) of the receiving water and shall be specified in individual permits or memorandums of understanding issued by the Department. The Department shall consider system design flows, river travel times, and other relevant information when establishing the specific conditions to be inserted in the permits or memorandums of understanding. Conditions shall be consistent with Commission-approved program plans\*\* and the intent of this rule.

- (c) The sum of tributary load allocations and waste load allocations for total phosphorus and ammonia-nitrogen can be converted to pounds per day by multiplying the instream criteria by flow in the tributary in cfs and by the conversion factor 0.00539. The sum of load allocations waste load allocations for existing or future nonpoint sources and point source discharges to the mainstem Tualatin River not allocated in a tributary load allocation or waste load allocation may be calculated as the difference between the mass (criteria multiplied by flow) leaving a segment minus the mass entering the segment (criteria multiplied by flow) from all sources plus instream assimilation.
- (d) The waste load allocation (WLA) for total phosphorus and ammonia-nitrogen for Unified Sewerage Agency of Washington County is determined by subtracting the sum of the calculated load at Rood Road and Rock Creek from the calculated load at Farmington.

State of the art?  
Consistency w/ Plans?  
income sources?

impossible  
incompatible

Subject to the approval of the Environmental Quality Commission, the Director may modify existing waste discharge permits for the Unified Sewerage Agency of Washington County and allow temporary additional waste discharges to the Tualatin River provided the Director finds that facilities allowed by the modified permit are not inconsistent and will not impede compliance with the June 30, 1993 date for final compliance. + USA is in compliance w/ plan.

~~XXXXXXXXXX~~  
plan

- (e) The Director may issue new waste discharge permits containing additional waste load allocations and approve nonpoint source activities containing additional load allocations for total phosphorus and ammonia-nitrogen provided the Director finds that the concentrations specified in sections (a) and (b) will not be exceeded.]
- (f) Within 90 days of the adoption of these rules, the Unified Sewerage Agency of Washington County shall submit a program\*\* plan and time schedule to the Department describing how and when the Agency will modify its sewerage facilities to comply with this rule. The program plan shall include provisions and time schedule for developing and implementing a management plan under an agreement with the Lake Oswego Corporation for addressing nuisance algal growths in Lake Oswego.
- (g) Within 18 months after the adoption of these rules, Washington, Clackamas, Multnomah Counties and all incorporated cities within the Tualatin River and Oswego Lake subbasins shall submit to the Department a program plan\*\* for controlling the quality of urban storm runoff within their respective jurisdictions to comply with the requirements of sections (a) and (b) of this rule.
- (h) After July 1, 1989, Memorandums of Agreements between the Departments of Forestry and Agriculture and the Department of Environmental Quality shall include a time schedule for submitting a program plan\*\* for achieving the requirements of sections (a) and (b) of this rule. The program plans shall be submitted to the Department within 18 months of the adoption of this rule.
- (i) Final program plans\*\* shall be reviewed and approved by the Environmental Quality Commission. All proposed final program plans shall be subject to public hearing prior to consideration for approval by the Environmental Quality Commission. Before approving a final program plan, the Commission shall reconsider and may revise the June 30, 1993 date state in sections (a), (b), and (e) of this rule. Significant components of the program plans shall be inserted into permits or memorandums of agreement as appropriate.
- (j) For the purpose of assisting local governments in achieving the requirements of this rule, the Department shall:

~~XXXXXXXXXX~~

#### JULY EOC MEETING PROPOSED RULE

- (C) Within one hundred twenty (120) days of submittal of the plan or agency designation and within sixty (60) days of the public hearing, the Environmental Quality Commission shall either approve or reject the plan or designation. If the Commission rejects the plan or designation, it shall specify a compliance schedule for resubmittal for approval and shall specify the reasons for the rejection. The Commission shall reject the plan if it determines that the plan will not meet the requirements of this rule within a reasonable amount of time. The Commission shall reject an agency designation if it determines the agency would not be able to conduct an effective nonpoint source program.

#### AMENDMENT OFFERED BY JACK SMITH AT JULY EOC MEETING

- (C) Within one hundred twenty (120) days of submittal of the plan or agency designation and within sixty (60) days of the public hearing, the Environmental Quality Commission shall either approve or reject the plan or designation. If the Commission rejects the plan or designation, it shall [specify a compliance schedule for resubmittal for approval and shall] specify the reasons for the rejection[.] and shall require the Director to issue the appropriate discharge permit or compliance order for pollutant load reductions within 180 days. The Commission shall reject the plan if it determines that the plan will not meet the requirements of this rule within a reasonable amount of time. The Commission shall reject an agency designation if it determines the agency would not be able to conduct an effective nonpoint source program.

#### AUGUST PUBLIC HEARINGS

- (C) Within one hundred twenty (120) days of submittal of the plan or agency designation and within sixty (60) days of the public hearing, the Environmental Quality Commission shall either approve or reject the plan or designation. If the Commission rejects the plan or designation, it shall specify a compliance schedule for resubmittal for approval and shall specify the reasons for the rejection. If the Commission determines that an agency has not made a good faith effort to provide an approvable plan within a reasonable time, the Commission may invoke appropriate as allowed under law. The Commission shall reject the plan if it determines that the plan will not meet the requirements of this rule within a reasonable amount of time. The Commission shall reject an agency designation if it determines the agency would not be able to conduct an effective nonpoint source program.

SEPTEMBER EQC MEETING PROPOSED RULE

- (i) Final program plans\*\* shall be reviewed and approved by the Environmental Quality Commission. All proposed final program plans shall be subject to public hearing prior to consideration for approval by the Environmental Quality Commission. Before approving a final program plan, the Commission shall reconsider and may revise the June 30, 1993 date stated in sections (a), (b), and (e) of this rule. Significant components of the program plans shall be inserted into permits or memorandums of agreement as appropriate.

STAFF RECOMMENDED LANGUAGE AT SEPTEMBER EQC MEETING

- (c) Within one hundred twenty (120) days of submittal of the program plan\*\* and within sixty (60) days of the public hearing, the Environmental Quality Commission shall either approve or reject the plan. If the Commission rejects the plan, it shall specify a compliance schedule for resubmittal for approval and shall specify the reasons for the rejection. If the Commission determines that an agency has not made a good faith effort to provide an approvable plan within a reasonable time, the Commission may invoke appropriate enforcement action as allowed under law. The Commission shall reject the plan if it determines that the plan will not meet the requirements of this rule within a reasonable amount of time. Before approving a final program plan, the Commission shall reconsider and may revise the June 30, 1993 date stated in sections (a), (b), and (e) of this rule. Significant components of the program plans shall be inserted into permits or memorandums of agreement as appropriate.

- (A) Within 90 days of the adoption of these rules, distribute initial waste load allocations and load allocations among the point source and nonpoint source management agencies in the basin. These allocations shall be considered interim and may be redistributed based upon the conclusions of the approved program plans.
- (B) Within 120 days of the adoption of these rules, develop guidance to nonpoint source management agencies as to the specific content of the programs plans.
- (C) Within 180 days of the adoption of these rules, propose additional rules for permits issued to local jurisdictions to address the control of storm water from new development within the Tualatin and Oswego Lake subbasins. The rules shall consider the following factors:
- (i) Alternative control systems capable of complying with sections (a) and (b) of this rule;
  - (ii) Maintenance and operation of the control systems.
  - (iii) Assurance of erosion control during as well as after construction.
- (D) In cooperation with the Department of Agriculture, within 180 days of the adoption of this rule develop a control strategy for addressing the runoff from container nurseries.

\*\*For the purpose of this section of the rules, program plan is defined as the first level plan for developing a waste water management system and describes the present physical and institutional infrastructure and the proposed strategy for changes including alternatives. A program plan should also include intergovernmental agreements and approvals, as appropriate, time schedules for accomplishing goals, including interim objectives, and a financing plan.

STATEMENT OF NEED FOR RULEMAKING

Pursuant to ORS 183.335(7), this statement provides information on the Environmental Quality Commission's intended action to adopt and amend rules.

(1) Legal Authority

ORS 468.735 provides that the Commission by rule may establish standards of quality and purity for waters of the state in accordance with the public policy set forth in ORS 468.710. ORS 183.545 requires a review every three years of state agency Administrative Rules to minimize the economic effect these rules may have on businesses. ORS 183.550 requires, among other factors, that public comments be considered in the review and evaluation of these rules. The Clean Water Act (Public Law 92-500, as amended) requires the states to hold public hearings, at least once every three years, to review applicable water quality standards. Section 303 of the Act further requires that Total Maximum Daily Loads be established for water quality limited stream segments.

(2) Need for the Rule

The Environmental Quality Commission, at its meeting on March 13, 1987, approved the process identified by the Department for establishing Total Maximum Daily Loads (TMDLs), including the proposed schedule for completing Phase I of the process for ten stream segments and one lake. To start the process, the Commission concurred with the Department's intent to place the Tualatin River TMDLs on 30-day notice for public review and comment, thus initiating the entire TMDL/WLA (Waste Load Allocation) process for the Tualatin River.

(3) Principal Documents Relied Upon in this Rulemaking

Clean Water Act as amended in 1977.

Water Quality Criteria, 1968. Federal Water Pollution Control Administration.

Water Quality Criteria, 1972. National Academy of Sciences and National Academy of Engineering.

Quality Criteria for Water, 1986. EPA.

Code of Federal Regulations, 1987 (40 CFR) Part 130 - Water Quality Planning and Management.

State/EPA Agreement, July 1987. Program Document for FY 1988.

DEQ Hearings Officer's Report for the Environmental Quality Commission, July 1988.

Environmental Quality Commission Report on the Tualatin River, July 1988.

#### (4) Fiscal and Economic Impact

Adoption and implementation of the proposed amendments to water quality standards in the Tualatin Basin would result in increased costs to local governments, small businesses, and individuals for treatment and control of point and nonpoint source wastes. Specifically, increased costs for wastewater treatment would be incurred by the Unified Sewerage Agency (USA) and those served by the USA to reduce phosphorus and ammonia loadings to the Tualatin River during the summer. These costs could breakdown into two categories: (1) capital construction costs for additional processes to reduce the two constituent loadings, and (2) increased operating costs.

In addition, increased costs could be incurred by a wide range of individuals and governmental entities for the improvement of urban and agricultural runoff management practices. These costs would relate to improving management practices to better control nonpoint sources to prevent degradation of water quality and maintain and protect the designated beneficial uses in the Tualatin River.

The fiscal and economic impacts are not well defined at present. Further definition of costs will occur as control strategies are assessed by USA and designated management agencies for nonpoint source control. The proposed implementation schedule describes the timing for assessment, submittal, and review of pollution control plans. The USA has provided the Department with preliminary cost estimates for the total present worth of needed improvements to comply with the approved phosphorus and ammonia criteria. J. Douglas Smith of the Tualatin Citizens Advisory Committee and N. Stan Geiger, chairman of the Tualatin Technical Advisory Committee, provided likely cost estimates for nonpoint pollution control costs.

The cost estimates provided by USA ranged from 50 to 150 million dollars, depending on the control strategy selected. The increase in user charges associated with these cost estimates range from \$4.20 to \$10.75 per month. These cost estimates are for construction cost and do not include anticipated increases in operating costs.

Nonpoint pollution control costs depend on the treatment method and the size of the catchment basin served. Urban catchment basins of 20 - 40 acres represent typical "on-site" control application, and "off site" application is reflected by detention basins serving greater than 640 acres. Construction costs for on-site wet detention basins serving the urbanized area of the Tualatin Basin were estimated by J.D. Smith and N. Stan Geiger as approaching 40 million dollars. Based on the Environmental Protection Agency publication Results of the Nationwide Urban Runoff Program, estimated costs for off-site wet detention basins serving the same urbanized area ranged between 5.4 and 14 million dollars. For engineered wetlands systems serving the urbanized area of the Tualatin Basin, J.D. Smith and N. Stan Geiger estimated costs as ranging between 2.5 and 7.5 million dollars. These estimates do not include engineering design, operational, or land acquisition costs.



In summary, the fiscal and economic impacts are not well defined. However, USA has provided the Department with preliminary cost estimates for the total present worth of needed improvements to comply with the proposed standards. These cost estimates range from 50 to 150 million dollars. The increase in user charges associated with these costs range from \$4.20 to \$10.75 per month. Public comment on any fiscal and economic impact is welcome and may be submitted in the same manner as indicated for the testimony on this notice.

The proposed rules would, if adopted, establish compliance dates for counties, cities and management agencies to submit implementation plans and schedules. The plans will identify implementation alternatives and costs associated with them. The Environmental Quality Commission will approve plans and adopt compliance schedules submitted under these proposed rules through another administrative rulemaking process. During this rulemaking process the public, small businesses, local governments, Department and Commission will have better costs associated with selected implementation alternatives to evaluate fiscal and economic impacts.

(5) Land Use Consistency

The Department has concluded that the proposal conforms with the statewide planning goals and guidelines.

Goal 6 (Air, Water, and Land Resources Quality):

This proposal is designed to improve and maintain water quality in the Tualatin River by eliminating the substandard dissolved oxygen problem mainly caused by ammonia loadings and by reducing the phosphorus loadings which supports nuisance algal blooms during the summer.

Goal 11 (Public Facilities):

Compliance with these proposed rules, if adopted, would require Unified Sewerage Agency of Washington County to provide additional sewerage facilities. Compliance with these proposed rules, if adopted, would require Washington and Clackamas Counties and the incorporated cities of these counties to provide for the control of urban stormwater runoff.

The proposed rules do not appear to conflict with other goals.

Public comment on any land use involved is welcome and may be submitted in the same manner as indicated for testimony in this notice. It is requested that local, state, and federal agencies review the proposed action and comment on possible conflicts with their program affecting land use and with Statewide Planning goals within their expertise and jurisdiction.

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

Ed Quan:c  
229-6978  
WC3519  
7/18/88

*Department of Environmental Quality*

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MEMORANDUM

To: Environmental Quality Commission  
From: Neil Mullane and Richard Nichols  
Subject: Agenda Item F, July 8, 1988, EQC Meeting

Hearings Officer's Report on The Proposed Rule Establishing Total Maximum Daily Loads (TMDLs), Waste Load Allocations (WLAs) and Load Allocations (LAs) for Total Phosphorus and Ammonia Nitrogen in the Tualatin River.

Background:

The Tualatin River below the Unified Sewerage Agency's (USA) Rock Creek Wastewater Treatment Plant (RCWTP) routinely violates the dissolved oxygen standard during low flow conditions.

Concentrations of chlorophyll *a* exceed the action level described in OAR 340-41-150 used to indicate nuisance phytoplankton growth conditions. This rule states that if the chlorophyll *a* content is exceeded, DEQ must conduct such studies as are necessary to describe present water quality; determine the impact of the elevated levels on beneficial uses; and develop a proposed control strategy for attaining compliance where technically and economically practicable.

The Federal Clean Water Act, under Section 303, requires that total maximum daily loads (TMDLs) be established for "water quality limited" stream segments. Water quality limited stream segments are reaches that do not meet standards, in either numerical or narrative form, even after technology based limitations have been applied.

A TMDL has several components. These components are defined as follows:

- o **Loading Capacity (LC):** The greatest amount of loading that a water can receive without violating water quality standards.
- o **Load Allocation (LA):** The portion of a receiving water's loading capacity that is attributed either to one of its existing or future non-point sources of pollution or to natural background sources. Load allocations are best estimates of the loading, which may range from reasonably

accurate estimates to gross allotments, depending on the availability of data and appropriate techniques for predicting loading. Wherever possible, natural and nonpoint source loads should be distinguished.

- o **Wasteload Allocation (WLA):** The portion of a receiving water's loading capacity that is allocated to one of its existing or future point sources of pollution. WLA constitute a type of water quality-based effluent limitation.
- o **Total Maximum Daily Load (TMDL):** The sum of the individual WLAs for point sources and LAs for nonpoint sources and background. If a receiving water has only one point source discharger, the TMDL is the sum of that point source WLA plus the LAs for any nonpoint sources of pollution and natural background sources, tributaries, or adjacent segments. TMDLs can be expressed in terms of either mass per time, toxicity, or other appropriate measure. If Best Management Practices (BMPs) or other nonpoint source pollution controls make more stringent load allocations practicable, then wasteload allocations can be made less stringent. Thus, the TMDL process provides for nonpoint source control tradeoffs.

In 1985, the Department initiated an intensive assessment of water quality and pollution sources in the Tualatin River Basin. Dissolved oxygen violations are due primarily to ammonia discharged from RCWTP. Phosphorus was found to be a key nutrient supporting the nuisance algal growth.

In December 1986, the Northwest Environmental Defense Center (NEDC) filed suit in the Federal District Court against the Environmental Protection Agency (EPA) to ensure that TMDLs would be established and implemented for waters in Oregon identified as being "water quality limited". This suit specifically identified the Tualatin River. A subsequent notice to file suit by NEDC listed an additional 27 water quality limited segments needing TMDLs. The Department actively participated in negotiations with NEDC, EPA, and the U.S. Justice Department to develop an acceptable approach for establishing TMDLs.

In March 1987, the Environmental Quality Commission (EQC) approved the Department's proposed process and schedule for establishing TMDLs for identified "water quality limited" segments. In April 1987, the Department prepared an issue paper proposing interim TMDLs for total phosphorus and ammonia in the Tualatin River. On March 11, 1988, the Department submitted final proposed phosphorus and ammonia standards to the EQC and requested authorization to hold public hearings. Three public hearings were held in late April 1988. Over 90 individuals presented written and/or oral testimony at these hearings. Exhibit 1 of this report identifies the commenters and their areas of concern. The remainder of this report summarizes the Department's response to the testimony. To lay the framework

Hearings Officer's Report  
July 8, 1988

for the Department's response to comments, it is important to first reiterate the purpose of the project and the study methodology.

Project Goals:

The purpose of establishing TMDLs is to protect the beneficial uses of water in the Tualatin Basin. The Department has identified degraded water quality adversely affecting two beneficial uses: 1) aquatic-life through substandard dissolved oxygen and potential chronic ammonia toxicity during low flow conditions, and 2) aesthetics through nuisance algal growth during summer low flow conditions.

Water quality standards are established to protect the beneficial uses. In the Tualatin Basin, there is a numerical standard of 6 mg/l for dissolved oxygen and a narrative standard for aesthetics. Additionally, the nuisance phytoplankton growth rule, OAR 340-41-150, identifies the chlorophyll a concentration used to indicate nuisance phytoplankton growth conditions.

The existing water quality standards are not met and have not lead to the achievement of the desired water quality in the Tualatin Basin. It is a reasonable approach to refine water quality criteria necessary to achieve standards and protect the beneficial uses of water in the basin.

Establishing TMDLs for phosphorus and ammonia concentration will focus implementation plans on solving the defined water quality problems in the Tualatin Basin. The TMDLs are proposed as special policies and guidelines for the Tualatin Basin in OAR 340-41-470.

The goal of the ammonia TMDL is to attain the dissolved oxygen standard of 6 mg/l in the lower Tualatin River and to prevent chronic ammonia toxicity.

The goal of the phosphorus TMDL is to reduce the current nuisance algal growth in the lower Tualatin River to a level that is aesthetically acceptable. Acceptable aesthetic conditions are based on the nuisance phytoplankton growth rule. The objective is to achieve a summer average chlorophyll a concentration of less than 15 ug/l in the lower Tualatin River based on current flow conditions.

Establishment of TMDLs is a technical issue. Limits will be based on a technical evaluation of the available information. Following the establishment of the TMDLs, strategies and options for attaining the limits will be defined, reviewed, and implemented.

Technical Approach:

Phosphorus has been identified as the key nutrient supporting the excessive algal growth in the Tualatin River and Lake Oswego. All nutrients are known to be important in influencing algal growth. Of all the nutrient elements,

only phosphorus is controllable by man. Carbon is too ubiquitous and is not controllable and nitrogen only partly so. There are several reasons why nitrogen is only partly controllable. Nitrogen in its various forms (as nitrate, ammonia, and organic) enters water bodies from natural and cultural sources much more readily than phosphorus. These avenues include fixation of atmospheric nitrogen by some blue-green algae and other microorganisms (Bartsch A.F., USEPA 1972).

The EPA provides a rationale, based on the best available scientific judgment, for establishing phosphorus criteria to prevent nuisance algal growth. However, EPA provides no national criteria for phosphorus concentration to control algal growth in rivers. There are several factors that may occur which justify selecting a phosphorus value different than the EPA suggested criterion. When available, site specific information should be used to establish phosphorus criteria to control algae.

No standard method is universally accepted for establishing a phosphorus criteria to control eutrophication in rivers. To determine the appropriate level, the Department used three technical assessments: 1) algal assays, 2) inter-basin comparison, and 3) site specific model review.

#### 1. Algal Assay.

The purpose of the algal assay is to determine the limiting nutrient, to measure algal growth potential, and to quantitatively estimate the effect of nutrient reduction on the productivity of the receiving water. The algal assay is based on the premise that maximum yield is proportional to the amount of a nutrient which is present and biologically available in minimal quantity. EPA states that when point sources overwhelm a river system with nutrients, as currently exists in the Tualatin River, the algal assay, rather than expensive modeling and long-term studies, may provide a sufficient basis for determining the required nutrient reductions (Rasche R.L. and Shultz D.A., 1987).

Assays have been found to be sensitive to subtle differences in nutrient content of various waters sampled (Green et. al., 1975). The reliability of the assay has been demonstrated by its repeated ability to accurately predict the effects of wastewater upon algal growth in natural waters and to determine the primary limiting nutrient in receiving waters (Ram and Plotkin, 1982).

The standard algal assay is widely accepted as the best measurement of bio-available phosphorus (Rasche R.L. and Shultz D.A., 1987; Ram N.R. and Plotkin S., 1982; Bradford M.E. and Peters R.H., 1987; Green J.C., Miller W.E. and Shiroyama T., 1975). There are several forms of phosphorus in a stream. Two are routinely measured by the Department: Total phosphorus and Ortho phosphorus. Total phosphorus represents the sum of the external and internal phosphorus reserves of the system

Hearings Officer's Report  
July 8, 1988

(Auer M.T., Kiesser M.S. and Canale R.P, 1986). Ortho phosphorus is generally considered as the readily available phosphorus for algal growth.

Several other forms are available for measurement. The phosphorus form depends on the method used for analyses. Differing methods include filtration, reduction, autoclaving, and enzymatic hydrolysis. Bradford and Hays (1987) found that Total Reactive Phosphorus (autoclaved) provided a consistent correlate of available phosphorus. This form of phosphorus was used by the Department in the algal assays. The assays can be expected to correlate to the bio-available phosphorus in the Tualatin River.

Algal assays measure the maximum potential of algal growth under controlled laboratory conditions with a single species of algae (*Selenastrum capricornutum*). These conditions never fully exist in the field. Therefore, results should be interpreted as a measurement of the maximum growth potential rather than a direct estimate of instream algal production.

Results of the Tualatin River algal assays show that phosphorus criteria below 150 ug/l are required to control algal growth. Phosphorus concentrations at 150 ug/l or above would not be expected to limit algal growth. Concentrations of 100 ug/l would be expected to result in a noticeable change in the algal growth in the Tualatin River. Concentrations approaching 50 ug/l would be expected to result in low algal growth conditions in the Tualatin River.

Several methods have been suggested by the technical advisory committee for fitting lines through the results of the algal assays. NEDC offered suggestions for estimating maximum algal growth. The expected algal growth potential changes little due to the methods used to fit a line to the results. The fundamental conclusions, as shown in Table 1, drawn from these results, do not change due the method employed.

Resultant water quality descriptions are based on the assays' ability to measure algal growth conditions. Additionally, research conducted by Lee and Jones (1986) indicated that algal growth reductions in lakes, as measured by chlorophyll a, are not noticeable at less than 20 percent reduction from the original conditions.

Table 1  
Algal Assay Results

Phosphorus Concentration	Estimated Reduction in Algal Growth Potential by:		Resultant Water Quality
	DEQ	NEDC	
0.15 mg/l	10-20%	10-15%	High algal growth, no visible effect.
0.10 mg/l	40-45%	35-40%	Moderate algal growth, effect would be obvious.
0.07 mg/l	60-65%	---	Moderate-to-low algal growth, effect would be obvious.
0.05 mg/l	80-85%	85-90%	Low algal growth, effect would be obvious.

A third algal assay was completed to estimate the reduction in algal growth potential due to dilution of effluent. Results of this assay are described in Table 2. Dilution ratios in these assays varied from no effluent to 5% effluent. Current levels of effluent in the Tualatin River exceed 30% during critical summer low flow conditions. This assay resulted in apparent nitrogen limitation. However, these results do not indicate nitrogen limitation under existing conditions.

Table 2  
Reduction in Algal Growth Potential  
due to Effluent Dilution

<u>Percent</u> <u>Effluent in Test Sample</u>	<u>Estimated Reduction in</u> <u>Algal growth potential</u>
0 (Above Known Discharges)	93%
1.0	75%
2.0	67%
3.0	56%
4.0	50%
5.0	43%

2. Inter-Basin Comparison:

One of the major problems in predicting the effect of phosphorus reduction on chlorophyll a concentration in the lower Tualatin River is that no site specific data exists at low phosphorus concentrations.

Hearings Officer's Report  
July 8, 1988

Comparing basins of similar morphology in the Willamette Valley to the Tualatin provides an indication of the algal growth response to lowered phosphorus concentration.

The basins compared include the Yamhill and the Marys Rivers, which flow west from the Coast range, have long residence times and flat gradients in the lower basin. The Willamette River, which was also included, is substantially larger and may not be a good comparative stream.

To draw any conclusions from this set of data requires the assumption that phosphorus is limiting algal growth, and that the relationship between phosphorus and algal growth is similar for streams in the same geographic region. Assuming phosphorus limitation means that physical factors such as light, temperature, and travel time are not limiting algal growth.

Empirical models comparing algal growth in various lakes is a widely accepted approach for estimating algal growth response due to phosphorus reduction in lakes. No similar empirical method exists for rivers. A prime reason is that a non-geographic basis for such generalizations as the fundamental oligotrophic-eutrophy classification system used for lakes does not exist for rivers (Cushing, et.al., 1980). Bradford and Peters (1987) also found that phosphorus in eutrophic rivers was more variably available than lake phosphorus for algal growth.

Based on studies conducted in Oregon, ecoregions provide a geographic framework for classifying stream systems. Ecoregions classify streams based on climate, land use, and ecological similarities. In Oregon, water chemistry, trophic level, productivity, and fish assemblages for Willamette Valley streams tended to be like other streams in the valley and unlike streams in other regions. Based on this study, the lower Tualatin River can be qualitatively compared to similar streams in the Willamette Valley. Streams rising in the Willamette Valley are relatively warm, enriched, turbid, and have deep pools. Willamette Valley streams have the greatest fish species richness and diversity, largest numbers of exotic species, and fewest salmonids (Whittier and Hughs, 1988).

NEDC suggested that a curve enveloping all the data from these stream provided an indication of the maximum algal growth supported by phosphorus. This envelope would provide an indication of the bio-availability of phosphorus at low concentration. A comparison of similar basins will provide an indication of the maximum algal growth due to bio-available phosphorus.



In basins similar to the Tualatin, phosphorus limitation of algal growth is observed below 100 ug/l. This indicates that the reduction of phosphorus in the Tualatin River can be expected to limit algal growth at similar phosphorus concentration.

### 3. Site Specific Model-Review

Simulation modeling uses a known set of conditions and circumstances to predict what results would most likely be if various conditions or circumstances were changed. It is not an exact science. As pointed out by NEDC, there are concerns with literal translation of the results. The results do not portray exact conditions. However, it is a professionally acknowledged science for predictive purposes.

The Department, in cooperation with the Unified Sewerage Agency (USA), conducted a series of intensive surveys to describe water quality in the lower Tualatin River. Daily samples were collected to assess the temporal variation in algal growth. This information was used by CH2M-Hill to calibrate a water quality model for the Tualatin River. The model used is the Corps of Engineers' Water Quality Model for Rivers-Reservoirs-Systems (WQRRS). The model has two segments. The "river" segment extends upstream from just below the Durham STP at River Mile 9. The "reservoir" segment extends downstream from River Mile 9 to the Lake Oswego Diversion Dam at River Mile 3.5.

The water quality coefficients were largely taken from the WQRRS documentation as default values. Algal growth rates, settling rates, certain decay rates, and half-saturation constants were modified for the Tualatin River calibration. The model was developed from data collected in 1987 and verified by data collected in 1986. The model calculates algal biomass as the result of nutrients and physical limitations. The relationship between algal biomass and chlorophyll *a* for the Tualatin River was assumed to be 50:1 or 2 percent by weight.

The modeling results presented by CH2M-Hill focused on describing the relationships between flow (Travel-Time), phosphorus concentration, and average chlorophyll-a concentration. The model assumes all the phosphorus present is biologically available. This is never true in the environment. To reflect the proposed rule, the model's bio-available phosphorus must be converted to total phosphorus. Interpretation of the results depends on the assumption made converting the biologically available phosphorus used in the model to total phosphorus in the Tualatin River. CH2M-Hill assumes that the relationship between Ortho phosphorus and Total phosphorus in the Tualatin River can be used to convert bio-available phosphorus to Total phosphorus.

This conversion method assumes that Ortho phosphorus is similar to biologically available phosphorus. Ortho phosphorus is typically considered as the measurement of readily available phosphorus. Total phosphorus represents the pool of available phosphorus. Since the model allows for internal cycling, this conversion method provides an initial starting point for evaluating phosphorus limitation.

Interpretation of the model results depends on the regression used to convert bio-available phosphorus to total phosphorus. Figures 1 and 2 from CH2M-Hill illustrate different interpretations based on selecting different regressions. Tables 3 and 4 illustrate the conversions used to generate these figures.

Table 3  
Conversions of Biologically Available to Total Phosphorus for Different Sections of the Tualatin River

Figure 1 Used the Elsner-Stafford Conversion

Location	<u>Ug/l Bio-Available Phosphorus</u>					
	7	26	56	78	114	155
	<u>Converted to Ug/l Total Phosphorus</u>					
Dilley - Cherry Grove	29	176	409	579	858	1176
Farmington - Scholls			29	74	148	232
Elsner - Stafford <sup>1</sup>	70	93	130	157	200	250
Elsner - Stafford <sup>2</sup>	60	85	124	153	201	254

Table 4  
Conversions of Biologically Available to Total Phosphorus for Different Sections of the Tualatin River.

Figure 2 Used the Farmington - Scholls Conversion

Location	<u>Ug/l Bio-Available Phosphorus</u>					
	.50	92	103	116	140	163
	<u>Converted to ug/l Total Phosphorus</u>					
Dilley - Cherry Grove	362	688	773	874	1060	1238
Farmington - Scholls			125	152	201	248
Elsner - Stafford <sup>1</sup>	123	174	187	203	232	260
Elsner - Stafford <sup>2</sup>	117	172	186	203	235	265

1 = Project Data  
 2 = Project + Intensive Data

ELSNER-STAFFORD REGRESSION CURVE  
SUMMER AVERAGE CHLOROPHYLL-a, JUNE TO SEPTEMBER

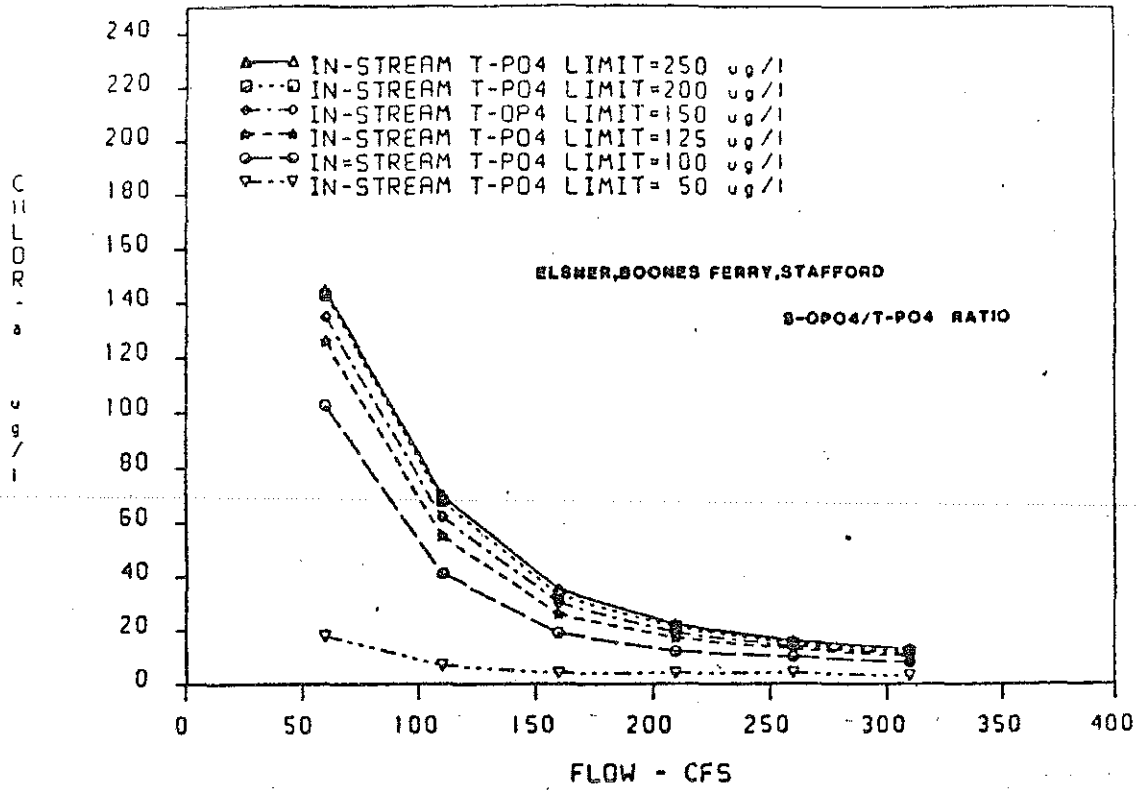
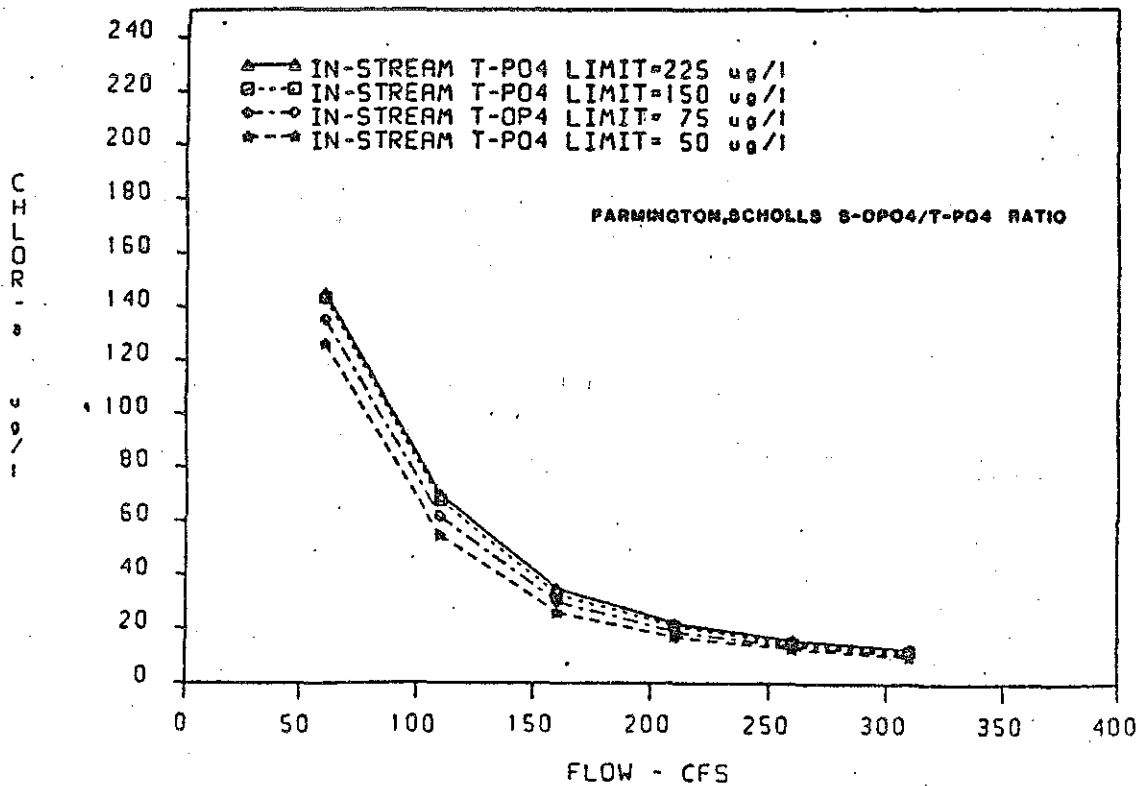


Figure 2  
TUALATIN RIVER CHLOROPHYLL-a vs. FLOW  
FARMINGTON-SCHOLLS REGRESSION CURVE  
SUMMER AVERAGE CHLOROPHYLL-a, JUNE TO SEPTEMBER



To predict the results of lower phosphorus in the Elsnor-Stafford area, the conversion relationships at Elsnor-Stafford was used. The consistent model results are shown in Table 5.

Table 5  
Model Results

<u>Total Phosphorus Concentration</u>	<u>Result in</u>
125 ug/l	Chlorophyll <u>a</u> in excess of 15 ug/l
100 ug/l	Chlorophyll <u>a</u> in excess of 15 ug/l when flows are below 160 cfs. When flows are above 160 cfs, average Chlorophyll <u>a</u> concentration would approach 15 ug/l
70 ug/l	Chlorophyll <u>a</u> concentrations below 15 ug/l at all current flow conditions.
50 ug/l	Chlorophyll <u>a</u> concentrations below 15 ug/l at all flow conditions. (CH2M-Hill's conversion to total phosphorus).

The Tualatin in 1987 had a mean summer (May - October) flow of 168 cfs, and a minimum weekly average flow of 80 cfs. Based on a comparison of flows at Farmington, these flows represent the lowest flow conditions for the past ten years. The phosphorus criteria must be set to limit algal growth at current flow conditions.

Lake Oswego:

The intent of the Tualatin project was to establish TMDLs to address water quality problems in the lower Tualatin River. As part of the study, the Department cooperated in the Lake Oswego Lake and Watershed Assessment conducted by Scientific Resources Inc. The purpose of the assessment was to identify and evaluate feasible lake restoration alternatives.

Lake Oswego is currently an intensively managed lake. The lake is connected to the Tualatin River by a canal. Water is withdrawn from the Tualatin for the purpose of power generation, except for small withdrawals for irrigation and reservoirs maintenance. Approximately 85% of Lake Oswego water comes from the Tualatin River.

The Lake Oswego Corporation controls access to the Lake Oswego through easements, shareholder agreements, and boat registration. The Corporation

provides for public access to the lake at the Lake Grove swim center and the City of Lake Oswego swim center.

For the past 40 years, copper, as  $\text{CuSO}_4$ , has been applied to Lake Oswego to control algal growth. Without this treatment, and during periods of no treatment, Lake Oswego is hyper-eutrophic, having excessive nuisance algal growths.

Several management options for controlling algal growth in Lake Oswego have been reviewed based on the widely accepted empirical Vollenweider model. This is the method suggested by EPA. Results of the analysis from Scientific Resources Inc. (SRI) are listed in Table 6.

Table 6  
Predicted Water Quality Conditions in Lake Oswego  
for Various Management Strategies

<u>Phosphorus Criteria and</u> <u>Management Strategy</u>	<u>Expected Conditions</u>
Annual limit of 100 ug/l. Continued water diversion at existing levels	Moderate algal growth conditions. Major target conditions achieved for Lake Oswego.
Summer limits of 50 - 100 ug/l total phosphorus with continued water diversion	Excessive algal growth.
Summer limits below 80 - 90 ug/l. Limited water diversion for lake maintenance and irrigation (6.36 cfs)	Moderate algal growth. Target conditions for lake water quality achieved.
February through March 50 - 25 ug/l. Continued water withdrawals	Reduction in the level of algal growth, still excessive. Possible reduction in copper applications due to overall reduction in algal growth.

From the technical analysis conducted to date, it is not possible to establish an annual TMDL which would prevent nuisance algal growth in Lake Oswego. The required criteria of 10 ug/l is below the observed phosphorus concentrations at Cherry Grove, in the upper watershed. It is possible to establish phosphorus criteria which assure options are available to Lake

Oswego to manage for water quality objectives. A seasonal limit of below 80 ug/l would provide Lake Oswego the opportunity to manage for water quality.

Phosphorus criteria initiated earlier in the year would allow Lake Oswego to reduce overall algal growth resulting from refilling the lake after winter draw down. Winter draw down allows Lake Oswego to control nuisance macrophyte growth.

Public Hearing Summary of Major Comments:

1. **Clean The River**

Several commenters did not propose a specific phosphorus criteria or policy, rather they stated that the Tualatin needs to be cleaned up. These commenters felt that the Department needed to establish criteria that will restore the Tualatin River to its original condition.

From personal histories, several individuals noted that many beneficial uses were not being fully supported in the Tualatin River. Uses not being supported include fishing, and contact recreation as well as aesthetics and aquatic life. This concern is described in testimony from Jim Gilbert and Larry Everson, and was supported by the Tualatin River Watch, a group of concerned citizens.

**Department's Response:**

The Department initiated a study in 1986 to evaluate the water quality and pollution sources in the Tualatin River. Beneficial uses not supported were identified as aesthetics and aquatic life. Phosphorus and ammonia have been identified as key parameters affecting the beneficial uses. The Department feels that criteria on these parameters, and development of strategies for both point and nonpoint pollution controls are necessary to protect the beneficial uses of the Tualatin River.

2. **Permanent Solution:**

Several commenters felt that a permanent solution should be developed for the Tualatin River. A comprehensive management plan needs to be developed that prevents short sighted conclusions.

**Department's Response:**

The Department agrees that a long-term water quality management plan needs to be developed for the Tualatin River. The establishment of TMDLs, WLAs, and LAs identifies key concerns and establishes water quality goals for the Basin. These goals will be used by the

Department, the designated lead agency for nonpoint sources, and the Unified Sewerage Agency to develop long term plans and compliance schedules for the basin.

3. Phosphorus Criteria:

a. Lower Phosphorus Limit of 50 ug/l.

A group of responses supported a lower phosphorus concentration than the proposed 100 ug/l. Three commenters supported the proposed level. An alternative strategy was proposed by CH2M-Hill and supported by USA, Washington County, and one individual.

Lower phosphorus suggestions were based on the assumption that 50 ug/l is an EPA recommended value for rivers discharging to a lake, by an assessment the algal assay result indicating a 90% reduction in algal growth at 50 ug/l total phosphorus, and an interpretation of CH2M-Hill's model.

Responses supporting the 100 ug/l criteria based their assessment on a perceivable change in water quality in the Tualatin River. Other commenters felt a 100 ug/l criteria would protect the beneficial uses of the river and provide more management opportunities.

Department's Response:

The stated goals of the project are to achieve a summer chlorophyll a concentration of 15 ug/l in the lower Tualatin River and to provide opportunities to Lake Oswego control nuisance algal growth. The Department agrees that a lower phosphorus criteria level is required to assure that these goals are achieved. Based on a review of algal assays, comparative basins, site specific models, and the Lake Oswego Restoration Analysis, the stated objectives can be achieved with a 70 ug/l phosphorus TMDL.

The 50 ug/l is not a standard defined by EPA, EPA suggests using site specific data where available. Load limits for Lake Oswego are based on the widely accepted Vollenweider method as suggested by EPA. Phosphorus limits for the Tualatin River are based on a technical analysis using site specific information.

As discussed previously, the algal assays can not be interpreted to suggest that reductions observed under laboratory controlled conditions will occur in the field. This basic fact is discussed by DEQ in the assessment report. Results should be interpreted as a reduction in algal growth potential.

Both EPA and NEDC cite the results of CH2M-Hill's modelling as site specific analysis indicating a need for a lower phosphorus concentration than proposed. The model predicts a concentration of 70 ug/l is required to prevent algal growth at currently existing flows in the Tualatin River. Algal assays predict a 60 - 65% reduction in algal growth potential resulting in noticeable improvements to water quality in the lower Tualatin River. A 70 ug/l phosphorus concentration would also allow Lake Oswego to meet its major target conditions for water quality. The Department, therefore, changes the originally proposed phosphorus criteria of 100 ug/l and proposes a 70 ug/l criteria for total phosphorus.

b. Alternative Criteria:

USA Proposed TMDLs for Various Flows of the Tualatin River:

The limits proposed under the Individual Control Strategy (ICS) suggested by USA, CH2M-Hill, and Washington County, are in Table 7.

Table 7  
Tualatin River ICS

<u>Flow CFS</u>	<u>Load Phosphorus Pounds per Day</u>	<u>Predicted TP at Elsner</u>	(CH2M-Hill) <u>Estimated Average Chlorophyll a</u>
70 or less	19	50 ug/l	15
100	38	70 ug/l	20
125	61	90 ug/l	30
150	117	145 ug/l	35
165 or greater	216	250 ug/l	35
(Median Conditions, Tualatin River at Elsner, Low Flow Conditions 1987)			
168	218	240 ug/l	35
(Median conditions, Tualatin River at Elsner for the Time Period Modeled)			
174	225	240 ug/l	38



ICS with Assumed Nitrogen Limitation:

Wetlands have been extensively discussed by the advisory committees to the Tualatin study. USA and CH2M-Hill, in reviewing the nitrification-biological phosphorus removal-wetlands polishing option, have suggested that nitrogen limitation would control algal growth in the lower river following this process. Nitrogen limitation would result in less algal growth than predicted by the phosphorus concentrations used on the ICS review. Based on this conclusion, USA suggests that the Department accept the ICS.

CH2M-Hill provided modeling results to estimate water quality conditions following the nitrification-biological nutrient removal-wetlands polishing wastewater treatment option. These results were run for flow at Farmington in excess of 165 cfs. Their model results are in Table 8.

Table 8  
Predicted Water Quality Following USA's Proposed  
Nitrification-Biological Nutrient Removal-Wetland Polishing Option

	Run No. 1		Run No. 2	
	<u>Elsner</u>	<u>Stafford</u>	<u>Elsner</u>	<u>Stafford</u>
Ortho P (mg/l)	0.43	0.045	0.031	0.036
Total P (mg/l)	0.12-0.11	0.13-0.11	0.10-0.09	0.11-0.10
Chlorophyll <u>a</u> (ug/l)	13	19	11	15

Department's Response:

The proposed ICS fails to achieve the major objectives of a noticeable change in water quality throughout the lower Tualatin River, a summer average 15 ug/l chlorophyll a, or provide management options for Lake Oswego.

There is a definite relationship between flow and phosphorus concentration in the Tualatin River. The alternative of varying phosphorus concentration with flow conditions to achieve a specified chlorophyll a concentration has some merit. However, no technical justification has been presented for increasing the chlorophyll a target concentration.

The ICS with assumed nitrogen estimates the algal growth in the Tualatin River following a management alternative of nitrification-biological phosphorus removal-wetlands polishing.

The control option of nitrification-biological phosphorus removal-wetlands polishing is certainly an option that needs to be evaluated as a management option for the Tualatin point sources. However, prior to selecting any option, there needs to be a full review of all available options. All available options have not been defined. A full review of any single option has not been completed. Definition and review of management options will be a component of the compliance schedule for USA.

There are several concerns with the proposed management plan. Prior to final review, the wetlands treatment assumptions need to be verified with site specific pilot projects. Available data indicates that the Jackson Bottoms wetlands may be providing phosphorus to the Tualatin River. Location of potential wetlands needs to be further assessed. Assumptions on nitrogen limitation need to be further reviewed.

CH2M-Hill concludes that nitrogen limitation would not result in a shift to blue-green algae. This conclusion is based on the following statements:

"Many waters in Western Oregon are nitrogen limited and blue-green algae are not common. Blue-greens are associated with the harder eastern Oregon waters.

"We have had a nitrogen limitation since 1980 and have not seen a shift to blue-green algae.

"Blue-green algae are often associated with ammonia as the limiting nutrient.

"Blue-greens generally require molybdenum when nitrogen is limiting. Molybdenum may be a limiting micro-nutrient."

Although, at times, nitrogen is in the lowest proportion of the macro-nutrients, it is not limiting. A shift to nitrogen fixation would only be expected when the available supply is exhausted. This does not occur in the Tualatin. CH2M-Hill suggests that blue-green algae are associated with ammonia limitation, and there is abundant ammonia in the Tualatin. It should also be noted that ammonia is one of the parameters to be limited in the Tualatin River.

The theoretical nitrogen to phosphorus ratio varies between systems and by algae species. An error of greater than 50% can be

expected if chemical analysis is used to assess the limiting nutrient (Rasch R.L. and Schultz D.A., 1987). The average nitrogen to phosphorus ratio cited by CH2M-Hill is within the range considered in nutrient balance by EPA. EPA states that if the ratio of nitrogen to phosphorus is greater than 12:1, phosphorus is considered the limiting nutrient; if the ratio is less than 5:1, then nitrogen is considered the limiting nutrient (USEPA 1983).

Blue-green algae do occur in the Tualatin Basin. When copper applications to Lake Oswego are stopped, blooms of blue-green algae appear in Lake Oswego. Data suggests that the copper additions prevent earlier growths. Although micro-nutrient limitation is suggested by CH2M-Hill, no data presented that would indicate that molybdenum would be limiting for the Tualatin River. The Tualatin River receives significant wastewater discharge and can not be considered a typical western Oregon stream. Research conducted in several streams in Oregon showed that Willamette Valley streams have similar chemical characteristics, and that these characteristics are different than other streams in western Oregon.

No site specific data has been provided which would justify selecting a phosphorus limit at concentrations above which phosphorus prevents nuisance algal growth. Additionally, the higher phosphorus values proposed by CH2M-Hill would limit opportunities for Lake Oswego to attain water quality goals. The Department concludes that a total phosphorus criteria of 70 ug/l provides greater assurance of attaining water quality standards than the ICS plan proposed by CH2M-Hill.

c. **Timing of the Phosphorus Limit:**

J. D. Smith and Larry Everson suggested a year-round phosphorus criteria. Larry Everson suggests that background concentrations be measured in the Tualatin River above the City of Gaston. Year-round phosphorus limits were suggested to protect the Fisheries resource in the Tualatin. The Lake Oswego Corporation suggested initiating phosphorus limits as early as February to help improve water quality in Lake Oswego. EPA requested a review the justification for the phosphorus time period.

**Department's Response:**

Year-around limits are proposed by NEDC to prevent potential toxic problems. Larry Everson suggests that phosphorus acts as a surrogate for many toxins. Limiting phosphorus year-round may

then limit toxins year-round. No data is presented to indicate a toxic concern in the Tualatin River associated with phosphorus discharge. The respondents did not cite literature to support their contention of phosphorus as a surrogate for toxic concerns. No technical support is provided which describes the need to limit phosphorus year-round to prevent undescribed toxic concerns.

A nonpoint source pollution control program needs to be established in the Tualatin Basin. The necessary guidelines for this program will be established by the Department and the appropriate lead agency(ies) for nonpoint source control. However, the proposed phosphorus TMDL is designed to address currently defined water quality problems in the Tualatin Basin. Phosphorus criteria initiated earlier in the year than proposed would benefit Lake Oswego. The water in Lake Oswego is replaced every three to four months. Water entering the lake preceding the summer provides most of the nutrients available during the growing season. Phosphorus limits during February to May would greatly reduce the nutrient supply in Lake Oswego available for algal growth. However, nutrient concentrations would still be adequate to result in high algal growth conditions.

Primary advantages to Lake Oswego of an earlier phosphorus limit are based on the assumption of lower cost to achieve a target level of water quality in the lake. The other primary advantage is that Lake Oswego would be able to maintain power generation during the spring. Alternative options to achieving water quality goals would require not withdrawing water for power generation.

Spring phosphorus removal needs to be evaluated as a control option by USA. Historically, the lowest concentrations in the lower Tualatin River occur in April. Concentration of phosphorus upstream of the major point sources reach their lowest concentrations in April/May. The Lake Corporation needs to establish options for water intake in April/May. USA and the Lake Corporation need to develop a management plan for phosphorus removal to coincide with options for filling Lake Oswego. The goal of this plan is to achieve as early as possible phosphorus reduction the Tualatin River. USA's compliance schedule will include establishing a spring phosphorus removal strategies.

Winter phosphorus limits would not help reduce algal growth in the Tualatin River. During the winter, physical conditions of high flows, cold temperatures, and low light intensity, limit the growth of algae in the Tualatin River. The phosphorus TMDL is required when these factors may not limit algal growth.

For the Tualatin River, the historical growth period is from June through August. The intensive data collection during the low flow conditions in 1987 shows that algal growth can exceed the 15 ug/l chlorophyll a action level through October. Historical temperature data which indicates maximum temperature may not limit algal growth between May and October. Similarly, historical data indicates that minimum stream flow may not limit algal growth between May and November. The Department agrees that the phosphorus limit needs to be expanded. The proposed time period for phosphorus TMDL is May 1 through October 31.

d. LA, WLA and TMDL:

Many commenters felt that nonpoint sources were neglected in the proposed rule. Although further refinement is required, commenters felt that establishing phosphorus and ammonia criteria on the major basins is an appropriate strategy for initiating a nonpoint source plan. Comments suggested that WLAs need to be attributed to all point sources whether permitted or not. Sewage overflows, container nurseries, and stormwater discharge pipes were specifically mentioned as requiring WLAs.

**Department's Response:**

The Department agrees that establishing goals and objectives for nonpoint source controls is necessary. Although the process for establishing the criteria was described in the proposed rule, further refinement is warranted. Establishing phosphorus and ammonia criteria for the major tributaries is an appropriate place to start.

Tributary target concentrations are equal to the proposed mainstem concentrations at the point where the tributary enters the mainstem Tualatin. Similar to the mainstem limits, the tributary limits vary with flow in the tributary.

To estimate the instream concentrations by mainstem reach, the known and unexplained sources of phosphorus were removed from the existing loads by mass balance. Tributary loads to the mainstem were estimated using the proposed concentrations and existing typical summer flows.

Table 9  
LA by Tributary and Mainstem Reach

<u>Mainstem</u>	<u>(ug/l)</u>	<u>Tributaries</u>	<u>(ug/l)</u>
Upper River	20	Scoggins Cr.	60
Dilley	40	Gales Cr.	45
Golf Course Rd.	45	Dairy Cr.	45
Rood Rd.	50	McKay Cr.	45
Farmington	70	Rock Cr.	70
Elsner	70	Fanno Cr.	70
Stafford	70	Chicken Cr.	70

All allocations are presented in ug/l. Tributary load allocations can be converted to pounds per day by multiplying the instream criteria by flow in the tributary in cfs and by the conversion factor of 0.00538. Load allocations for existing or future nonpoint sources to the mainstem Tualatin River not allocated in a tributary load allocation, may be calculated as the difference between the mass (criteria multiplied by flow) leaving a segment minus the mass entering the segment (criteria multiplied by flow) from all sources plus instream assimilation.

For the major point source at Rock Creek, the WLA can be calculated by subtracting the load above the point of discharge (Rood Road) plus the load allocation for the Rock Creek tributary drainage from the load below the discharge (Farmington). Table 10 demonstrates the calculation of the WLA when RCWTP is discharging at 20 cfs and flow in Rock Creek is 10 cfs. The WLA includes all discharges into public water including bypasses and overflows.

Table 10  
Phosphorus WLA Calculation

<u>Flow at Farmington cfs</u>	<u>Load at Farmington Lbs/Day</u>	<u>Flow at Rood Rd. cfs</u>	<u>Load at Rood Rd. Lbs/Day</u>	<u>Load at Rock Creek at 10 cfs Lbs/Day</u>	<u>WLA RCWTP 20 cfs Lbs/Day</u>
50	19	20	5	4	10
60	23	30	8	4	11
70	26	40	11	4	12
80	30	50	13	4	13
90	34	60	16	4	14
100	38	70	19	4	15
110	41	80	22	4	16
120	45	90	24	4	17
130	49	100	27	4	18
140	53	110	30	4	19
150	56	120	32	4	20
160	60	130	35	4	21
170	64	140	38	4	22
180	68	150	40	4	23
190	72	160	43	4	24
200	75	170	46	4	25

As planning guidelines, the criteria and, therefore, the loads, may change as management plans are reviewed. Technical justification for an alternative target concentration may be provided based on flow augmentation resulting in dilution of upstream concentrations, refined values based on the Department's planning/monitoring requirements to refine NPS LAs by appropriate stream sections, or adjustments to the WLA based on instream assimilation or mixing zone studies.

Table 11 lists potential LAs based on existing instream concentrations above where known point sources exist, and existing tributary concentrations. Background and nonpoint source loads currently fulfill the proposed instream phosphorus criteria. For RCWTP to discharge, the effluent concentration would have to be equal to or below the ambient phosphorus criteria.

Table 11  
LA by Tributary and Mainstem Reach

<u>Mainstem (ug/l)</u>		<u>Tributaries (ug/l)</u>	
Upper River	20	Scoggins Cr.	60
Dilley	40	Gales Cr.	75
Golf Course Rd.	45	Dairy Cr.	120
Rood Rd.	70	McKay Cr.	180
Farmington	70	Rock Cr.	320
Elsner	70	Fanno Cr.	200
Stafford	70		

Knowing the tributary flow, the effect of alternative criteria can be presented. See Table 12.

Table 12  
Tributary Load Reduction

<u>Tributary (cfs)</u>	<u>Difference in Load Between Alternatives Reviewed</u>
Dairy (20 cfs) (Includes McKay)	8.5 lbs/d
Rock Cr (10 cfs) (Includes Beaverton)	13.5 lbs/d
Fanno Cr. (3 cfs)	3.0 lbs/d

The allocations presented in Table 9 provide a equitable distribution of the efforts to achieve the phosphorus criteria in the Tualatin Basin. The allocations are the Department's estimate of the reductions required to achieve the TMDL. The LAs are based on an assessment of existing conditions. However, the Department has not assessed the potential of achieving these goals.

The allocations presented in Table 11 assume no nonpoint source control efforts. This assumption has obvious effects on the WLA provided to USA. The Department acknowledges the need to include nonpoint source controls as a component of the management plan for the Tualatin River. The proposed LAs are those listed in Table 9.

A TMDL based on 70 ug/l provides an appropriate margin of safety. All analysis indicate that this concentration will: result in a trophic level change in algal growth conditions, achieve the algal growth in the range of 15 ug/l chlorophyll a at existing flow



conditions, and result in a decrease in algal growth that is noticeable to the general public.

Load allocations are planning guidelines. Permit conditions for USA require that sewage bypassing be prevented. Therefore, the WLA for sewage bypass has already been defined as zero. The Department is currently conducting studies to determine pollution loads originating from container nurseries. Results of these investigations will be included as WLA in the Tualatin following the study and assessment of management options by the Department and the technical advisory committee to the project. Stormwater quality goals and guidelines are to be developed as part of the compliance schedule for nonpoint source agencies. As appropriate these guidelines will be included in the TMDL planning guidelines for the Tualatin Basin.

4. Ammonia Criteria:

a. Toxicity

Three commenters felt that prior to establishing ammonia limits, problems with ammonia toxicity need to be reviewed. Limits should be based on the strictest possible limit to provide adequate oxygen concentration or prevent ammonia toxicity to cold water fish.

Department's Response:

The Department agrees that the limit should be the strictest limits for ammonia which provide adequate oxygen concentration and prevent ammonia toxicity.

Ammonia exists in two basic forms, the ammonium ion and un-ionized ammonia. The principle toxic form is the un-ionized ammonia. The degree of toxicity depends primarily on the concentration of ammonia, the pH, and stream temperature.

Current levels of ammonia in the Tualatin River at Farmington routinely exceed the EPA 4-day average toxicity criteria level during summer low flow conditions. The 4-day average ammonia toxicity criteria is occasionally exceeded in the lower Tualatin River at Elsner and Tualatin during summer low flow conditions. One hour maximum ammonia toxicity values are not exceeded in the Tualatin River.

The primary source of ammonia in the Tualatin Basin is RCWTP. Below RCWTP ammonia is rapidly converted to nitrate. The highest

concentrations, and the greatest exceedance of the EPA criteria, occur below the RCWTP as measured at Farmington. The critical site for establishing an ammonia standard is below the RCWTP at Farmington.

Based on the maximum temperature observed at Farmington (22° C) and the maximum pH (7.5), the 1.0 mg/l (1000 ug/l) ammonia standard would maintain maximum ammonia concentrations below the EPA 4-day average criteria value in the Tualatin River. Ammonia levels required to achieve the dissolved oxygen standard are restrictive enough to prevent chronic toxicity levels of ammonia.

b. **Ammonia Time Frame:**

EPA suggested that a longer time period is required to prevent dissolved oxygen violations. The suggested time frame occurs earlier in the spring and later in the fall. Larry Everson, suggested year-round standards to address ammonia toxicity concerns.

**Department's Response:**

The Department agrees that a longer time frame is required to prevent dissolved oxygen violations and eliminate concerns with ammonia toxicity. Historical data shows that dissolved oxygen violations occur from early June through mid-November. Ammonia concentrations routinely exceed EPA 4-day average toxicity criteria at Farmington from June through October. Ammonia concentrations occasionally exceed EPA 4-day average toxicity criteria in November. The ammonia criteria is to be expanded to include May 1 through November 15.

The Department's objective is to establish guidelines, through OAR, which address existing problems in the Tualatin River Basin. Defined water quality problems associated with ammonia are low dissolved oxygen and chronic ammonia toxicity. Both problems occur during low flow conditions. The Department is not aware of ammonia toxicity concerns in the Tualatin River, or tributaries, during winter high flow conditions. Data indicates that ammonia concentrations are well below EPA recommended criteria during winter high flow conditions.

As stated, the Department sees TMDLs as tools to achieving water quality standards where existing rules and regulations fail to attain water quality objectives. Toxic levels of ammonia are prevented according to OAR 340-41-445 (2)(o)(B). Levels of toxic substances shall not exceed the most recent criteria values for

organic and inorganic pollutants established by EPA and published in Quality Criteria for Water (1986). The Department intends that these levels apply to all Tualatin tributaries.

c. TMDL, LA and WLA by Tributary and River Reach:

Concerns regarding the refinement of ammonia criteria by sub-basin were related to ammonia toxicity concerns. The Department feels that a refinement of the ammonia load allocations is appropriate and these allocations are presented for segments of the mainstem and specific tributaries to the Tualatin in Table 13.

Table 13  
LA by Tributary and Mainstem Reach

<u>Mainstem (Ug/l)</u>		<u>Tributaries (Ug/l)</u>	
Upper River	30	Scoggins Cr.	30
Dilley	30	Gales Cr.	40
Golf Course Rd.	40	Dairy Cr.	40
Rood Rd.	50	McKay Cr.	40
Farmington	1000	Rock Cr.	100
Elsner	850	Fanno Cr.	100
Stafford	850		

All allocations are presented in ug/l. Limits are based on existing concentrations at standard DEQ sampling locations. LA criteria apply at the mouth of the tributary. The daily load can be converted to pounds per day by multiplying the target concentration by the flow in cubic feet per second and again by the conversion factor 0.00538.

The proposed criteria are lower at Elsner and Stafford than the criteria at Farmington to prevent chronic ammonia toxicity levels from being exceeded. Lower levels are necessary due to warmer water temperatures that occur in this section of the river. The rapid conversion of ammonia to nitrate in the river will prevent chronic levels of ammonia at Elsner if the load allocation at Farmington is reached.

The ammonia WLA for the major point source at Rock Creek can be calculated by subtracting the load above the point of discharge (Rood Road) plus the load allocation from the Rock Creek tributary basin from the load below the discharge (Farmington). Table 14 provides an example of the ammonia WLA when RCWTP is discharging at 20 cfs and the flow in Rock Creek is 10 cfs.

Table 14  
Ammonia WLA Calculation

<u>Flow at Farmington cfs</u>	<u>Load at Farmington Lbs/Day</u>	<u>Flow at Rood Rd. cfs</u>	<u>Load at Rood Rd. Lbs/Day</u>	<u>Load at Rock Creek at 10 cfs Lbs/Day</u>	<u>WLA RCWTP 20 cfs Lbs/Day</u>
50	269	20	5	4	258
60	323	30	8	4	309
70	377	40	11	4	360
80	430	50	13	4	412
90	484	60	16	4	463
100	538	70	19	4	514
110	592	80	22	4	565
120	646	90	24	4	616
130	699	100	27	4	667
140	753	110	30	4	718
150	807	120	32	4	769
160	861	130	35	4	820
170	915	140	38	4	872
180	968	150	40	4	923
190	1022	160	43	4	974
200	1076	170	46	4	1025

As planning guidelines, the target criteria and, therefore, the loads, may change as management plans are reviewed. Reasons for change may include technical justification for an alternative value, flow augmentation resulting in dilution of upstream concentrations, refined values based on the Department's planning/monitoring requirements to refine NPS LAs by appropriate stream sections, or technical justification for an alternative target water quality condition.

A TMDL based on the proposed 1.00 mg/l (1000 ug/l) of ammonia provides an appropriate margin of safety. All analysis indicate that this concentration will prevent substandard oxygen concentration and prevent chronic levels of ammonia toxicity in the Tualatin River below Farmington.

5. **Nonpoint Source Control:**

a. **NPS Controls Needed**

Several commenters noted that nonpoint source controls are a necessary component of management strategies to protect the

description of the elements that they felt should be included in a nonpoint source management plan. One Thousand Friends of Oregon felt that a link needs to be established between land use planning and water quality planning in the Tualatin Basin. Several individuals felt that the Department needs to designate a lead agency for developing nonpoint source pollution control plans in the basin. Washington County was suggested as an appropriate agency.

Total Phosphorus and Total Suspended Solids were suggested as surrogates for numerous other chemical parameters entering the environment from nonpoint sources. NEDC suggested establishing a TMDL for Total Suspended Solids.

**Department's Response:**

The Department agrees that additional emphasis and guidance needs to be given the nonpoint source program. Therefore, specific requirements for urban stormwater runoff and agricultural discharges have been added to the rules. Washington and Clackamas Counties and the incorporated cities of these counties within the Tualatin Basin have been charged with the responsibility of developing plans within specific time frames for urban stormwater runoff. These plans are to address existing problems and will as contain provisions for preventing future problems.

The final proposed rule also contains requirements for Washington and Clackamas Counties to designate an agency responsible for agriculture nonpoint sources within their county in the Tualatin Basin. Specific time periods are established for completing these designations and conducting subsequent reviews and approvals by the EQC.

The Department agrees that LAs for the major tributary basins are appropriate and these have been established in sections (a) and (c) of the proposed rule.

**b. Tributary Load Allocation:**

Several commenters felt that load allocations for the major tributary basins need to be defined.

**Department's Response:**

The Department agrees that tributary load allocations provide an appropriate method for establishing guidelines for water quality

in tributary streams. The allocations are discussed under the phosphorus and ammonia concerns.

6. Compliance Schedule:

Several commenters noted the need to further define a compliance schedule in the proposed rules.

Department's Response:

After review of the public testimony, the Department agrees that further clarification of compliance schedules, for both point and nonpoint sources, is necessary. The Department's requirements need to be stated to assure that steady progress is made towards addressing water quality problems in the Tualatin Basin. The proposed rule is modified to reflect these requirements.

The Department believes that 90 days is an adequate time period for USA to develop and submit to the Department for approval, a plan and schedule of how USA will comply with the proposed rule.

Nonpoint source compliance schedules will be addressed by Washington County, Clackamas County, incorporated cities, and designated lead agencies. The Department believes that one year is adequate time for the counties and cities to develop plans and time schedules for controlling the quality of stormwater discharged to public water in the Tualatin Basin. This plan needs to provide an inventory of sewage bypass locations and describe a process for complying with the proposed rule.

The Counties, subject to Commission approval, will designate a lead agency to be responsible for the control of nonpoint source pollution outside of the urban growth boundaries. The Department believes that 90 days is sufficient time for the county to designate a lead agency. The Department also believes that 180 days is sufficient time to develop and submit a plan and time schedule for achieving the goals of the proposed rule.

Hearings will be held to obtain public input on all proposed plans. Following these hearing, the Environmental Quality Commission will either accept or reject the submitted plans. Plans will be rejected if the Commission determines that it will not meet the goals of the proposed rule within a reasonable time period. If the plan is rejected, the Commission will specify a compliance schedule for resubmittal of the plan for approval.

8. Cost of Achieving the TMDL

Several commenters felt that the Department has not fully evaluated the costs associated with the proposed TMDLs, or fully evaluated all options, has not proven that a phosphorus limit will result in improved water quality in the Tualatin River, or proven that proposed phosphorus levels are attainable.

**Department's Response:**

The establishment of the limits to protect the beneficial uses of the Tualatin River Basin is a technical issue. Criteria are set to achieve defined water quality objectives and are based on the best available technical information. Once these criteria have been determined, then options for achieving the TMDLs, WLAs, and LAs, can be evaluated by the appropriate agency. During this evaluation, the costs associated with achieving a defined criteria can be evaluated.

All the technical data collected by the Department or provided by cooperating agencies shows that reducing phosphorus will reduce algal growth in the Tualatin River. Phosphorus control is a commonly accepted method to restore waters suffering from nuisance algal growth. No technical information has been provide that indicates phosphorus control would not limit algal growth in the Tualatin River.

The proposed TMDLs provides a technical assessment of the phosphorus criteria required to limit algal growth at all currently existing flow conditions. A complete assessment of attainability will require that control options be defined and evaluated. This evaluation will occur as part of the compliance schedule developed by USA, the designated nonpoint source agency, and DEQ.

The proposed tributary LAs are based on the concentration of phosphorus expected in the reach of the Tualatin River where they discharge. LAs for the Tualatin River are based on a mass balance of phosphorus in the Tualatin River with existing point and undefined phosphorus loads removed. The Department believes that these LAs provide the best available planning guide for NPS controls. As stated earlier, LAs will refined as needed.

9. Technical Evaluation:

Four commenters described concerns, or provided suggestions for technical analysis.

Department's Response:

Concerns raised regarding technical issues are discussed in the technical evaluation section.

10. Other Concerns:

a. Definition of LC, TMDL, WLA, and LA:

NEDC and USEPA suggested that definitions for the components of the TMDL be those defined by USEPA.

Department's Response:

The Department agrees that the definitions of Loading Capacity (LC), Waste Load Allocation (WLA), Load Allocation (LA) and Total Maximum Daily Load (TMDL) should be consistent with the federal definition. These definitions appear in the background section.

b. Postpone establishing criteria for five years:

Three commenters suggested postponing establishing criteria for phosphorus and ammonia for five years to provide further study. This suggestion also stated that limits should not be imposed without 80% federal or state funds available for necessary improvements.

Department's Response:

The proposed criteria are planning guidelines. As guidelines they establish water quality goals for the basin. Options for achieving water quality criteria have not been fully defined or reviewed. The necessary compliance schedules have not yet been determined for point and nonpoint sources.

USA and the designated nonpoint source agency, under the proposed compliance schedule, must submit to the Department for review and approval planning schedules by December 31, 1988. These schedules will include appropriate time frame for any further study that is needed to assess management options.

c. Treatment Alternatives:

Many commenters suggested wetlands as a treatment alternative for point sources. Others commenters felt that less discharge to the Tualatin will be required.



**Department's response:**

The proposed criteria are planning guidelines. Treatment alternatives have not been determined, nor has any alternative been fully evaluated. Identification and evaluation of treatment alternatives is a key component of the planning process identified in the proposed compliance schedule. Only when this review has been completed, can the selection process for the appropriate management option be initiated.

**d. Phosphorus Detergent Ban is Needed.**

**Department's Response:**

Phosphorus detergent bans have been reviewed by the Department. This review is available upon request. In general, phosphorus detergent bans have not been found to be effective at reducing loads to a river where treatment plants currently treat phosphorus. However, as a management option to reduce influent load to treatment plants, or to reduce nonpoint source loads, a phosphorus detergent ban may be further reviewed. If this assessment indicates a verifiable benefit from a phosphorus detergent ban, the Department would support an appropriate restriction.

**e. The Department is not legally required to establish standards under the federally required TMDL process:**

The Department agrees that the proposed criteria are better defined as special rules and policies for the Tualatin Basin.

**f. The Tualatin River Stinks:**

**Department's Response:**

Although only mentioned by one individual during the hearings, this complaint has been voiced by several citizens during the course of the study. The Department believes that the proposed criteria to eliminate nuisance algal growth will prevent this aesthetic problem. Decay of organic material, such as algae, has been suggested as the primary reason for this problem.

g. Algae does not mean pollution:

Department's Response:

There are very few waters that do not support some algal growth. Since algae are primary producers in the food chain, this is a fortunate fact. The problems occur when algal productivity is increased due to human activities to nuisance levels. These nuisance levels currently occur in the Tualatin River. Beneficial uses of fish and aquatic life, contact recreation, and aesthetics are negatively affected by these nuisance algal growths.

The nuisance phytoplankton growth rules cites an average summer chlorophyll a concentration of 15 ug/l as an indication that nuisance algal growth conditions may exist. No technical information has been provided to indicate that higher levels are acceptable for the Tualatin River. Median chlorophyll a levels in the Tualatin River at Elsner during 1987 were over 35 ug/l. The Department feels that this exceedance is great enough to indicate nuisance algal growth conditions.

h. USA is not working in good faith.

Department's Response:

USA has worked cooperatively with the Department throughout the study design, data collection, data analysis, and public involvement components of the project. The Department believes that this cooperation will continue.

Attachments: (2)

Matrix of Respondents and Concerns  
Summary of Written Testimony

Bob Baumgartner:hs/kjc  
WH2720  
292-5877  
June 17, 1988

SUMMARY OF ORAL AND WRITTEN TESTIMONY

The proposed rule went out for public comment, following Commission approval, on March 11, 1985. Three hearings were held in the Tualatin Basin to obtain public input. A total of 94 respondents provided 76 documents of written testimony and 53 respondents provided oral testimony. The remainder of this report summarizes the oral and written testimony received by the Department.

**Joseph Abraham, Written Testimony**

Mr. Abraham provided his historical view of the Tualatin River, and noted that it is in the best interest of many people that the river be cleaned up.

**Eileen Alrore, Written Testimony**

Ms. Alrore described swimming and picnicking along the Tualatin River during the 1930's and 1940's. She hopes that the Tualatin, as well as the Molalla and Pudding Rivers, are kept clean.

**Brett Arvidson, Oral Testimony, 4/25/88**

Mr. Arvidson stated that DEQ has not proven that the proposed phosphorus standard would work and that there has not been a full evaluation of the potential costs. Other concerns that were stated by Mr. Arvidson include: the proposed rule grossly neglects factors other than phosphorus that affect algal growth; nonpoint source controls; and removal of flow in the Tualatin by out-of-basin transport may be more of a problem than nutrient control. Mr. Arvidson felt that just because algae was present did not mean the river was polluted. Mr. Arvidson does not believe the Department has shown that the Tualatin River is water quality limited due to algal growth.

**Richard Baranzano, Written Testimony and Oral Testimony, 4/28/88**

Citing OAR 340-41-150(2), Mr. Baranzano states that the Environmental Quality Commission must prove that the Tualatin River's true characteristic is devoid of algal growth prior to establishing a phosphorus limit. He feels that the Department must develop a control strategy for attaining compliance that is technologically and economically practicable.

Lloyd Baron, Oral Testimony, 4/25/88

Mr. Baron noted that there are 25 to 26 agencies with some control of water quality or quantity in the Tualatin Basin and suggested that a single agency, the Washington County Commissioners, should be responsible for water control in the basin. There are different costs associated with the level of nutrient control required. Phosphorus is not the only factor which influences algal growth. Because of these concerns, Mr. Baron felt that Washington County should go slow in developing a water quality management plan for the Tualatin Basin.

Beull and Associates, Written Testimony and Oral Testimony, 4/26/88

Dr. Beull encouraged the use of wetlands as a waste treatment alternative in the Tualatin Basin. Dr. Beull provided examples and information on existing wetland treatment systems in California.

Gregg Brown, Oral Testimony, 4/25/88

Mr. Brown questioned the costs estimates provided by the Unified Sewerage Agency and their consultants, CH2M-Hill. Mr. Brown felt the costs were purposefully inflated to suggest that costs associated with water quality control measures were unacceptable.

Carolyn Brown, Written Testimony and Oral Testimony, 4/25/88

Ms. Brown supports the proposed phosphorus controls for the Tualatin River. The lower Tualatin River is not a lake. In more mature streams, such as the Tualatin River, stream configurations tend to have meanders and sluggish flow. Ms. Brown felt that costs and economic impacts should be described. Structural nonpoint source controls should be defined and implemented.

Lolitta Carter, Written and Oral Testimony, 4/25/88

Dr. Carter provided seven reasons why the EQC should postpone establishing a water quality plan for the Tualatin Basin. These reasons are: the proposed phosphorus limit may not work; the algal assays may not be the best technology; the Tualatin Technical Advisory Committee (TAC) was not asked to endorse the proposal; out-of-basin transport may be an option and result in further water quality problems; natural sources of phosphorus may keep levels in the river above the lowest proposed levels; the solution needs to be permanent and include ecological, economic, and social factors as well as be cost effective to reduce the financial cost to the citizenry; and the Washington County Board of Commissioners should be the agency to solve the problem, not DEQ.

Consulting Engineers Council Oregon (CECO), Written Testimony

The CECO took exception to suggestions that CH2M-Hill provided invalid cost estimates. Cost estimates are a professional service provided by registered engineers. They carry the same professionalism as design drawings.

CH2M-Hill, Written Testimony and Oral Testimony, 4/25/88

CH2M-Hill provided results of their modelling efforts for the Unified Sewerage Agency and proposed an "Individual Control Strategy (ICS) for the Tualatin River". The strategy proposed by CH2M-Hill is based on their analysis of the Tualatin data. From this analysis, CH2M-Hill concludes that many factors interact to control algal growth in the Tualatin River. The major factors include weather, residence time, phosphorus, and nitrogen. The Tualatin River ICS incorporates the interactions between flow and nutrient concentration to limit algal growth.

CH2M-Hill bases the justification for the proposed ICS on Environmental Protection Agency guidance for phosphorus control which states that there are natural conditions that would dictate the consideration of either a more or less stringent phosphorus level. CH2M-Hill responds to all seven specific conditions cited by EPA justifying an alternative standard. In summary, their results indicate that natural phenomenon may currently be limiting algal growth in the lower Tualatin River. Cost effective measures based on the ICS, may help control introduced pollutants. Phosphorus control may not be sufficiently effective under present technology to make phosphorus the limiting nutrient. Under the ICS, total nitrogen may be the limiting nutrient.

CH2M-Hill also provides a review of biological nutrient removal with wetland polishing. Their analysis suggests that under this strategy total inorganic nitrogen will be the limiting nutrient. They do not believe that a control strategy based on nitrogen limitation will result in a shift to blue-green algal forms which can fix atmospheric nitrogen. The reason stated is that there has been a nitrogen limitation since at least 1980 (interaction). There has been no indication of a switch to blue-green algae; they have not been the dominant form in the late summer in these years. Nitrogen limited waters are common in western Oregon and Washington. Blue-green algae are relatively uncommon. Blue-greens generally require molybdenum when nitrate or nitrogen gas is the nitrogen source. Molybdenum is often the limiting nutrient (micro-nutrient) for western Oregon waters.

CH2M-Hill believe that site specific limitations were better addressed by their empirical analysis and modelling than by the Department's algal assay and comparison of data with other streams. They also noted that EPA criteria should be used as guidance values and not limits, when site specific information is available.

John R. Churchill, Written Testimony and Oral Testimony, 4/25/88 and 4/27/88

Mr. Churchill refers to EPA guidelines and states that the burden of proof for deviating from these guidelines is on the regulator. Mr. Churchill believes that the Department's data and CH2M-Hill's model results show 0.05 mg/l of phosphorus to be the appropriate limit for establishing a water quality control plan in the Tualatin Basin. Mr. Churchill believes that 0.05 mg/l will be easier to attain than a 0.10 mg/l concentration since it will require restrictions from all point and nonpoint sources which would eliminate competition for load allocations.

A specific nonpoint source management program needs to be part of the water quality management plan. This program should include load allocations for each sub-basin, identification of all point sources and appropriate waste load allocations. A schedule of attainment must be part of the plan as well as a schedule for refining load allocations to nonpoint sources. He cited container nurseries as an industry in need of waste load allocations. The Department also needs to separate background sources from nonpoint sources in their load allocations and commit to a monitoring program.

Mr. Churchill questions why Lake Oswego is not discussed in the proposed water quality management plan. Mr. Churchill states that limits to protect water quality in Lake Oswego are required by the consent decree and by the Clean Water Act.

#### **Clackamas County, Written Testimony**

The Clackamas County Commission emphasizes that a clean Tualatin River is vital to the economic and environmental well being of Clackamas County. The degraded river limits the beneficial use of the river as well as threatens property values of communities in the lower Tualatin Valley. Clackamas County concurs with the establishment of phosphorus limits of 0.025 mg/l for Lake Oswego and 0.05 mg/l for the lower Tualatin River. Clackamas County strongly recommends extending the period for phosphorus limitation from the proposed June to September to March to September the time period of TMDLs. An intensive nonpoint source program is also suggested.

#### **Joyce Cohen, State Senator District 13, Written Testimony**

Ms. Cohen states that it is important to act without delay to restore water quality to the Tualatin River and Lake Oswego. Standards should be set as stringently as possible. Comprehensive water quality management plans should include nonpoint source control.

#### **Cornelius, City of, Written Testimony**

The City does not wish to take a position at this time but wishes to reserve the right to comment at a later stage in the process should the need arise.

Billie Cottingham, Written Testimony

"We need a strong program to clean up the Tualatin River and let's do it now."

Robert Couch, Written Testimony

Referring to the cleanup of Vancouver Lake, which greatly improved water quality and recreational opportunities, Mr. Couch urges adoption of a 0.05 mg/l target level for total phosphorus. He states that 5 years is a reasonable time frame for compliance.

Andre Cyminski, Oral Testimony, 4/25/88

The Tualatin River used to be a trophy bass fishery. The river is not used for swimming simply because it is too polluted. A phosphorus standard based on 0.05 mg/l is needed to result in a clean river.

Victor Duran, Written Testimony

Mr. Duran would like to see the Tualatin cleaned up; therefore, he is in favor of the strict (0.05 mg/l phosphorus) limit.

Walter A. Durham, Written and Oral Testimony, 4/27/88

Mr. Durham provided a personal account of the history of the Tualatin River. It is his belief that phosphorus can be reduced to 0.05 mg/l in the Tualatin River. Nonpoint source controls and protection of the water table should be included in a comprehensive water quality management plan for the Tualatin Basin. The Department needs to convince the citizens of the Tualatin Basin that they are capable of cleaning up the Tualatin Basin.

Mrs. Robert Eastman, Written Testimony

Mrs. Eastman provided her historical views and perspective of problems in the Tualatin River. She notes that the fish they sometimes catch look diseased and wonders if it is possible that interested citizens can exercise enough power to stop industrialists, developers, and polluters from abusing a once exceptional river.

Rodger Ellingson, Written Testimony

Mr. Ellingson believes a strong numerical limit for phosphorus is needed to protect the Tualatin River. A narrative standard would not be enforceable. A 0.05 mg/l phosphorus standard could be achieved through improved forest practices, wetland conservation, wetland treatment, and education. Mr. Ellingson states that it has not been proved that the 0.05 mg/l level in the lower river could not be met within five years by using passive ecological treatment.

Connie Emmons, Oral Testimony, 4/27/88

The Tualatin is not fishable or swimmable as required by the federal Clean Water Act. The citizens of the Tualatin River Basin deserve a long-term goal of clean water in the Tualatin Basin. The DEQ has shown an inability to deal with the problem.

Coustaue Emmons, Written Testimony

Regulations protecting the Tualatin River have been sloppy. The river is not fishable or swimmable. The Department needs to be involved in regulating growth to protect water quality. A long-term plan is needed to protect the Tualatin River for future generations.

David Erickson, Written Testimony

Mr. Erickson feels the Department should be very aggressive on controlling the pollution in the Tualatin River. A 0.05 mg/l phosphorus level is still too high, but it is a good first step.

Larry Everson, Written and Oral Testimony, 4/27/88

Mr. Everson focused his comments on points relating to the fishery resources of the Tualatin Basin. The phosphorus concentration has been shown to affect aquatic life through its effect on algal growth. The phosphorus concentration will reflect the level of other pollutants in the Tualatin River, including toxics. Therefore phosphorus may be used as an indicator of the ability of the river to support fish. Mr. Everson recommends a 0.05 mg/l phosphorus standard, or a standard based on instream concentrations above the City of Gaston. These standards should be in place for the entire year.

The proposed ammonia standard is inadequate to protect the fishery resource in the Tualatin River. Mr. Everson recommends changing the proposed standard to cover the full year for the Tualatin River and its tributaries. The standard must be based on the strictest limit to provide adequate oxygen concentration or prevent ammonia toxicity to cold water fish.



Zella Eyeler, Written and Oral Testimony, 4/27/88

In providing her historical view of the Tualatin River, Ms. Eyeler supports a 0.05 mg/l phosphorus level to restore the Tualatin River. She believes the river should be restored during our lifetime and protected for future generations.

Farm Bureau of Washington County, Written and Oral Testimony, 4/25/88

The Farm Bureau provided suggestions for alternatives to establishing total maximum daily loads for nutrient control in the Tualatin and other water quality limited streams in Oregon. The proposal includes postponing the establishment of limits for five years. During this time, further study would be conducted and a coordinated management group would be established in each basin. Implementation of programs for water quality control would be conducted only if there was at least 80% federal or state funding for the program.

Jerry Feela, Written Testimony

In providing his historical view of water quality problems in the Tualatin Basin, Mr. Feela points out that urban growth has caused degraded water quality in the Tualatin River. Actions should have been taken long ago to protect water quality.

Kenneth Fink, Written and Oral Testimony, 4/28/88

It took 60 years for the Tualatin River to reach its present deplorable condition. It will take much effort to restore the Tualatin. The state should not have been forced by EPA through a citizen lawsuit to initiate a program to restore the river. Mr. Fink supports a 0.05 mg/l phosphorus standard.

Forest Grove, City of, Written Testimony

The City Council expresses a strong desire for DEQ and USA to work together to find a mutually agreeable resolution to the phosphorus standard issue.

Gaston, City of, Written Testimony

The City of Gaston intends to exceed the water quality requirements set by the DEQ. The City currently treats stormwater runoff to reduce pollution loads to the river. They noted that their efforts may be old fashion, but they are effective. Their efforts do cost money which they pay for by a high tax rate. However, the City feels it is their responsibility not to pollute the river and pass problems on to their neighbors downstream.

Stan Geiger, Written and Oral Testimony, 4/27/88

Mr. Geiger suggests starting the proposed phosphorus limitation earlier in the spring to help protect Lake Oswego. Support is given for the 0.10 mg/l phosphorus standard. What the standard would produce is a new range of summertime algal growth effects in the river, not create a certain level of algal growth.

As chairman for the Tualatin Technical Advisory Committee (TAC), Mr. Geiger clarified the role of the TAC. This clarification was made in response to statements made in other testimony. The worth of a technical advisory committee is that it identifies important technical questions and issues that have a bearing on the rule-making process. Issues were well reviewed by the technical committee. A summary report of the issues reviewed by the TAC is provided as an attachment to Mr. Geiger's written testimony.

Jim Gilbert, Oral Testimony, 4/26/88

Mr. Gilbert discussed the results of 13 random surveys he conducted at Roamers Rest on the Tualatin River. All individuals surveyed were second or third generation citizens of the Tualatin Basin. Mr. Gilbert concluded from his survey that water quality is getting worse in the river, few people would swim in the river under present conditions, and that all survey respondents agree there are fewer fish than there used to be.

Robert Grimes, Written Testimony

Mr. Grimes states that he and his neighbors resent the Unified Sewerage Agency crying about how much it will cost to correct problems they (USA) have created. He supports the 0.05 mg/l phosphorus standard.

Guise and Associates, Written Testimony

Mr. Guise states that he will gladly pay an extra \$10.00 per month for clean recreational water in the Tualatin River.

Judie Hammerstad, State Representative District 27, Written and Oral Testimony, 4/27/88

A numerical standard for phosphorus should be set. This standard may be in the form of an equation including streamflow and sunlight. Load allocations should be established for all point and nonpoint sources. The ability to meet limits will depend on nonpoint source controls. Standards should be year-round. A timeline should be established that will result in substantial improvement in water quality. Cost-effectiveness is important. However, we should be careful not to end up with only a partially cleaned up stream.

Mary Harrison, Oral Testimony, 4/27/88

A master plan needs to be developed for the Tualatin Basin, not an expensive quick fix solution. Somebody will have to pay, through taxes or user fees, the cost of cleaning up the Tualatin River. The nationwide guidelines are not applicable to the Tualatin because they do not include flow which is paramount to the problem. The USA treatment plants provide a major portion of the flow in the basin. If limits are too strict, USA will transport the effluent out of the Basin. The resulting lower flow in the river will result in worse conditions than are there currently.

L. A. Helgesson, Written Testimony

Noting that their cattle will not drink the creek water, Mr. Helgesson states the need for further nonpoint source controls. Also, the sewerage district should monitor all users so that the financial burden of phosphorus control can be equitably distributed.

Hillsboro, City of, Written Testimony

The City of Hillsboro supports good, quality water and is prepared to work with the sewerage agency to do its share to improve water quality in the Tualatin River. The City recognizes the need to implement nonpoint source controls. The City hopes the Department and USA can agree on a proposal for a water quality management plan for the Tualatin River.

Izaak Walton League of America, Inc., Portland Chapter, Written Testimony

The Izaak Walton League recommends that 0.05 mg/l be established as the phosphorus standard for the Tualatin River. Additionally, the League recommends that an immediate program be launched to clean up the river for both point and nonpoint sources.

Karen James, Written Testimony

Ms. James is pleased to see an effort to clean up the Tualatin River, and appalled that it required a law suit to initiate the cleanup. Ms. James supports a 0.05 mg/l phosphorus standard.

Stanley G. Jewett, Jr., Written Testimony

Based on federally suggested guidelines, Mr. Jewett supports a year-round 0.05 mg/l phosphorus standard.

Irv Jones, Written Testimony

Mr. Jones contends that the proposed ammonia limit is too high due to the toxicity of un-ionized ammonia. Mr. Jones suggests a limit of 0.20 mg/l ammonia as the standard.

Pat Kleiwer, Oral Testimony, 4/25/88

Pat Kleiwer provided a lengthy discussion on water quantity problems in the Butternut Creek, a tributary of the Tualatin. Based on her experiences, she feels that an intensive nonpoint source program is a necessary component to the restoration of the Tualatin River.

Lake Oswego, City of, Written and Oral Testimony, 4/27/88

The City of Lake Oswego is committed to achieving the highest possible water quality in the Tualatin River. Numerical limits must be established and careful consideration given to the time limits for these standards. The City believes there should be no further delays in establishing limits.

Lake Oswego Corporation, Written and Oral Testimony, 4/27/88

Three individuals provided both oral and written testimony on behalf of the Lake Oswego Corporation. The Lake Oswego Corporation supports efforts to clean up the Tualatin River and disagrees with recommendations supporting narrative standards. Numerical standards should be established as close to 0.05 mg/l phosphorus as possible; allocations should be set for all point and nonpoint sources; there should be no further delays in establishing standards; there should be some limits on pollution loading at all times; however, the control period for phosphorus should be expanded to begin March 1st.

League of Women Voters of East Washington County, Written and Oral Testimony, 4/26/88

The League urges DEQ to develop a point and nonpoint source control program for the Tualatin Basin. The League supports the standards proposed by DEQ.

League of Women Voters West Clackamas County, Written Testimony

The League of Women Voters supports the process of public input relative to the efforts to clean up the Tualatin River. The League urges that standards be set to fully protect all uses of the river, pollution from nonpoint sources be reduced, necessary regulations be established to guarantee the standards will be achieved, guidelines for compliance for all parties be prescribed without delay.

Ellen and David Ludwig, Written Testimony

The Ludwigs state that the phosphorus standard is too high and suggest 0.05 mg/l as a standard. There should be an effective designation of load allocations for each section of the Tualatin River and its tributaries.

Victor Madison, Oral Testimony, 4/25/88

Mr. Madison supports the suggestion that the limits be postponed for several years to allow for further study. Phosphate must be coming from farm land. The Corps of Engineers suggested that reefs in the lower river could be removed to increase flow in the river. The increased flow would decrease algal growth. Mr. Madison asked why removing the reefs isn't considered as a management strategy. The people in the lower river should have to help pay for the cleanup.

Susan Martins and Becky Lukens, Written Comments

The commentators note that the Tualatin River is a disgrace; however, it could support many uses if it is cleaned up.

McMinnville, City of, Written Comments

The City of McMinnville states that the proposed phosphorus limitation is not consistent with Oregon regulations. It is unclear as to what improvements will be made to beneficial uses by setting the proposed standards. Additionally, the control strategy for attaining compliance needs to be technologically and economically feasible. It is not good policy to establish standards that are not economically feasible.

It is not practicable to set a numerical limit. Many factors affect algal growth. To select two factors as the criteria for a standard is erroneous. The standard should be tied more directly to the problem.

Kermit Miller, Written Testimony

Mr. Miller provided a personal history of his family's 42 years of residence along the Tualatin River. He strongly endorses the plan to clean up the Tualatin River to its former quality.

Gary Miniszewski, Written and Oral Testimony, 4/25/88

Mr. Miniszewski notes that it has been established that algal growth in a stream causes substandard water quality that affects the beneficial uses. If Washington County wants added growth in the basin, then the phosphorus issue needs to be resolved. Mr. Miniszewski states that 0.05 mg/l should be the phosphorus standard.

Jim Morrilan, Oral Testimony, 4/27/88

Mr. Morrilan states that the proposed 0.10 mg/l phosphorus standard is not adequate, a 0.05 mg/l standard is needed to prevent nuisance algal growth. Nonpoint source pollution control plans are needed. Something should be accomplished within five years.

Peter Morris, Anglers Club of Oregon, Oral Testimony, 4/27/88

Mr. Morris states that any deviation from the EPA suggested 0.05 mg/l phosphorus standard is self-serving behavior. Standards need to be set in a reasonable time frame. The Tualatin River once provided excellent fishing.

Rosalie Morrison, Written and Oral Testimony, 4/27/88

Rosalie provided pictures of pipes which discharge stormwater runoff into the Tualatin River and local erosion problems due to construction. She states that a 0.05 mg/l phosphorus standard should apply from March through September.

Northwest Environmental Defense Center (NEDC), Written and Oral Testimony, 4/25/88

NEDC reminded the Department that if the Department fails to submit, or if EPA fails to approve an inadequate submission of TMDLs and associated load and waste load allocations, then EPA shall determine and establish TMDLs, WLAs, and LAs, and other appropriate regulatory actions for the Tualatin River no later than 90 days thereafter.

NEDC states that the proposed standards for phosphorus are inadequate to comply with the terms and intent of the consent decree.

Conclusions based on the laboratory algal assay data and the available data from instream assessments of the Tualatin River and other rivers is subjective. Conclusions from the assays are dependent on an arbitrary line fitted through the data. NEDC offers suggestions for an alternative interpretation.

Comparison of various streams ignores critical parameters that affect algal growth. To seek meaning from this curve is to compare apples and oranges. NEDC suggests fitting an envelope around the data based on the generally accepted 1:1 ratio of chlorophyll a to phosphorus in algal biomass.

NEDC feels that the summary of advantages and disadvantages of target concentrations are unnecessarily subjective and noticeably biased toward the Department's proposed phosphorus standard. Summaries on control options include premature assumptions and impacts of point and nonpoint source control strategies that have not been designed. NEDC offers alternative advantages and disadvantages summaries. The staff report should contain some discussion of the benefits and value to local planners, developers, and

resource management agencies of clear objectives, standards, or planning objectives.

NEDC cited publications cautioning against reliance on dynamic modelling for estimating the relationship between nutrient loads and eutrophication response. These models have limited predictive capabilities because the dynamic relationships are poorly modeled. Rather than state the obvious, that algal growth is dependent on many factors, CH2M-Hill's modelling efforts should focus on estimating the algal growth response for various concentrations of phosphorus.

Standards for both phosphorus and ammonia should be year-round instead of seasonal. Historically, seasonal limitations were to compensate for different flow conditions. The Department's proposed method for relating streamflow to limits already accounts for this.

NEDC points out the inconsistency with definitions for TMDLs, WLAs, and LAs, proposed by the Department and as defined by federal regulation. The federal definitions are recommended. It was also noted that WLAs should be allocated to each existing or future point source of pollution and separate LAs for each existing or future nonpoint source of pollution. NEDC provides a description of the elements contained in a nonpoint source pollution management system for the Tualatin Basin.

Referring to the Clean Water Act, NEDC states that any implementation or compliance schedule allowing greater than 5 years for achieving full compliance with water quality standards in the Tualatin River will be unreasonable.

#### John Nelson, Oral Testimony, 4/27/88

Mr. Nelson has lived along the lower river for 42 years. It strikes him that most of the pollution comes from up-river in Washington County. Mr. Nelson suggests that if the polluters put their intakes below their outfalls, there would be fewer problems.

#### Birgetta Nixon, Written Testimony

Ms. Nixon points out that forest practices in the upper river are having a detrimental effect on water quantity in the lower river.

#### Oregon Environmental Council, Written Comments

The Tualatin River is a very important part of the recreational opportunities in the area. With a cleanup, it can be returned to its former prominence as a fishing stream. The Department must act now to stop both point and nonpoint sources of pollution. The phosphorus standard should be at least as strict as 0.05 mg/l.

One Thousand Friends of Oregon, Written Testimony

One Thousand Friends of Oregon describes the goals of Oregon's land use planning program and states that a link could be established between land use planning and water quality planning. They recommend that the Department use its permitting authority in conjunction with the land use regulations, to establish an effective nonpoint source control plan.

Jim Orell, Written and Oral Testimony, 4/27/88

Based on his many years living along the Tualatin River, Mr. Orell recommends that the Department review wetland treatment and irrigation of effluent as options to reduce pollution loads to the Tualatin River. He recommends accomplishing something within the next five years in the Tualatin River Cleanup.

Rosalyn Paul, Written and Oral Testimony, 4/27/88

Rosalyn Paul submitted a poem she wrote entitled "A River Is For Life" and recommended a 0.05 mg/l phosphorus standard.

Eleanor Phinney, Oral Testimony, 4/27/88

Eleanor described the efforts she has put towards learning about the Tualatin River as part of the Tualatin River-Watch. Included in her dissertation was a review of a map she put together which describes the Tualatin Basin. Her review of the map included a discussion of the need and potential for nonpoint source controls. Mrs. Phinney supports a 0.05 mg/l phosphorus standard.

John Platt, Written and Oral Testimony, 4/25/88

As a member of the Oregon Wildlife Federation, Mr. Platt recommended that the Department base its decision on a scientific and technical evaluation in compliance with federal law, not on the foundation of political opinions that take into the account the needs of a small minority whose gains come from the majority's loss.

David Ransier, Written Testimony

Being concerned about the quality of the Tualatin River, Mr. Ransier supports a phosphorus limit of 0.05 mg/l, effective designation of LAs on each segment of the Tualatin River and tributaries, and an immediate program to stop point and nonpoint source pollution.



City of Rivergrove, Written and Oral Testimony, 4/27/88

The City provided a list of beneficial uses of the Tualatin River and stated that the Department has not defined the beneficial uses of the Tualatin River. The City of Rivergrove wishes to restore the Tualatin River to a condition which supports the beneficial uses without delay. To achieve this restoration, the City Council recommends a 0.05 mg/l phosphorus TMDL.

Joe and Eugene Robick, Written and Oral Testimony, 4/27/88

The Robicks provided their historical views of the Tualatin River and said that they would like to see the river restored to its former condition.

Andy and Elizabeth Rocchia, Written and Oral Testimony, 4/27/88

The prime interest of Mr. and Mrs. Rocchia is a cleaner river to protect fish and bird life. They support a 1.0 mg/l ammonia standard and a 0.05 mg/l phosphorus standard for the Tualatin River. The use of wetlands and irrigation of effluent are encouraged.

Emile E. Rhode, Written Testimony

The Tualatin River stinks. Sewage effluent should be used to irrigate forest land; the cost would be low, and effluent would not be a problem.

Ethan Seltzer, Oral Testimony, 4/25/88

Dr. Seltzer noted that a weak standard was a sign that nothing much is going to happen. The problems are a failure of political will and community response. Dr. Seltzer asks for a phosphorus standard of 0.05 mg/l.

Arden Sheets, Written and Oral Testimony, 4/25/88

The Department has not proved that any phosphorus standard will improve water quality. Phosphorus is a natural element and does not constitute a health hazard. Many factors contribute to algal growth. It is apparent that several issues have been identified and a unified effort will be required to improve water quality in the Tualatin River. Algae is a nuisance affecting aesthetics. How much aesthetics can we afford?

Nothing has been done to learn of the economic effect on Washington County. An economic impact study needs to be completed before any public funds are spent on a cleanup.

Lee Shissler, Written and Oral Testimony, 4/27/88

As a graduate student at Portland State University, Mr. Shissler conducted a phone survey on pollution control management in the Tualatin Basin. Of 445 calls, there were 83 positive responses. Mr. Shissler concluded that if recreational capacity of the river is to be restored, a significant improvement in water quality is necessary. Therefore, he supports a 0.05 mg/l phosphorus standard.

Dennis Stanfill, Written and Oral Testimony, 4/26/88

Mr. Stanfill provided a thorough discussion of problems in Butternutt Creek, a tributary of the Tualatin River. Mr. Stanfill concluded that DEQ can assist the residents of Washington County by setting the strictest feasible water quality standards, establishing a tributary monitoring program, and establishing an enforcement program that requires costs to be borne by those who create the problem.

Leonard Stark, Written and Oral Testimony, 4/27/88

Mr. Stark provided his historical view of water quality in the Tualatin Basin. He recommends the Department consider all options for limiting or controlling pollution in the Tualatin Basin.

Soil and Water Conservation District (SWCD) of Washington County, Written and Oral Testimony, 4/26/88

The Washington County SWCD provided literature describing their nonpoint source control programs and alternatives to the Department's proposed limits. The proposed alternative suggests that phosphorus limits not be established for another five years to allow time for further study and the implementation of a coordinated group. Coordinated groups will be developed for each section of the river. These groups will plan to reduce or mitigate TMDLs in each river segment. The proposal states that if there is not 80% federal or state funding for programs and construction available to reduce or mitigate the TMDLs, the river or segment shall be considered in compliance. The proposed alternative would apply to all water quality limited segments in Oregon.

Tigard, City of, Written Testimony

The City of Tigard supports efforts to clean up the Tualatin River, but it is concerned over the high costs that may be involved. The City takes no formal position and reserves the right to comment at a later date. The City hopes that the Department and USA can reach agreement on a water quality management for the Tualatin Basin.

Tualatin, City of, Written Testimony

The City of Tualatin supports the position of USA that existing Tualatin River water quality standards should be retained or further narrative standards be adopted. The City supports the phosphorus loads proposed by USA as the more effective way to enhance or maintain water quality to protect the beneficial uses of the Tualatin River. The City supports a cooperative planning effort by all affected parties that focuses on all aspects of water quality, and is consistent with reasonable use of public and private resources.

Tualatin Valley Irrigation District (TVID), Written and Oral Testimony,  
4/25/88

TVID supports the proposals presented by SWCD and the Farm Bureau of Washington County.

Unified Sewerage Agency (USA) of Washington County, Written and Oral  
Testimony, 4/25/88

USA states their position that the phosphate and ammonia TMDLs should be set at the levels contained in Dr. Kaczynski's (CH2M-Hill) comments. These levels are sufficient, when combined with the principal elements of USA's individual control strategy, to achieve substantial reductions in the levels of algae in the Tualatin River.

USA believes it is unnecessary and unwise to set new or additional water quality standards in order to adopt TMDLs and implement an effective water quality management plan for the basin. Their proposed ICS strategy addresses several parameters that affect algal growth, not just phosphorus. Modelling results indicate that the goal of algae reduction can be achieved with phosphorus concentrations higher than 0.10 mg/l.

The algae issue is one of aesthetics. There was no support from the technical committee for basing the standards on the nuisance phytoplankton growth rule. This rule is intended to indicate when a study is needed, not as a basis for establishing standards. More effort needs to be given to addressing the meaning of the standard in terms of algal growth and aesthetics.

Efforts to address solutions to the algal problem and other water quality issues on the Tualatin River will not be simple or inexpensive. Many agencies and jurisdictions will be involved. Any workable plan will need to include a comprehensive nonpoint source control plan.

U.S. Environmental Protection Agency, Region 10, Written Comments

The EPA focuses its comments on three general issues: criteria levels for water quality standards, the process for establishing total maximum daily loads, and implementation programs for both point and nonpoint sources.

EPA emphasizes that standards form a basis for water pollution control decisions which must be made to achieve a set of goals. These goals need to be clearly stated by the Department prior to initiating an implementation program.

Many groups with different perspectives have an interest in the Tualatin. The Department must feel it is supported by a sound technical basis in order to minimize conflicts which may arise. The information used to establish a criterion and develop an implementation plan should fit into a logical framework.

EPA describes concerns with using data from several streams to propose limits for phosphorus in the Tualatin. EPA suggests that site specific evaluations based on modelling conducted by CH2M-Hill be used to describe the relationship between total phosphorus and flow. This information should then be used to establish the concentration of total phosphorus that may be needed to achieve an average chlorophyll a concentration of 0.015 mg/l under current summer low flow conditions. Using the available information, the Department should be able to reasonably describe the effect of achieving various levels of phosphate in the lower river. EPA suggests that the proposed phosphorus standard may not be low enough.

EPA suggests that the Department provide a more adequate time frame for the application of the ammonia standard and review potential ammonia toxicity problems.

EPA states that water quality management plans developed to meet the proposed criteria and TMDLs should be comprehensive and balanced. The Department needs to identify appropriate criteria for tributary streams, and identify and establish loads for all point sources.

EPA states that the initial establishment of criteria is a technical decision; economics should not enter into the process until implementation strategies are developed and good, reliable cost estimates are available.

Washington County, Written and Oral Testimony, 4/26/88

Washington County supports adoption of TMDLs as proposed by USA and CH2M-Hill.

Washington County disagrees with DEQ's proposal to adopt TMDLs and standards simultaneously. Oregon has existing, valid, adequate standards that address dissolved oxygen (DO) and algae in terms of recreation and aesthetics. The DO standard is numerical. If additional standards are needed at this time to address algal growth, then Washington County supports a narrative standard. It is not necessary to set standards to establish

TMDLs. State law requires the EQC to consider the ability of local government to finance necessary improvements. DEQ should avoid conflicts between state law considerations for standards and federal law defining TMDLs as the assimilative capacity without regard to cost.

DEQ should set loads as high as possible, consistent with available data and analysis. Section 404 of the 1987 Water Quality Act provides that once waste loads are set and permits issued based on those loads, neither loads nor permit levels can be increased. There may be flexibility, through new information or studies, that may allow loads to change and still attain water quality standards.

Phosphorus limits should not apply year-round. They are more appropriate during the recreation season. The requirements of a compliance schedule are not supported by applicable provisions of state or federal law. TMDLs are part of the water quality planning process. Compliance schedules can be developed as part of the NPDES permit modifications. As a practical matter, the Durham and Rock Creek treatment plants are the only two point sources discharging into the river during the season in question. They are under common ownership. Thus, a single WLA to USA is logical to afford the agency the flexibility to meet the WLA number.

Washington County suggests that the Department address implementation of TMDLs in writing, and request public comment. No document exists now to explain the Department's approach to implementation of TMDLs.

**Sandy Wasson, Written and Oral Testimony, 4/26/88**

Sandy Wasson provided a detailed description of flooding problems she and her neighbors face along Butternut Creek, a tributary of the Tualatin River. Ms. Wasson felt that the Department could help by establishing nonpoint source pollution controls.

**West Linn, City of, Written Testimony**

As the community furthest downstream, West Linn inherits everything poured into the river. The City Council supports the proposed standards of 1.0 mg/l ammonia and 0.05 mg/l phosphorus.

**Wetlands Conservancy, Written and Oral Testimony, 4/27/88**

The Wetlands Conservancy believes that the proposed standard of 0.10 mg/l of phosphorus is too high and supports the 0.05 mg/l phosphorus recommendation of NEDC. The Conservancy urges the use of wetlands to help solve pollution problems in the Tualatin Basin. There is tremendous potential to use wetlands for stormwater control. The Conservancy urges the Department to establish nonpoint source load limits for each tributary sub-basin.

Michael T. White, Written and Oral Testimony, 4/26/88

Mr. White provided a description of water quality problems along Dawson Creek, a tributary of the Tualatin. The potential impact on numerous fish and wildlife species was included in his discussion. Mr. White suggested that the Department recognize the value of wetlands; impose fines on property owners who fail to control soil erosion; provide tax incentives for property owners who maintain adequate buffer zones; require permits for excavation in riparian areas; establish quantitative standards for silt, phosphorus, ammonia, heavy metals, and other chemical pollutants; hold a periodic review of water quality; and restrict the use of well surfactants.

Paul and Betty Wolf, Written and Oral Testimony, 4/26/88

In providing a narrative of their view of the Tualatin River, the Wolfs state that the river water quality is not adequate for swimming or fishing. They feel that there is an immediate need to clean up the river and not five or ten years from now.

Stephan Zimmerman, Oral Testimony, 4/25/88

Mr. Zimmerman believes that a 0.10 mg/l phosphorus standard would allow physical remedies such as wetlands to be used to clean up the Tualatin River. A more restrictive standard would not allow physical fixes. Therefore, Mr. Zimmerman supports the 0.10 mg/l phosphorus standard.

WJ530

Commenter	Testimony Written Oral	Date (Received)	Phosphorus Concerns							Ammonia Concerns		Nonpoint Source Management					
			Clean The River	Perminant Solution	Target Conc.	A Lower	B As Proposed	C Altern- Limits	D Extend Time(P)	LA WLA TMDL	A Toxicity Concern	B Extend Time (N)	C LA WLA TMDL	A			B
														Plans Needed	lead Agency Needed	Major Tributary Allocation	
Abraham, Joseph W.	X	23-Apr-87	X	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Alrore, Eilene Y.	X	27-Apr-87	X	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Arvidson, Brett	1	:	:	X	:	:	:	:	:	:	:	:	X	:	:	:	
Baranzano, Richard A	X	3 29-Apr-87	:	:	:	:	:	:	:	:	:	:	:	:	:	:	
Baron, Lloyd	1	:	:	:	:	:	:	:	:	:	:	:	:	X	:	:	
Beull & Assc.	X	2 27-Apr-87	:	:	:	:	:	:	:	:	:	:	:	:	:	:	
Brown, Gregg	1	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	
Browne, Carolyn	X	1 25-Apr-87	:	:	:	:	X	:	X	:	X	:	X	:	X	:	
Carter, Lolita	X	1 29-Apr-87	:	:	X	:	:	:	:	:	:	:	:	X	:	:	
CECO	X	29-Apr-87	:	:	:	:	:	:	:	:	:	:	:	:	:	:	
CH2M-Hill	X	1	:	:	:	:	X	:	X	:	X	:	X	:	:	:	
Churchill, John R.	X	2 26-Apr-87	:	:	:	X	:	X	X	:	:	X	:	:	X	:	
Clackamass County	X	29-Apr-87	X	:	:	X	:	X	:	:	:	:	:	:	X	:	
Cohen Joyce	X	29-Apr-87	:	:	X	:	:	:	:	:	:	:	X	:	:	:	
Cornelius, City of	X	21-Apr-87	:	:	:	:	:	:	:	:	:	:	:	:	:	:	
Cottingham, Billie	X	27-Apr-87	X	:	:	:	:	:	:	:	:	:	:	:	:	:	
Couch, Robert	X	29-Apr-87	:	:	:	X	:	:	:	:	:	:	:	:	:	:	
Cyminski, Andre	1	:	:	:	:	X	:	:	:	:	:	:	:	:	:	:	
Duran, Victor	X	29-Apr-87	:	:	X	:	X	:	:	:	:	:	:	:	:	:	
Durham, Walter A.	X	3 27-Apr-87	:	:	:	X	:	:	:	:	:	:	X	:	:	:	
Eastman, Mrs Robert	X	21-Apr-87	X	:	:	:	:	:	:	:	:	:	:	:	:	:	
Ellingson, Rodger M.	X	02-May-87	:	:	:	X	:	:	X	:	X	:	X	:	X	:	
Emmons, Connie	3	:	X	:	:	:	:	:	:	:	:	:	:	:	:	:	
Emmons, Coustaue	X	27-Apr-87	:	:	X	:	:	:	:	:	:	:	:	:	:	:	
Erickson, David	X	27-Apr-87	X	:	:	X	:	:	:	:	:	:	:	:	:	:	
Everson, Larry	X	3 29-Apr-87	:	:	:	X	:	X	X	:	X	X	X	:	X	:	
Eyler, Zella A.	X	3 25-Apr-87	X	:	:	X	:	:	:	:	:	:	:	:	:	:	
Farm Bureau	X	1 25-Apr-87	:	:	:	:	:	:	:	:	:	:	:	X	:	:	
Feela, Jerry	X	27-Apr-87	X	:	:	:	:	:	:	:	:	:	:	:	:	:	
Fink, Kenneth E.	X	3 27-Apr-87	:	:	:	X	:	:	:	:	:	:	X	:	:	:	
Forest Grove	X	29-Apr-87	:	:	:	:	:	:	:	:	:	:	:	:	:	:	
Gaston, City of	X	27-Apr-87	:	:	:	X	:	:	:	:	:	:	:	:	:	:	
Geiger, Stan	X	3 27-Apr-87	:	:	:	:	X	X	:	:	:	:	:	:	:	:	

Commenter	Testimony Written Oral	Date (Received)	Phosphorus Concerns					Ammonia Concerns			Nonpoint Source Management			
			Clean The River	Permanant Solution	-----A-----	B	C	D	A	B	C	-----A-----	B	
					Lower Target Conc.	Altern- As Proposed Limits	Extend Time(P)	LA WLA TMDL	Toxicity Concern	Extend Time (N)	LA WLA TMDL	NPS Plans Needed	Lead Agency Needed	Major Tributary Allocation
Gilbert, Jim		2	X	:	:	:	:	:	:	:	:	:	:	:
Grimes, Robert E	X		:	:	:	X	:	:	:	:	:	:	:	:
Guise & Assc.	X	20-Apr-87	X	:	:	:	:	:	:	:	:	:	:	:
Hammerstad, Judie	X	1 27-Apr-87	:	:	:	:	:	X	:	:	:	X	:	:
Harrison, Mary		3	:	:	:	:	:	X	:	:	:	:	:	:
Helgesson, L.A.	X	27-Apr-87	X	:	:	:	:	:	:	:	:	X	:	:
Hillsboro, City of	X	29-Apr-87	:	:	:	:	:	:	:	:	:	:	:	:
Izaak Walton League	X	22-Apr-87	:	:	:	X	:	X	:	:	X	X	X	:
James, Karen	X		:	:	:	X	:	X	:	:	X	X	X	:
Jewett, Stanley G.	X	29-Apr-87	:	:	:	X	:	:	:	:	:	:	:	:
Jones, Irv.	X		:	:	:	:	:	X	X	:	X	:	:	:
Kleiber, Pat		2	:	:	:	:	:	:	:	:	:	X	:	:
Lake Oswego, City of	X	3 22-Apr-87	:	:	:	:	:	X	:	:	:	:	:	:
Lake Oswego Corp. 1	X	3 27-Apr-87	:	:	:	X	:	X	:	:	X	:	X	:
Lake Oswego Corp. 2	X	3 27-Apr-87	:	:	:	X	:	X	:	:	X	:	X	:
Lake Oswego Corp. 3	X	3 27-Apr-87	:	:	:	X	:	X	:	:	X	:	X	:
Gary LaHaie			:	:	:	:	:	:	:	:	:	:	:	:
League, Women Voters	X	2 26-Apr-87	:	:	:	:	X	:	X	:	X	:	X	:
League, Women Voters	X	27-Apr-87	:	:	:	:	:	:	:	:	:	X	:	:
Ludwig, Ellen & David	X	29-Apr-87	:	:	:	X	:	:	:	:	:	X	X	:
Madison, Victor		1	:	:	:	:	:	:	:	:	:	:	:	:
Martin/Luckens	X	22-Apr-87	X	:	:	:	:	:	:	:	:	:	:	:
McMinnville, City of	X	29-Apr-87	:	:	:	:	:	:	:	:	:	:	:	:
Miller, Kermit		27-Apr-87	X	:	:	:	:	:	:	:	:	:	:	:
Miniszewski, Gary	X	1 25-Apr-87	:	:	:	X	:	:	:	:	:	X	:	:
Morrilan, Jim		3	:	:	:	X	:	:	:	:	:	X	:	:
Morris, Peter		3	:	:	:	X	:	:	:	:	:	:	:	:
Morrison, Rosalie	X	3 27-Apr-87	:	:	:	X	:	:	:	:	:	X	:	:
NEDC	X	1 29-Apr-87	:	:	:	X	:	X	X	X	X	X	X	X
Nelson, John C.		3	X	:	:	:	:	:	:	:	:	:	:	:
Nixon, Birgetta	X	25-Apr-87	:	:	:	:	:	:	:	:	:	X	:	:
OEC	X		:	:	:	X	:	X	:	:	X	X	X	:
One Thousands Friends	X	29-Apr-87	:	:	:	:	:	X	:	:	X	X	X	:

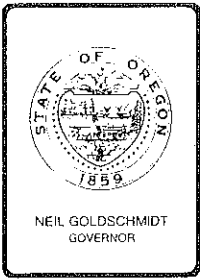


Commenter	Testimony	Date	Phosphorus Concerns							Ammonia Concerns			Nonpoint Source Management				
			Clean The River	Perminant Solution	Lower Target Conc.	A As Proposed	B Altern- ative Limits	C Extend Time(P)	D LA WLA TMDL	A Toxicity Concern	B Extend Time (N)	C LA WLA TMDL	A		B		
													Plans Needed	Lead Agency Needed	Major Tributary Allocation		
Orrell, Jim	X	3	27-Apr-87	:	:	:	X	:	:	:	:	:	X	:	:		
Paul, Rosalyn	X	3	27-Apr-87	:	X	:	:	X	:	:	:	:	:	:	:		
Phinney, Eleanor	X	3	29-Apr-87	:	X	:	:	X	:	:	:	:	:	:	:		
Platt, John C.	X	1	25-Apr-87	:	X	:	:	:	:	:	:	:	:	:	:		
Ransier, David M.	X		27-Apr-87	:	:	:	:	X	:	:	X	:	X	:	X		
Rivergrove, City of	X	3	27-Apr-87	:	:	:	:	X	:	X	:	X	:	X	:		
Robick, Joe	X		27-Apr-87	:	X	:	:	:	:	:	:	:	:	:	:		
Rocchia, Elizabeth	X	3	27-Apr-87	:	:	:	:	X	:	:	:	:	:	:	:		
Rode, Emile E.			27-Apr-87	:	:	:	:	:	:	:	:	:	:	:	:		
Seltzer, Ethan		1		:	:	:	X	:	:	:	:	:	X	:	:		
Sheets, Arden	X	1	25-Apr-87	:	:	:	:	:	:	:	:	:	:	:	:		
Shissler, Lee	X	3	27-Apr-87	:	:	:	X	:	:	:	:	:	:	:	:		
Stanfill, Dennis R.	X	2	29-Apr-87	:	:	:	:	:	:	:	:	:	X	:	:		
Stark, Leonard	X	3	27-Apr-87	:	X	:	:	:	:	:	:	:	:	:	:		
SWCD, Washington Ct.	X	2	26-Apr-87	:	:	:	:	:	X	:	:	X	X	X	X		
Tigard, City of	X		18-Apr-87	:	:	:	:	:	:	:	:	:	:	:	:		
Tualatin, City of	X		26-Apr-87	:	:	:	:	X	:	:	:	:	X	:	:		
TVID	X	1	25-Apr-87	:	:	:	:	:	:	:	:	:	:	X	:		
USA	X	2	22-Apr-87	:	:	:	:	X	:	X	:	X	X	X	:		
USEPA	X		29-Apr-87	:	:	:	:	:	X	:	X	X	:	:	X		
Washington County,	X	2	29-Apr-87	:	:	:	:	X	:	:	:	:	:	:	:		
Wasson, Sandy	X	2	27-Apr-87	:	:	:	:	:	:	:	:	:	X	:	:		
West Linn, City of	X		27-Apr-87	:	:	:	X	:	:	:	:	:	:	:	:		
Wetlands Conservany,	X	3	27-Apr-87	:	:	:	X	:	X	:	:	X	X	X	:		
White, Michal T	X	1	22-Apr-87	:	:	:	:	:	:	:	:	:	X	:	:		
Wolf, Betty		3		:	:	:	X	:	:	:	:	:	:	:	:		
Wolf, Paul and Betty	X		26-Apr-87	:	X	:	:	X	:	:	:	:	:	:	:		
Zimmerman, Stephan		1		:	:	:	:	X	:	:	:	:	:	:	:		
Total	94	76	53		21	5	38	4	5	11	21	4	3	21	33	6	16

Committer	Compliance Schedules		Economics			Assurance		Technical Concerns			Other Concerns
	Need to be Defined	3-5 years Adequate	Costs Not Defined	All Options Not Fully Studied	Economic Practice Limits	Results Not Proven	P Limit Not Achievable	Algal Assays	Basin Compar- isson	Model Review	
Abraham, Joseph W.	:	:	:	:	:	:	:	:	:	:	:
Alrore, Eilene Y.	:	:	:	:	:	:	:	:	:	:	:
Arvidson, Brett	:	:	X	X	X	X		X			:Algae does not mean pollution
Baranzano, Richard A	:	:	:	:	X	:	:	:	:	:	:
Baron, Lloyd	:	:	:	:	:	X		:			:Go Slow in setting limits
Beull & Assc.	:	:	:	:	:	:	:	:	:	:	:Supports use of wetlands
Brown, Gregg	:	:	:	:	:	:	:	:	:	:	:CH2M-Hill invalid cost estimates
Browne, Carolyn	:	:	X	:	:	:	:	:	:	:	:
Carter, Lolita	:	:	:	:	X	X	X	X	X		:
CECO	:	:	:	:	:	:	:	:	:	:	:CH2M-Hill cost estimates are verifiable
CH2M-Hill	:	:	:	:	:	:	:	:	:	:	:
Churchill, John R.	X	:	:	:	:	:	:	:	:	X	:
Clackamass County	:	:	:	:	:	:	:	:	:	:	:
Cohen Joyce	X	:	:	:	:	:	:	:	:	:	:
Cornelius, City of	:	:	:	:	:	:	:	:	:	:	:Reserve Comment
Cottingham, Billie	:	:	:	:	:	:	:	:	:	:	:
Couch, Robert	:	X	:	:	:	:	:	:	:	:	:
Cyminski, Andre	:	:	:	:	:	:	:	:	:	:	:
Duran, Victor	:	:	:	:	:	:	:	:	:	:	:
Durham, Walter A.	:	:	:	:	:	:	:	:	:	:	:
Eastman, Mrs Robert	:	:	:	:	:	:	:	:	:	:	:
Ellingson, Rodger M.	X	:	:	X	:	:	:	:	:	:	:
Emmons, Connie	:	:	:	:	:	:	:	:	:	:	:
Emmons, Coustaue	:	:	:	:	:	:	:	:	:	:	:
Erickson, David	:	:	:	:	:	:	:	:	:	:	:
Everson, Larry	:	:	:	:	:	:	:	:	:	:	:
Eyler, Zella A.	:	:	:	:	:	:	:	:	:	:	:
Farm Bureau	X	:	:	:	:	:	:	:	:	:	:Wait 5 Years, only with federal/state funds
Feela, Jerry	:	:	:	:	:	:	:	:	:	:	:
Fink, Kenneth E.	:	:	:	X	:	:	:	:	:	:	:
Forest Grove	:	:	:	:	:	:	:	:	:	:	:No Position at this time
Gaston, City of	:	:	:	:	:	:	:	:	:	:	:
Geiger, Stan	X	:	:	:	:	:	:	:	:	:	:

Commenter	Compliance Schedules		Economics			Assurance		Technical Concerns			Other Concerns
	Need to	3-5 years	Costs	All Options	Economic	Results	P Limit	Algal	Basin	Model	
	be	Adequate	Not	Not Fully	Practicle	Not	Not Acheiv-	Assays	Compar-	Review	
	Defined		Defined	Studied	Limits	Proven	able		isson		
Gilbert, Jim	:	:	:	:	:	:	:	:	:	:	:Phone Survey, uses not supported
Grimes, Robert E	:	:	:	:	:	:	:	:	:	:	:
Guise & Assc.	:	:	:	:	:	:	:	:	:	:	:
Hammerstad, Judie	:	X	:	:	:	:	:	:	:	:	:
Harrison, Mary	:	:	:	X	X	:	X	:	:	:	:
Helgesson, L.A.	:	:	:	:	:	:	:	:	:	:	:
Hillsboro, City of	:	:	:	:	:	:	:	:	:	:	:
Izaak Walton League	:	:	:	:	:	:	:	:	:	:	:
James, Karen	:	:	:	:	:	:	:	:	:	:	:Phosphorus Detergent ban
Jewett, Stanley G.	:	:	:	:	:	:	:	:	:	:	:
Jones, Irv.	:	:	:	:	:	:	:	:	:	:	:
Kleiber, Pat	:	:	:	:	:	:	:	:	:	:	:
Lake Oswego, City of	:	:	:	:	:	:	:	:	:	:	:
Lake Oswego Corp. 1	:	:	:	:	:	:	:	:	:	:	:
Lake Oswego Corp. 2	:	:	:	:	:	:	:	:	:	:	:
Lake Oswego Corp. 3	:	:	:	:	:	:	:	:	:	:	:
Gary LaHaie	:	:	:	:	:	:	:	:	:	:	:
League, Women Voters	:	:	:	:	:	:	:	:	:	:	:
League, Women Voters	:	X	:	:	:	:	:	:	:	:	:Supports public involvement
Ludwig, Ellen & David:	:	:	:	:	:	:	:	:	:	:	:
Madison, Victor	:	:	:	:	:	:	:	:	:	:	:More time needed for study
Martin/Luckens	:	:	:	:	:	:	:	:	:	:	:
McMinnville, City of	:	:	X	:	X	X	X	:	:	:	:DEQ not consistent with regulations
Miller, Kermit	:	:	:	:	:	:	:	:	:	:	:
Miniszewski, Gary	:	:	:	:	:	:	:	:	:	:	:
Morrilan, Jim	:	X	:	:	:	:	:	:	:	:	:
Morris, Peter	:	:	:	:	:	:	:	:	:	:	:
Morrison, Rosalie	:	:	:	:	:	:	:	:	:	:	:Sediment problems
NEDC	:	X	:	X	:	:	:	X	X	X	:
Nelson, John C.	:	:	:	:	:	:	:	:	:	:	:
Nixon, Birgetta	:	:	:	:	:	:	:	:	:	:	:Forest practices cause problems
OEC	:	:	:	:	:	:	:	:	:	:	:
One Thousands Friends:	:	:	:	:	:	:	:	:	:	:	:

Commenter	Compliance Schedules		Economics			Assurance		Technical Concerns			Other Concerns	
	Need to	3-5 years	Costs	All Options	Economic	Results	P Limit	Algal Basin	Model			
	be	Adequate	Not	Not Fully	Practicable	Not	Not Achievable	Assays Compar-	Review			
Defined		Defined	Studied	Limits	Proven		isson					
Orrell, Jim		X		X								
Paul, Rosalyn												
Phinney, Eleanor												
Platt, John C.												
Ransier, David M.												
Rivergrove, City of											:Committee process unacceptable	
Robick, Joe												
Rocchia, Elizabeth												
Rode, Emile E.				X							:River Stinks	
Seltzer, Ethan												
Sheets, Arden			X		X	X						
Shissler, Lee												
Stanfill, Dennis R.												
Stark, Leonard												
SWCD, Washington Ct.		X									:Wait 5 years, only with federal-state funds	
Tigard, City of											:Reserve Comment.	
Tualatin, City of					X	X						
TVID	X										:Wait 5 years, only with federal-state funds	
USA						X					:Not leagally required to set standards	
USEPA	X								X			
Washington County,											:DEQ is not legally committed to establishing standard	
Wasson, Sandy												
West Linn, City of												
Wetlands Conservany,				X								
White, Michal T												
Wolf, Betty												
Wolf, Paul and Betty												
Zimmerman, Stephan												
Total	94	9	5	4	8	7	7	2	3	3	2	22



## Department of Environmental Quality

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### Memorandum

To: Environmental Quality Commission

From: Richard Nichols and Neil Mullane, WQ

Subject: Agenda Item R, September 9, 1988, EQC Meeting

Hearings Officer's Report Responding to Testimony from Hearings on the Proposed Additions of Language to the Special Policies and Guidelines Contained in Oregon Administrative Rules (OAR) Chapter 340, Division 41-470(3).

### Background

On July 8, 1988, the Environmental Quality Commission adopted rules establishing special policies and guidelines for the Tualatin Basin. The new rules set ammonia-nitrogen and total phosphate criteria for the Tualatin Basin, but did not include a compliance schedule for achieving the new criteria. The Commission authorized the Department to hold public hearings on additional rules which would contain a compliance schedule.

The Department held two hearings within the Tualatin Basin on August 17 and 18, 1988. A total of 55 individuals, including representatives of local governments and other organizations, provided written and/or verbal testimony. The testimony received at the hearings is summarized in a separate report attached to this document. An attached report identifies the concerns discussed by each commenter. This report will summarize the major issues raised and provide the Department's response to the testimony received at the August 17 and 18, 1988 hearings.

(Note: following the hearings, the Department believed that the involved parties in the Tualatin Basin were not far apart in how the Tualatin water quality criteria should be implemented. As a result, the Department organized a small work group of people representing NEDC, Washington County, Unified Sewerage Agency, several cities, the Lake Oswego Corporation, agriculture and forestry to meet and, hopefully, come to agreement on the wordings of the rules concerning implementation of the Tualatin water quality criteria. At the time this response was prepared, the Department believed that general concensus had been achieved although the Department had offered to meet and discuss the issues further. To simplify further discussion involving this group in

this report, the group will hereafter be called the Tualatin work group.)

### Testimony

The major issues that were discussed during the hearings and work group meeting described below with the Department's response to each issues.

#### COMPLIANCE SCHEDULES

Most commenters felt that the proposed compliance period was overly aggressive. The schedule did not allow for a complete review of potential options, enough time to develop a cost effective strategy, nor allow the regulated community enough time to establish a funding base to address pollution control. The criteria established by the Commission in July 1988 will require a great reduction in existing phosphorus loads. This reduction will necessitate a well-planned strategy or the efforts to improve the Tualatin will certainly fail.

Washington County, the Unified Sewerage Agency (USA), and several Cities offered alternative compliance schedules and target dates. These schedules were admittedly longer than the schedule proposed by the Department. Other cities felt that the Department's requirements were unclear, that the cities did not have the data that they felt the Department was requesting, or that they could not possibly provide the type of information needed. Washington County, USA, Clackamas County, and several cities suggested that the Department should hold meetings to clarify the issues and discuss the compliance schedules.

Commenters from the Lower Tualatin Valley Homeowners Association, River Grove, and several individuals felt that compliance should begin immediately. Additional planning is simply an excuse for not doing anything. The conditions in the river will get worse, or more difficult to fix, while the planning continues.

#### Department's Response:

The Department believes that it is difficult to determine what is an appropriate compliance schedule until the local entities provide their initial plans. The Tualatin work group discussed this issue extensively and concluded that the rules should concentrate on the submittal of "program plans" which will present a particular entity's approach to defining the problem, reviewing alternatives, and selecting a preferred solution. Once these program plans are submitted, reviewed, and approved by the Commission, the actual compliance schedule will be much better delineated. The proposed rules as modified by hearing testimony and the discussion in the Tualatin work group, to require Commission approval of the program plans with the required public hearings.

## FINAL COMPLIANCE DATE

Most commenters felt the final compliance date was unrealistic. A problem that took generations to create will take longer than 5 years to correct. Time is needed to fully review all options and decide on a technically sound and cost effective program. Suggested compliance dates included:

1. 10 years;
2. Individually specified for each permit; and
3. Final date should come out of planning phase.

The lower Tualatin Valley Homeowners Association, the Lake Oswego Corporation, the Tualatin Riverkeepers, the Wetlands Conservancy, the City of River Grove, and three individuals felt compliance should begin as soon as possible and that five years was not an unrealistic time frame.

### Department's Response:

The final compliance date defines the time frame for producing results. As such, the date provides guidance during the planning process. The schedule for the planning process is described in the proposed rule. Program plans will be developed by the appropriate agencies after the Department has allocated specific loads. Additional information presented in the program plans could allow the final compliance date to be reassessed. Consequently, the Department has proposed a rule that allows the Commission to change the final compliance date based on information presented in the program plans. In general, the Tualatin work group thought this was a reasonable approach, although there was some concern because of the inherent uncertainty of how the Commission might ultimately react to the schedules in the program plans.

### SHOULD TMDLS NOT APPLY WHEN RIVER CONDITIONS ARE SUCH THAT WATER QUALITY PROBLEMS WILL NOT OCCUR?

Washington County and USA requested specific flow conditions for initiating and ending the "summer low flow period" be included in the rule. Concerns were raised that the proposed conditions may not be an accurate measurement of "low flow conditions". One commenter felt that the dates should stay in the rule and if the polluter felt a change was necessary they should apply for a specific change.

### Department's Response:

The dates defining the critical low flow period in the Tualatin Basin were, to surround the time of year when lower river flows, higher water temperatures, and other conditions combine to cause water quality violations. Obviously, these conditions will vary from year to year. However, the dates do provide a definite period for compliance. Exceptions to the dates may be justified depending on the requirements of the control strategy selected. For example, out of basin transport would not be dependent of flow in the river, but agricultural re-use (effluent irrigation) may be limited by weather conditions usually associated with

high flows. Any compliance exception should be specific to a source and its approved control strategy. Exceptions, therefore, need to be applied for and included as a permit condition. As permit conditions, the exceptions would be reviewed during public hearings. The Department, therefore, does not propose to include the specific flow-related triggers in the proposed rule. The proposed rule, however, would allow for exceptions to be applied for in proposed program plans and included as permit conditions if approved by the Commission.

#### NONPOINT SOURCE POLLUTION FROM AGRICULTURAL AND SILVICULTURAL ACTIVITIES

Several commenters felt that the Departments of Agriculture and Forestry are, and should be, designated as lead agencies for agricultural and Forestry nonpoint source controls respectively.

##### Department's Response:

The Tualatin work group felt that the Oregon Departments of Agriculture and Forestry were the appropriate lead agencies for agriculture and forestry nonpoint source controls. This suggestion is reasonable in that both of these agencies are the designated statewide management agencies for these particular nonpoint source activities. However, the Department has focused its effort on urban stormwater runoff and agriculture NPS problems in discussions with the counties and cities, and the local Soil and Water Conservation District. Inserting the state agencies into the process at this time will require some discussion. Both agencies have been very cooperative in helping the Department review and modify its approach to control nonpoint source pollution as required by Section 319 of the Water Quality Act of 1987. (These are the new amendments to the Clean Water Act). The Department believes that, if we can allow these two agencies to develop their Tualatin program plans within the process developed out of Section 319; this may help to relieve both agencies' concern that they have not been involved in the process. Consequently, the Department has proposed that the rules require that the programs plans for forestry and agriculture be required in the Memorandums of Understanding that the Department will develop with these two agencies. The Tualatin work group felt this was reasonable although the Department of Forestry and Agriculture representatives were only at the last meeting and may not yet have had to time to fully consider the ramifications of this approach.

#### CONTAINER NURSERIES

Two individuals felt that container nurseries should be identified in the rule as industrial sources, be given specific waste load allocations, and specific permits. Several representatives from the container nursery industry testified that they are an agricultural nonpoint source. Representatives from the industry felt that container nurseries should be regulated by the Soil Conservation Service or Department of Agriculture.



**Department's Response:**

For those unfamiliar with the term container nursery, this a nursery operation where plants and shrubs are grown in pots. The pots are placed on slopes with drainage systems designed to collect and convey irrigation drainage off the site. Although information is scarce at this point, many people feel that the irrigation drainage contains significant amounts of phosphorus and ammonia nitrogen as well as other contaminants. The Department has formed a technical advisory committee whose task is to assess the problem and develop a control strategy for the container nursery industry on a statewide basis. Separate action taken relative to container nurseries within these proposed rules for the Tualatin subbasin would ignore current and past efforts by the Department and the container industry to address potential problems. The Department does not believe it appropriate to bypass the role for the advisory committee at this time. The Department does recognize that container nurseries need to be evaluated in the Tualatin subbasin. The Department does need to define how load, or waste load, allocations will be made to individual nurseries. In this regard, the Department has proposed rules that require that the Department, within six months of the adoption of these proposed rules, develop a control strategy for container nurseries.

**OSWEGO LAKE SUB-BASIN**

Several commenters felt that the Oswego Lake sub-basin should be included in the rule as part of the Tualatin Basin. They felt that, if urban runoff is to be controlled in the Tualatin basin for the purpose, in part, of helping keep Oswego Lake clean, it was only appropriate that those drainage areas that drain directly to the lake should also do their share.

**Department's Response:**

No one either in hearing testimony or in the Tualatin work group objected to Oswego Lake being included in the provisions of the proposed rule. Therefore, the Department has included it in the rules where appropriate.

**NEW OR ADDITIONAL LOADS**

Two Commenters felt that new or additional loads needed to be further addressed in the proposed rule. One commenter felt that a moratorium on new sources should be imposed until compliance is attained. Another commenter felt that new loads should only be allowed where existing capacity is available.

**Department's Response:**

Although the Department recognizes that some water quality standards are being violated in the Tualatin River, the violation do not constitute a threat to public health or welfare. Therefore, a moratorium does not seem warranted at this time.

The Department recognizes that once a TMDL has been established and once the final compliance date has been reached, no additional discharges of ammonia-nitrogen or phosphorus can be allowed unless the total loading is within the TMDL. However, the Department also believes that orderly growth within the Tualatin basin should be allowed as long as steady progress is being made towards ultimate compliance with meeting the TMDL. The proposed rule allows the Director, subject to Commission approval, to allow additional discharges from the Unified Sewerage Agency facilities provided the Director finds that the facilities requiring the additional discharges are not inconsistent or would impede compliance with the final deadline. The Tualatin work group did not object to the allowance of temporary increases in discharge loadings as long as Commission approval was necessary and the discharge was strictly temporary.

#### ESTABLISHMENT OF WASTE LOAD ALLOCATIONS AND LOAD ALLOCATIONS

Several testifiers stated that the Department had not distributed waste load allocations or load allocations to the various sources in the basin as required by the consent decree between EPA and NEDC and federal regulations.

##### Department's Response:

This issue was discussed extensively among the Tualatin work group members. Most felt it would be very difficult for entities to prepare program plans without knowing what the specific waste load or load allocations would be. The Department agrees and proposes wording in the proposed rules that would require the Department to establish initial waste load allocations and load allocations within ninety days of the adoption of the proposed rules.

#### CONTROLS ON URBAN RUNOFF FROM NEW DEVELOPMENT

At least one testifier thought the Department should develop rules using its permit authority to require new development in the subbasin to provide storm water runoff controls. It was felt that action taken early on in this regard would prevent expensive retrofitting of technology later when each entity began to implement its storm water quality control program.

##### Department's Response:

This issue also received much discussion from members of the Tualatin work group. Representatives of the cities and Washington County did not feel they had the expertise to develop an effective program. The Department was concerned that a permit program could be resource intensive and thought that such a program could best be handled through the building permit program which is conducted by the county and some of the larger cities. The Department finally agreed that it would propose additional rules for permits that would be issued to the entities themselves that would provide mechanisms for controlling storm water from new development during the interim period until the implementation plans become effective.

## PERMITS FOR ALL POINT AND NONPOINT SOURCES

One testifier thought that the Department should require permits for all point and nonpoint source dischargers in the subbasin.

### Department's Response:

Permits are required for all point sources which discharge into the states waters. Permits are useful tools for dealing with point source problems. This is because point sources have a defined point of discharge that can be limited in a permit and which can be monitored to assure compliance. Nonpoint sources do not have a defined point of discharge and, as a result, cannot be effectively regulated by a permit. Traditionally, nonpoint sources have been regulated through management agreements between the Department and nonpoint source management agencies such as the Department of Forestry. These nonpoint source management agencies then are required to assure that individual nonpoint sources provide appropriate best management practices to assure proper control of their wastewaters. The Department believes that continued use of nonpoint source management agencies and best management practices are preferred. The program plans submitted by these management agencies, however, must be tied back to meeting water quality standards and, specifically in the case of the Tualatin subbasin, to meeting the specified load allocations.

## CARPENTER CREEK SHOULD BE ADDED AS A MAJOR TRIBUTARY TO THE TUALATIN RIVER

One testifier felt that, because of a major source of ammonia along Carpenter Creek, this creek should have been specifically mentioned in the rules.

### Department's Response:

The Department agrees that an obvious source of pollutants should not be ignored. The Department intends to specify a specific load allocation of ammonia-nitrogen and phosphorus to Carpenter Creek when waste load allocations and load allocations are distributed throughout the subbasin. The proposed rules require that this be done within ninety days of their adoption. We believe this is the best way to address the concerns about Carpenter Creek.

## COSTS FOR REACHING COMPLIANCE WITH THE CRITERIA HAVE NOT BEEN ADEQUATELY CONSIDERED

The Department recognizes that detailed cost estimates have not been calculated in preparing these proposed rules. The established criteria are based on a technical analysis of the data collected by the Department and provided by cooperating agencies. This information indicates that a phosphorus level of 70 ug/l in the Lower Tualatin is necessary to prevent nuisance algal growth at all existing flow conditions in the lower Tualatin River and in Oswego Lake. The ammonia criteria is designed to attain the

dissolved oxygen standard in the lower Tualatin River. The criteria provide long-term planning guidelines.

The Clean Water Act of 1988 does address cost-benefit analysis in Section 302(b). This section allows EPA's Administrator, with concurrence of the state, to issue a permit which modifies the effluent limitations required by TMDLs if the applicant demonstrates at a hearing that (whether or not technology or other control strategies are available) there is not reasonable relationship between the economic and social costs and benefits to be obtained (including attainment of the objective of this act) from achieving such limitation.

**Department's Response:**

The Department believes that the program plans are the appropriate place for describing how and when cost-benefit analysis will be conducted. Cost-benefit analysis may influence the compliance schedule as well as the established criteria. Program plans, and subsequent compliance plans, may include reassessment of the established criteria at key points. Key points could include, completion of pilot projects and analysis of available options, achievement of interim limits, or demonstration of a change in the assimilative capacity of the river by flow modification or other methods.

The Department believes that the program plans must be prepared and submitted before any analysis of detailed costs can be conducted. At such time as the Commission reviews and approves the proposed programs plans, it can consider costs and factor this information into its consideration of the final implementation date.

**DEPARTMENT DID NOT ADEQUATELY PREPARE FISCAL AND ECONOMIC IMPACT STATEMENT**

One testifier felt that the economic and fiscal impact statement on the proposed rules was inadequate.

**Department's Response:**

The Department recognizes that a detailed economic analysis was not made. However, the Department did provide sufficient information for the public to assess the economic impact of the proposed rules.

**CRITERIA FOR PHOSPHORUS AND AMMONIA-NITROGEN ARE TECHNICALLY NONRESPONSIVE**

One testifier felt that the proposed approach to correcting the water quality problems in the Tualatin subbasin were not founded on technically sound information.

**Department's Response:**

All the technical data collected by the Department or provided by the cooperating agencies shows that reducing phosphorus will reduce algal growth in the Tualatin River. Phosphorus control is a commonly accepted method to

restore waters suffering from nuisance algal growths. The adopted phosphorus criteria provides an analysis of the nutrient level required in the lower Tualatin River to prevent nuisance conditions at all flow conditions in the river and in Oswego Lake.

USA, suggested an alternative plan based on the estimated efficiency of a biological nutrient removal-nitrification-wetlands polishing treatment plant at Rock Creek. As discussed in the hearing's officers report of July 8, 1988, this is certainly an option that needs to be reviewed. The Department does not believe this option has been fully reviewed. For example, pilot wetland projects need to be conducted to determine removal efficiencies. Additionally, other options have not been fully reviewed. Only after the necessary technical and cost-benefit analysis have been completed can a management option be selected.

RJN/NJM:hs  
WH2944

Attachments: Summary of Written and Oral Testimony  
Summary Matrix

SUMMARY OF ORAL AND WRITTEN TESTIMONY  
TUALATIN BASIN COMPLIANCE STANDARD

Mike Allen, Unified Sewerage Agency Advisory Committee.

The levels of phosphorus and ammonia dictated by the Environmental Quality Commission are admirable; however, only one facility in the United States can achieve the required standard for phosphorus. Time is needed to develop and implement plans to achieve the new effluent standards.

Brett Arvidson, Citizen

A ten year plan should be established for achieving the phosphorus standards in the Tualatin River. The technical basis for regulating phosphorus is flimsy. The technology to achieve a 70 ug/l phosphorus concentration is not available. Wetlands are being sold as a solution; however, wetlands do not remove phosphorus efficiently. Sources such as the EPA Land Application manual and the water Pollution Control Federation Nutrient Control manual, all quote phosphorus removal efficiencies around 40-60%. Wetlands will not achieve the 70 ug/l standard. The present situation requires innovative technical work and thorough planning. This effort will require ten years.

Richard Baranzano, Citizen

DEQ can not prove what the natural color of the Tualatin River was. We need a sample from the past to determine the natural color of the river. DEQ should be careful with establishing limits, the difference between 70 and 100 ug/l of phosphorus may not be noticeable.

Brent Bishop, I-5 Corridor Association

The primary goal of the I-5 Corridor Association is to ensure a positive environment for business. The association urges caution in implementing rules, allowing an adequate time line for compliance, and thorough investigations of the various alternatives for alleviating the existing problems.

Mike Bracken, CH2M-HILL Consultant to the Unified Sewerage Agency

Four potential alternatives for the Unified Sewerage Agency effluent disposal were identified and evaluated. The alternatives are:

1. High-lime phosphorus removal at the treatment plants and discharge to the Tualatin River.
2. Relocation of the effluent discharge points to the Columbia River and/or Willamette River.
3. Agricultural Re-use.

4. Wetland Polishing of highly treated effluent and discharge to the Tualatin River.

At the current level of study, it is unknown whether any of the alternatives are feasible or implementable. Pilot testing, preliminary analysis, feasibility studies, and public input will be required prior to selecting an alternative.

Alternative one has the advantages of easy implementation, few agencies involved, and maintains present flow in the river. Disadvantages include expensive operation and maintenance, large quantities of sludge produced, required limits of 70 ug/l may not be achievable. Projected costs are \$84 million for a Durham lime plant and \$100 million for a lime plant for Rock Creek, Forest Grove, and Hillsboro. Implementation estimated by mid 1996.

Alternative two has the advantage of removing the point sources from the basin. Disadvantages include loss of flow in the Tualatin, high litigation potential, requires new National Pollution Discharge Elimination System (NPDES) permits, and involves numerous agencies. Cost estimates range from \$19 million for Durham and \$112 million for all treatment plants. Implementation estimated by mid 1999.

Alternative three has the advantages of keeping water in the Tualatin River, added irrigation, allows for a phased implementation. Disadvantages include reliance on separate parties for effluent disposal, interagency cooperation, requires a change in state agricultural application rule, large storage ponds, and potential for litigation. Estimated costs is \$ 80 million. Implementation estimated by mid 1997.

Alternative 4 has the advantages of beneficial re-use and maintaining present flows in the Tualatin. Disadvantages include an un-proven method for phosphorus removal, would require long-term pilot testing, plant could be subject to future standard that could not be met with wetlands, process is expensive to maintain. Estimated cost is \$108 million. Implementation estimated by mid 1998.

**Jack Broome, Wetland Conservancy**

Jack Broome cited several successful examples of the use of wetlands for treatment systems and provided an article from the Journal of the Water Pollution Control Federation describing the use of wetlands for treating effluent. Mr. Broome felt five years is not an unreasonable compliance period.

**Jack Brosey, Citizen**

Mr. Brosey stated that it would not work to remove phosphorus, that algae grew in the Tualatin and lake Oswego 100 years ago. The Tualatin River is cleaner than it was before the Unified Sewerage Agency was formed. What needs to be done is to build a new dam and reservoir.

Donald Burdick, Lake Oswego Corporation

The Board of Commissioners of the Lake Oswego Corporation requested that the Lake Oswego Drainage basin be included rules for the Tualatin Basin.

Van Burris, Hillsboro-Forest Grove-Beaverton Joint Water Treatment Plant

Carpenter Creek receives via Oregon Products Nursery up to 1.0 mgd from the Rock Creek Treatment Plant. The nursery adds additional ammonia to the irrigation waters. The irrigation water reaches the Tualatin via Carpenter Creek. The ammonia levels in the Tualatin jump from a norm of 0.10-0.25 mg/l to 0.40-0.68 mg/l. This increase in ammonia causes the water treatment plant to increase the chlorine feed rate up to double what is normally required. Because of these concerns the City of Hillsboro requests that Carpenter Creek be included as a major tributary to the Tualatin and subject to the appropriate ammonia standards.

Jack Churchill, Tualatin River Keepers

The Tualatin River Keepers request that the DEQ and the EQC follow state and federal law and meet the requirements of the consent decree by establishing TMDLs. The River Keepers recommend that:

1. All pollution should be out of the river by June 30, 1993;
2. The Director issue permits for discharge of phosphate only to the extent there is presently reserve load allocation within the TMDL for the river or tributary at the time the permit is issued;
3. DEQ requires that the Unified Sewerage Agency - Lake Oswego Corporation Plan become part of the permit to the Unified Sewerage Agency;
4. DEQ use its permit authority to regulate new development;
5. DEQ issue permits which include compliance schedules for stormwater runoff;
6. DEQ develop WLA for urban stormwater runoff as required by the consent decree;
7. DEQ and EPA provide technical assistance to cities and counties developing stormwater plans; and
8. DEQ issue a general permit for zero discharge to container nurseries.

Robert Cofelt, Tualatin Valley Economic Development Council

Mr. Cofelt stated that everybody seems to have the same goal, an aesthetic and sound environment. A workable solution needs to be developed to achieve this goal. Time will be needed to develop the most cost-effective solution



Larry Cole, Mayor of Beaverton

It is obvious that local governments in the region are environmentally responsible, and willing to work together to solve the Tualatin problem. The compliance period is unrealistic. A problem that took generations to create will take more than five years to fix, if we are going to do the job right. The compliance date will depend on the solutions developed. Criteria for phosphorus should be regulated by flow and temperature conditions in the river rather than specific dates. All possible solutions have not been explored. For example, flow augmentation is a promising idea that needs to be closely looked at. Mayor Cole provided newspaper articles to describe local concerns about the Tualatin and a copy of the City's regulatory documents.

Ted Credon, Mayor of River Grove

The City of River Grove is ready to begin the clean-up of the Tualatin River. All we need to know is what criteria we need to meet and by when. DEQ needs to appoint or create a central agency to control point and nonpoint pollution. Sections A and E should be removed from the rule entirely. The public law makes no hardship provisions and the clean-up is reasonable if properly engineered.

Frank Deaver, Tektronix Inc.

The adopted rules for the Tualatin are neither effective nor cost-effective. They are technically incompetent and technically non-responsive. The fiscal and economic analysis of the rules is inadequate. Probable building moratoriums and land-use issues will undoubtedly result in counter suits and additional litigation. The USA proposed approach of upstream impoundments, wetlands treatment, diverting effluent from the Durham sewage treatment plant is more reasonable and cost effective.

Dennis Derby, Home Builders Association of Portland

The environmental groups' hidden agenda is a building moratorium. Let's not shut down the economic growth in the Tualatin Basin.

Ralph Duyck, Soil and Water Conservation District

Mr. Duyck described the Combined Animal Feeding Operation program, started in 1980 through the Soil and Water Conservation District, to control pollution. Agriculture is not a nonpoint source pollution problem except for the occasional bad apple.

Tom Duyck, Farmer

He described the Soil and Water Conservation District's efforts to control nonpoint source pollution over the last decade.

Gerald Edwards, Tigard City Council

The Council shares the goal of improving water quality in the Tualatin River, but they do have several concerns about the proposed compliance schedule. The City needs to review the water quality goals in light of other goals for Tigard and in light of the limited resources available to the City. The City, therefore, requests that the proposed amendments be modified as follows:

1. Requirements of paragraph (h) be changed from 90 days to 12 months; and
2. The requirements of paragraph (g) be revised from 12 months to 48 months.

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Kathie Femrite, Oregon Nurserymen

A permit system for container nurseries should not be required; nurserymen are farmers and should be regulated by the Soil Conservation Service. Education is needed to help control the existing problems.

Ken Fink, Lower Tualatin Valley CPO

Cleaning-up the river is not just the problem of the sewerage agencies. The DEQ, EQC, and Water Resource Department need to be involved. In a few years the Tualatin can be a pristine river.

Delayne Fry, Citizen

Mr. Fry, as a fourth generation dairyman, stated that farmers do not need more rules. Agricultural nonpoint source pollution control practices work. The growing urban population is the key to nonpoint source pollution problems.

Paul Fukasawa, Oregon Association of Nurserymen

Department of Agriculture should be the lead Nonpoint Source Agency

Bill Gaffi, City of Portland

A very ambitious phosphorus standard has been established for the Tualatin which will challenge everyone in the basin. Given the low flow and urbanized nature of the Tualatin Basin, there appears to be a high probability of failure in this effort unless we plan a reliable and well thought-out strategy. Time has not allowed such a strategy to be formed. It is critical that sufficient time now be taken to ensure success of this very substantial effort. Two phases are proposed:

1. Development of an attainment strategy within 24 months; and
2. Implementation of the attainment strategy within five years of completion of phase 1.

Lyell Gardener, Director SWCD, Riverfront Owner

The proposed policies and guidelines lie within the parameters that seem reasonable in the Tualatin Basin, considering the direction the county has exploded. Experience shows that the most economical way to clean water is to have more of it. Clean water storage facilities should be planned in new developments. If given time, projects like the Jackson Bottom Resource Management plan could have a tremendous cleansing effect on the sewerage agency.

Eugenia Goddard, Citizen

Eugenia Goddard insists on:

- o A maximum five year cleanup period;
- o Permits for all point and nonpoint source permits and permits for stormwater;
- o Permits for all container nurseries; and
- o EQ meet water quality standards by June 30, 1993.

Marian Grey, Oregon Association of Nurserymen

The Oregon Nurserymen are voluntarily working with the Department to develop a technically sound management strategy for their operations. A "band-aid" approach of permit regulation would not provide a solution and is not needed.

Peter Harvey, City of Lake Oswego

Let's get on with this program in a reasonable time frame. The DEQ needs to clarify its requirements for the cities. If the requirements are in the rule, the rules should also state the methodology for engineering calculations. The five acre requirement would generate numerous 4.99 acre developments if Lake Oswego is included in the rule. Allocations need to be established for major tributaries discharging into Oswego Lake.

Bonnie Hays, Washington County Chairperson

The County provided modifications to the proposed compliance schedules. The schedule is longer than that proposed by DEQ. The County feels their plan represents a realistic plan of action, thorough cost-benefit analysis of alternative plans, and adequate citizen involvement. Key components to the plan include:

A. Point Source Schedule:

1. Seasonal limits based on flow conditions in the Tualatin River for the Point sources.

2. By February 28, 1991, the Unified Sewerage Agency will submit a detailed plan describing alternatives for meeting the phosphorus requirements.
3. By July 1991, the Commission shall accept or reject the Unified Sewerage Agencies plans for meeting the phosphorus limit.

B. Nonpoint Source:

1. Within 30 days of rule adoption, the DEQ will designate the Department of Agriculture as the agency for controlling pollution from agricultural areas.
2. Within 30-days of rule adoption, the counties/cities to develop a urban runoff work schedule.
3. 18-months for the counties/cities to develop and submit time schedules.
4. 60-days following submission for the Department to review time schedules.
5. 16-months following the Department's review of time schedules, the Counties/Cities submit interim inventory reports describing land use, drainage, zoning designations, and estimated urban runoff quantities.
6. 60-days following submission of inventory, the Department will establish final WLAs and IAs
7. 12-months following establishment of final allocations to submit preliminary plans.
8. 60-days for Department to review, approve, or suggest modifications to the plans.
9. 6-months following the Department's review of the preliminary plans, the counties/cities to submit final plans.
10. 5-months, but no later than June 30, 1993, final plans submitted by the counties/cities to the Commission for approval.

Walt Hitchcock, Sherwood City Council

The deadlines are too short. The City does not have the money to accomplish the requirements of DEQ. The City of Sherwood suggests:

1. 12-months to inventory potential sources; and
2. 12-months to define a clean-up Plan.

Gerd Hoeron, Lake Oswego Corporation

The Lake Oswego Corporation urges the rule to be adopted with the following provisions:

1. Include the Lake Oswego drainage basin;
2. Require the Lake Management Plan be included in section (f); and
3. Keep the compliance date no later than June 30, 1993.

Shirley Huffman, Mayor of Hillsboro

The proposal by DEQ should be tempered with reason. There needs to be time to do the engineering, build test pilots plants, and to fund the apparent awesome fiscal impacts. The cities and counties are moving forward. For example, the City of Hillsboro commissioned U.R.S. consultants to prepare a comprehensive storm drainage master plan. This plan addressed three elements:

1. Protection from flooding;
2. Protection of streams from impacts of urbanization; and
3. Protection of water quality and beneficial uses of surface waters.

Norbert Kinen, J. Frank Schmidt & Son Co.

The company has concerns with DEQ's actions in setting limits in the Tualatin Basin. The company feels that:

1. The Soil and water Conservation Service should carry out the agricultural nonpoint source plan;
2. A specific time should be established for the application of the criteria for phosphorus and ammonia. This time period should be July and August; and
3. DEQ should maintain in their policies and procedures that nurseries are agriculture and a nonpoint source.

Cal Kramer, Soil and Water Conservation District

The setting of standards is premature; one year is not enough time. Implementation dates should be developed as management plans are developed. A monitoring plan to complement the implementation will be required. The SWCD generally supports the management proposal. However, the State Department of Agriculture is the lead agency for nonpoint source. Forestry should be included in the rule.

Gary Krahmer, Unified Sewerage Agency

The Unified Sewerage Agency is concerned with water quality and is proud of their achievements and reputation. The agency is ready to move forward. The agency has identified and reviewed four alternatives for achieving the proposed standards (Mike Bracken, CH2M-HILL). The agency requests that the Department specify phosphorus and ammonia loads for the agency, suggests that EQC consider revising the target date to make it clear that 1993 is a target date, and that the Commission approve the calendar plus flow approach proposed by USA.

Stanton LeSieur, Unified sewerage Agency

There is very little demand for irrigation water prior to June 1 and after September 15 of each year. The potential for rainfall in June and October can make it very difficult to have dry land for irrigation. Two technical articles are provided on the removal rates for phosphorus in wetlands. Phosphorus addition from rainfall is a major load to the wetlands system and may be part of the reason for low removal rates. The Agency suggests the following language:

\_\_\_\_\_ (3)(a)(c) As measured during the low flow period to begin May 1, or when the average weekly river flow measured at Farmington is less than 500 cfs but no later than June 1 and to end no earlier than September 30, providing the last 14 days average flow measured at Farmington exceeds 500 cfs.

Kevin Marsh, Director ASCS, USDA Cost Share Program

Agricultural nonpoint source programs were discussed. The cost share program has been found to be effective at controlling agricultural nonpoint source pollution

Ted Mast, Glenn Walters Nursery

The cooperative efforts of DEQ and the container nurseries has mobilized the industry to focus on clean water. The advisory committee is focusing on solutions, standards, and best management practices. The advisory committee will help DEQ formalize Best Management Practices based on the technical studies conducted by DEQ.

Stuart McKenzie, U.S. Geological Survey (at the request of USA)

The Department's proposed time schedule is overly optimistic. Sufficient data will require 12 to 18 months to collect. Counties will require two to three years to develop reasonable plans. Implementation plans following a planning time-line will only work with good cooperation.

Rosalie Morrison, Homeowner

The compliance schedules should require that cities and counties begin immediately and are implemented as soon as they can be approved by DEQ. There have been enough studies on the Tualatin already. Monitoring should begin now on all point and nonpoint sources including stormwater runoff.

There should be a moratorium on all new sources until plans are available that will assure meeting the new standards. Costs will be minimal now compared to trying to reclaim the Tualatin River, its tributaries, and the Tualatin Valley in another five or ten years.

Jack Nelson, Association of General Contractors

The Association recognizes that water quality in the Tualatin is of utmost importance and the amount of money required to accomplish this clean-up represents a significant expense to the taxpayers. The 1993 date does not allow enough time to provide funding to construct the necessary facilities to clean-up the Tualatin. If the time-line is not extended, a moratorium on new construction could result in one of Oregon's prime development areas.

Mike Nelson, Ben Franklin Development

An old Chinese saying, "Progress is not where we are today -- but where we were in the past". The Unified Sewerage Agency has not stonewalled. Reasonable time limits are required to develop a cost-effective plan to clean-up the Tualatin. Efforts to clean the river will require developing a working relationship between public and private entities.

Gary Ott, Citizen

The DEQ has failed to adequately plan for water quality in the Tualatin Basin. DEQ should prepare cost-benefit analysis of the proposed regulations. DEQ should delete the requirements for wetlands management on 5-acre parcels because of nuisance condition, lack of evidence that wetlands remove phosphorus, and conflicts with LCDC goals of 10-people per acre for urban development. The use of phosphate detergents in the state of Oregon should be banned. The Lake Oswego Diversion dam should be removed. In summary the DEQ has not complied with the United States Code Title 33 paragraph 1312 which calls for cost-benefit analysis and evaluation of technology or other alternative control strategies to meet effluent limitations

Jerry Parmenter, Washington County

Washington County is committed to developing reasonable urban stormwater management plans for Washington County and to meet the standard set by the Environmental Quality Commission. It is the intent of the county to meet with the DEQ to develop reasonable time schedules for implementing urban stormwater runoff plans.

Eleanor Phimney, Citizen

We can have "nirvana" in the Tualatin basin if we try. Land use should be done to have the greatest caring for this earth. Eleanor suggests that DEQ establish a committee to review local ordinances, permit STPs for wetlands treatment, create small impoundments in the basin, and ban phosphorus detergents. Solving the problems in the Tualatin will require creative thinking.

James Rapp, City Manager, City of Sherwood

The City Council of Sherwood has gone on record as supporting the standards adopted by the Commission. The City is alarmed at the tight time-lines required and believes the 1993 target date is fated to be missed. Because the City of Sherwood is serious about the standards, they need adequate time to provide the DEQ with accurate up-to-date information.

Don Schut, City of McMinnville

This issue is very complex. It cannot be addressed lightly. The economic impact to the state is tremendous. DEQ and the Commission should not move to hasty decisions that are unrealistic, and only open the doorway for more litigation. DEQ must work with local agencies to resolve existing water quality problems. It is better to have a logical time-frame for selecting alternatives for meeting limits. After this selection is made, a new compliance schedule can be developed for completion of the actual projects.

Michael J. Scott, Tigard Chamber of Commerce

The Tigard Chamber of Commerce states that it is clear that Washington County, Cities, and local businesses want a clean river. However, those interested in solving problems want to do it in a reasonable, cost-effective and environmentally sound manner. The Commission has adopted incredibly strict standards. To achieve these standards will require cooperative planning, time and money. It is strongly encouraged to adopt an implementation schedule that allows all options to be explored.

J. D. Smith, Northwest Environmental Defense Center

The Northwest Environmental defense Center finds that DEQ has not lived up to the requirements of the Consent Decree. NEDC finds that no WLA and no LAs have been submitted to the Environmental Protection Agency. EPA will publish by no later than September 4, 1988 appropriate LA and WLA for each and every existing and future point and nonpoint source. EPA will revise permits within 90-days and disapprove any increase in loads until compliance is achieved. EPA will adopt at least parity and new pollution sources will be delayed by five years until NPS compliance is achieved.

The rules proposed by DEQ are codification of further delays. These rules merely pass the buck by going into details of "good faith" and "budgeting". This rule gives the indication that DEQ is not serious about cleaning up the Tualatin River. In the fiscal and economic impact statement the word cost or increased costs appear 20 times, benefits zero times. In this statement DEQ should state the cost of not complying with Federal Standards, and discuss the benefits of a clean river.

Leonard Stark, Citizen

Mr. Starch provided numerous examples of potential sources of pollution to the river, and methods for addressing water quality problems in the basin. Mr. Starch encouraged DEQ and EQC to develop a reasonable compliance schedule.



Luanne Thielke, Mayor, City of Tualatin

The City of Tualatin is very concerned about water quality in the Tualatin Basin. Currently, the City has in its plans a requirement for the preservation of a greenway adjacent to the banks of the Tualatin River. The City is quite concerned about the cost of providing utility services. The City recommends that:

1. Submittal of plans be made no sooner than 24 months from the date of adoption of these rules;
2. That the issue is addressed by all residents that are in the area that drains either to the Tualatin River or Lake Oswego; and
3. Sections (3)(g) and (3)(i) be rewritten so that they cover all lands draining into the Tualatin Basin or Lake Oswego Basin regardless of whether they are urban, non-urban, agricultural, or non-agricultural

Jerry Taylor, City Manager of Cornelius

The City of Cornelius fully endorses previous comments describing the need for more time to plan and implement a control program. The City of Cornelius fully intends to do their part in the Tualatin River Clean-up.

Bruce Warner, Department of Land Use on Transportation,  
Washington County

The affected agencies cannot meet the proposed compliance schedules. It will take a minimum of 18 months for Washington County to devise a management strategy. By the end of 1993, alternatives can be reviewed and selected. After this evaluation implementation of a reasonable nonpoint source pollution control plan can begin. This plan will include retrofitting existing developments where necessary.

Richard Westlake, Citizen, Consulting Engineer

What we have today is the result of the same thought process that is being proposed. "Grave concern" and planning will make no difference. There is no substitute for taking action. We need to take a look at the problems with the perspective of a clean river. If we had a clean river, people would not be appeased by hope and long-term planning. Their proposed additional planning time is just an excuse for not creating funds. We need a project champion; without pressure, nothing will get done.

Ken Wright, President Lower Tualatin Valley Homeowners Association  
(Inc.)

The association strongly recommends that:

1. DEQ should move immediately to follow the policies and guidelines as set by the EQC;

2. DEQ should move as rapidly as possible to establish plans and implement water quality standards;
3. The EQC established standards should be met no later than July 30, 1993; and
4. Monitoring should begin on all existing point and nonpoint sources of pollution.

Robert Burd, USEPA

Mr. Burd states that:

1. The proposed rules recognize that water quality problems must be solved in a balanced manner and support the addressing of point and nonpoint sources.
2. Specifying dates in the rules ensures that expectations are clearly identified.
3. The rule describes the equations for method or determining the sum of the load allocations and wasteload allocations and for determining the TMDL. However, no specific individual load allocations or waste load allocations have been presented which could be put into a NPDES permit of the implementation plan.
4. When the Department makes a formal submittal to EPA, the individual WLAs and LAs must be defined before the TMDL can be considered complete.

Richard Walker, Sunset Corridor Association

The standards are not necessarily justified and may not be achievable. The water quality problems are not an emergency, and not a human health concern. Compliance will cost a lot of money. The complexity of the issue will require a lot of time to develop reasonable plans. DEQ needs to participate in the solution.

Exhibit 2 of Attachment D.

Name	Orall Date	Written Schedules	Compliance Schedules	Final Date	Time of Application	Nonpoint Source Agency	Container Nurseries	Oswego Lake Sub-basin	New Loads	Others
Allen, Mike	2		X							
Ardvidson, Brett		X	X	X						
Bananzano, Richard	2									DEQ can not prove the natural color of the water
Bishop, Brent	2	X	X	X						
Bracken, Mike	1	X	X	X						Alternative treatment options reviewed
Broome, Jack	2	X		X						
Brosy, Jack	2									Dam is needed
Burdick, Don		X						X		
Burris, Van		X								Include Carpenter Creek
Churchill, Jack	1	X	X	X			X	X	X	
Cofelt, Robert	1		X	X						
Cole, Larry	1	X	X	X						All options not reviewed
Creedon, Ted	2	X	X	X		X				
Deaver, Frank	1	X								DEQ technically unsound, prefers USA proposed plan
Derby, Dennis	2									Environmental Groups want a building moritorium
Duyck, Ralph	1		X			X				
Duyck, Tom	2	X				X				
Edwards, Gerald	2	X	X	X						
Femrite, Kathie	2						X			
Fink, Ken	1	X		X						
Fry, Delane	1					X				
Fukasawa, Paul	2						X			
Gaffi, Bill		X	X	X						
Gardner, Lyell	1			X						Dam is needed
Goddard, Eugenia		X		X			X			Permitts for all point and nonpoint sources
Gray, Marian	2	X					X			
Harvey, Peter	2		X							Need Clarification of DEQ requirments
Hays, Bonnie	1	X	X	X	X					
Hitchcock, Walt	2		X	X						
Hoeren, Gerd	2	X		X				X		
Huffman, Shirley	1	X	X		X		X			

STATE OF OREGON

DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE MEMO

TO: Fred Hansen

DATE: September 8, 1988

FROM: David Mann through Mary Halliburton *DMH*

SUBJECT: Testimony For Agenda Item J, September 9, 1988 EQC Meeting

- o Mr. Lynn Heusinkveld has asked to speak at the EQC meeting. He is an attorney representing the Charleston Sanitary District, which is tributary to Coos Bay Treatment Plant No. 2. Charleston Sanitary District has expressed dissatisfaction with Coos Bay's waste treatment operations, maintenance, and costs. The District is contemplating building a separate plant and withdrawing from its agreement with Coos Bay for treatment of sewage from the District. Mr. Heusinkveld has requested 5 to 10 minutes during the Public Forum period to inform the Commission regarding these concerns.

He may also seek the Commission's assurance that facility planning for improvements to Plant No. 2 addresses the alternative of a separate plant in Charleston. The City of Coos Bay agrees that this alternative should be covered in the facilities plan. The City and Department staff do not consider that a requirement for addressing this alternative need be specified in the Stipulated Compliance Order.

- o Five representatives of the City of Coos Bay are expected to be present to answer questions, and if necessary to respond to the statement by Charleston Sanitary District, if requested by the EQC.
  - 1. Jeff Towery, City Manager Pro Tem
  - 2. Gene McCabe, City Councilman
  - 3. Ralph Dunham, Wastewater Treatment Program Manager
  - 4. Stan Sharp, Wastewater Treatment Operations Superintendent
  - 5. Mark Lasswell, Century West Engineering, Portland
- o Department staff does not believe the discontent of Charleston Sanitary District has any bearing on the need for a Stipulated Compliance Order between the EQC and the City of Coos Bay, which is the sole permittee and responsible party for Plant No. 2.

WC3736

cc: Dick Nichols  
Tom Lucas  
Tom Bispham

OREGON ENVIRONMENTAL QUALITY COMMISSION

WITNESS REGISTRATION

JEFFREY GRANT  
NAME (PLEASE PRINT)

1300 GILDEN ST PORTLAND  
ADDRESS

OIL HEAT INSTITUTE  
AFFILIATION

I REQUEST APPROXIMATELY 5 MINUTES TO SPEAK.



AGENDA ITEM J

OREGON ENVIRONMENTAL QUALITY COMMISSION

WITNESS REGISTRATION

LYNN HEUSINKVELD  
NAME (PLEASE PRINT)

396 N. Front St. Coos Bay  
ADDRESS

Attorney for Humboldt on Sandbar Island  
AFFILIATION Regional Agreement with Coos Bay

I REQUEST APPROXIMATELY 5-10 MINUTES TO SPEAK.

AGENDA ITEM

J

OREGON ENVIRONMENTAL QUALITY COMMISSION

WITNESS REGISTRATION

NAME (PLEASE PRINT)

ADDRESS

AFFILIATION

I REQUEST APPROXIMATELY \_\_\_\_\_ MINUTES TO SPEAK.

AGENDA ITEM

R

OREGON ENVIRONMENTAL QUALITY COMMISSION

WITNESS REGISTRATION

NAME (PLEASE PRINT)

ADDRESS

AFFILIATION

I REQUEST APPROXIMATELY 5 MINUTES TO SPEAK.

AGENDA ITEM 

OREGON ENVIRONMENTAL QUALITY COMMISSION

WITNESS REGISTRATION

Jim Brown  
NAME (PLEASE PRINT)

222 SW Columbia Suite 1000 Portland 97201  
ADDRESS

Book & bits  
AFFILIATION

I REQUEST APPROXIMATELY 5 MINUTES TO SPEAK.

AGENDA ITEM 

OREGON ENVIRONMENTAL QUALITY COMMISSION

WITNESS REGISTRATION

Diana Mackin  
NAME (PLEASE PRINT)

1300 114th Ave SE #10 Bellevue WA 98004  
ADDRESS

Asst. Dir. - Admin. Services  
AFFILIATION

I REQUEST APPROXIMATELY 5 MINUTES TO SPEAK.

OREGON ENVIRONMENTAL QUALITY COMMISSION

WITNESS REGISTRATION

RENA CUSMA

NAME (PLEASE PRINT)

METRO

ADDRESS

EXEC. OFFICER

AFFILIATION

I REQUEST APPROXIMATELY 15 MINUTES TO SPEAK.

REQUEST TO SPEAK AT APPROXIMATELY 11:00 AM.

OREGON ENVIRONMENTAL QUALITY COMMISSION

WITNESS REGISTRATION

Commissioner Bob Koch

NAME (PLEASE PRINT)

City of Portland

ADDRESS

AFFILIATION

I REQUEST APPROXIMATELY \_\_\_\_\_ MINUTES TO SPEAK.

He would like about 3 minutes as soon as possible.



AGENDA ITEM 4

OREGON ENVIRONMENTAL QUALITY COMMISSION

WITNESS REGISTRATION

Kenneth M. Mitchell

NAME (PLEASE PRINT)

1001 Molalla Ave. Suite 207 Oregon City, OR

ADDRESS

Mayor - City of Oregon City / Clackamas

AFFILIATION

I REQUEST APPROXIMATELY 5 MINUTES TO SPEAK.

County City Assoc Rep.

AGENDA ITEM 4

OREGON ENVIRONMENTAL QUALITY COMMISSION

WITNESS REGISTRATION

Jeanne Roy  
NAME (PLEASE PRINT)

ADDRESS

Recycling Advocates  
AFFILIATION

I REQUEST APPROXIMATELY \_\_\_\_\_ MINUTES TO SPEAK.

I am aware the public is not allowed to speak on this item, therefore I would like you to ask staff why they are calling for more frequent collection during March, April, May + Sept., Oct., Nov. when I think higher tonnages are generated during the summer. I think summer months should be included. Maybe knock off March + Nov.

AGENDA ITEM

YARD  
DEBR

OREGON ENVIRONMENTAL QUALITY COMMISSION

WITNESS REGISTRATION

John CHARCES

NAME (PLEASE PRINT)

ADDRESS

OEI

AFFILIATION

I REQUEST APPROXIMATELY 5 MINUTES TO SPEAK.

AGENDA ITEM

Y

OREGON ENVIRONMENTAL QUALITY COMMISSION

WITNESS REGISTRATION

Dale Sherbourne

NAME (PLEASE PRINT)

2638 SW Corbett Portland Oregon

ADDRESS

AFFILIATION

I REQUEST APPROXIMATELY 4 min MINUTES TO SPEAK.

AGENDA ITEM

✓ 17

OREGON ENVIRONMENTAL QUALITY COMMISSION

WITNESS REGISTRATION

Jeanne Roy  
NAME (PLEASE PRINT)

2420 SW Boundary St.  
ADDRESS

Recycling Advocates  
AFFILIATION

I REQUEST APPROXIMATELY 1 MINUTES TO SPEAK.

AGENDA ITEM

18

OREGON ENVIRONMENTAL QUALITY COMMISSION

WITNESS REGISTRATION

Jeanne Roy  
NAME (PLEASE PRINT)

2420 SW Boundary St.  
ADDRESS

Recycling Advocates  
AFFILIATION

I REQUEST APPROXIMATELY 7 MINUTES TO SPEAK.

OREGON ENVIRONMENTAL QUALITY COMMISSION

WITNESS REGISTRATION

Cal Krahnmer

NAME (PLEASE PRINT)

Rt 4 Bx 76 Cornelius

ADDRESS

OR 97113

AFFILIATION

I REQUEST APPROXIMATELY 5 MINUTES TO SPEAK.

OREGON ENVIRONMENTAL QUALITY COMMISSION

(Regulation)

WITNESS REGISTRATION

Tim Rowson

NAME (PLEASE PRINT)

2600 River Road Seaside

ADDRESS

OR 97138

AFFILIATION

I REQUEST APPROXIMATELY 5 MINUTES TO SPEAK.

OREGON ENVIRONMENTAL QUALITY COMMISSION

WITNESS REGISTRATION

Smith  
NAME (PLEASE PRINT)

NEDC  
ADDRESS

AFFILIATION

I REQUEST APPROXIMATELY \_\_\_\_\_ MINUTES TO SPEAK.

Gary E. Newkirk ✓  
2234 SE 53rd Ave.  
Portland, OR 97215  
July 8, 1988

Oregon Environmental Quality Commission  
811 SW 6th Ave.  
Portland, OR 97204

SUBJECT: Request for Action  
DEQ file #90578

Commission Members:

BACKGROUND:

DEQ mandated in 1978 that a sewer system for the Barview area be constructed.

The Twin Rocks Sanitary District was formed to build the mandated system.

DEQ reviewed and approved the sewer system plans.

DEQ monitored, inspected and approved the construction of this system.

In designing the system, the manholes were located on Lakeside Drive, a road running along the edge of Tillamook Bay. The road is elevated between 3 and 4 feet above ground level.

The lowest natural outflow point on the entire sewer system is the shower at my house, 15280 Lakeside Drive. The next lowest natural outflow point is my toilet. All other houses in this area were built later and at higher levels above the road to gain a better view of the Bay. The lowest manhole is located 18 inches higher than my shower.

My house at 15280 Lakeside Drive is a listed National Historic Building. It was constructed in 1902 by the United States Lifesaving Service as the second manned station on the Oregon Coast. The Service later changed its' name to the U. S. Coast Guard.

Since the sewer system was constructed in 1980, it has flooded my house with raw sewage seven times. The last was reported by me to DEQ on June 29, 1988. The house is no longer habitable.

DEQ has stated that it has no corrective enforcement powers covering raw sewage backing up from the Twin Rocks Sanitary District system into my house.

Gary E. Newkirk  
July 8, 1988  
Page 2

Raw sewage flowed out from under both the front and back doors and onto the ground on occurrences two, three, four and five. The raw sewage came within six inches of the back door on the sixth occurrence and within three feet on the seventh occurrence.

REQUESTS:

I hereby request that DEQ investigate and report the immediate cause of the 7th raw sewage backup.

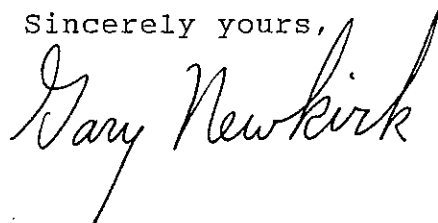
I hereby request the results of the DEQ investigation of their special responsibility to listed Historic Buildings as covered in the Federal loans channeled through DEQ to construct this system. Also the Federal protection demands delegated to DEQ in reference to Historic Building protection. This was first requested December 11, 1987.

I hereby request information on the status of these 1987 DEQ requests of the Twin Rocks Sanitary District:  
For improved monitoring of the system.  
Detailed inspection results of the sewer line in front of my house.  
Installation of an alarm system.  
A telephone answering system for emergencies.

I hereby request the Oregon Environmental Quality Commission to declare the Twin Rocks Sanitary District system to be a clear and present danger to Public Health and to Tillamook Bay under ORS 468 based on the numerous previous system failures which caused raw sewage to back up into my house and run outside onto the ground and the obvious predictability of future raw sewage backups which will reach the ground outside my house.

I hereby request that the Environmental Quality Commission ask the upcoming state legislative assembly for additional power to enforce corrective action against sewage systems that routinely flood private residences with raw sewage and then take no corrective action or inadequate corrective action. I ask the Commission to publicly declare their intent in this area and that I be informed of your decision.

Sincerely yours,



2

Statement of John R. Churchill before the Oregon Environmental Quality Commission July 8, 1988 on Agenda Item E. Rules for Cleaning up the Tualatin.

My address is 788 Cabana Lane, Lake Oswego. I am appearing today as head of the Tualatin Riverkeepers- a citizens group dedicated to the restoration of the Tualatin River- I am also a plaintiff in NEDC and Churchill vs EPA and I am the author of the Tualatin River Planning Collage- A product of my water Policy seminar at Portland State University. As a former employee of the EPA I had the opportunity to be one of the architects of P>L> 92-500.

*Added name to Chair to Commission*

My testimony today is to support the program offered by the Department and urge the Commission to adopt the Rule with the clarifying amendments offered by my Colleague Dr. Jack Smith , president of NEDC.

"The story in Texas about Jesse Jackson is appropriate to your actions today" You can't get the water clean until you get the hog out of the creek ... You don't get the hog out of the creek by saying 'here hog here hog' . You put your shoulder to it -to the hog- and shove and shove until you get the hog out of the water " Our citizens of the basin for far too long have been calling to USA and Washington County:: Here hog here hog." to no avail.

So my purpose today is to encourage this commission to put your shoulder to the hog in the Tualatin and get that hog out of the water. Its a big hog.. Its going to take a lot of hard sustained pushing if you are going to succeed.

The most important fact about todays hearing is that you are in reality deciding the course and direction of Oregons Water Quality. So goes the Tualatin So goes Oregon. The process we initiate today will set the pattern for Water quality limited streams in Oregon.

As yesterdays Oregonian editorial stated the time is now to initiate the Tualatin River Comeback- To reverse the trend of rapid degradation that has set in. Yes --it will take time dedication of many- cooperation-- money and a continuing public support and involvement. And most of all political will. Not only by this commission but your actions must act as transfusion of political will particularly to Washington County. A most important agreement is trust in the system a distrust in the agecnies reposnsible for implementation. Unfortunately USA, Washington County and the Soil and Water District after joining in the Departments Advisory Committee for a year walked out on the rest of the players and have taken the position that they will continue to pollute until ordered by a federal court. You need to help them become part of the solution and no longer the major problem.

2



We all commend the the water division staff of the Department for the pioneer work that they have done in forging a new program process for water quality management. With the addition of a few clarifying amendments we are offering we believe the rule provides the direction for a workable program to clean up the Tualatin. We believe it is a workable program.

One of the concerns you continually face on this commission is Do we have enough data to make a decision? My answer to that is simply that we never have enough data to satisfy the technical program personnel- the consultant for hire and you never never have enough data to satisfy the polluters. It is always easier to make another study than to bite the bullet and take firm regulatory decisions.

I would suggest that this commission in reaching its decision today follow the advice of Dean Acheeson- to weigh heads and not count them.

Public policy decisions must be made in a timely manner. Obviously we should have an iterative process of continuing evaluation and mid course corrections. But we must begin now. We have delayed too long.

The Tualatin is the most studied river in Oregon. In fact there have been so many studies my graduate seminar in water policy at Portland State University wrote a book entitled the Tualatin River Planning Collage. It is a study of the studies. How nice it would have been to write a book on the action programs cleaning up the Tualatin.

More studies will not clean up the Tualatin. We objected strongly to the two year study of the Tualatin on the basis that there was enough data to establish total maximum daily loads. Yes the the technical studies have given us more assurance of the right course. Most importantly the two years have given hope to a rapidly increasing majority of the citizens of the basin that they want their river back. So the public discussions have served a useful purpose. However, as I look back and think where we would be now if we had followed the Federal Law and established these Total maximum daily loads in 1979 when the Federal Act and courts required them to be established.

First the program offered in the rules initiates a new direction in Oregon Water Quality Policy. From Sewage management to Water quality management. -show Oregonian.

The picture of the desecrated river and the mayor of River Grove Ted Creedon compares with the many pictures painted in the hearing record of crowds of 5000 swimming at Romers rest and five other major spas on the Tualatin before the pollution began.

The fisheries the record shows have been depleted in both specie and numbers over the years. The Tualatin was once known as the river that supported the most diverse species and families of fish and shellfish of any river in the united States. As for the future the Tualatin is being called upon for increasing the salmon and steelhead runs by the Northwest Power Planning Council in their program to double the salmon runs in the Columbia System.

That the uses of the Tualatin -the fisheries-the swimming- the boating -the aesthetics- the property values have all been substantially adversely affected by the massive degradation of the Tualatin is a part of the public record. The Federal statute requires that these uses be restored by cleaning up the water quality

What about the economics- How much is it going to cost. A lot. The federal and state water quality statutes are not concerned with cost benefit. What they are concerned with is internalizing the externalities. That is each polluter pays to cleanup ones own wastes. He does not transport the cost to society and increase the social cost What has happened in this case is that as the development in both Washington and Clackamas County has doubled and redoubled the Counties and cities have not required the front end investments in both the storm runoff systems. Pollution and down stream water users have paid the social costs of the failure to charge for the necessary water management. Is it a manageable cost this program will impose. The answer is yes. If you take USAs most wild cost estimate of increasing household sewer rates by \$10.00 a month for transport of the sewage to the Willamette the monthly USA rate would still be below Salems and Albanys. In 1986 the city of Gaston spent \$360,000 for master storm drain plan. They are currently developing storm water user fees. Their discharge of phosphates which they monitor is .033 mg/l of phosphates. The river fat that point is .047. One could compare the 360,000 spent by the small town of Gaston with the \$200,000 budgeted by USA and Washington County. The conclusion one can draw yes it is manageable. To get a clearer picture of costs and the cost effectiveness of alternative treatment systems particularly wet lands the plaintiffs have requested EPA to make a an economic study . This study will be available in late fall.

For several years the river research studies at John Hopkins have vividly shown that Urban streams faces a precarious existence. Most streams face rapid rates of degradation both the hydrologically and the quality. They reach a point of irreversible degradation where the solution historically has been to cover them over- That is to make a an honest sewer of them. The Tualatin on its present course is headed for that fate.

Most of the people that I have talked with are supportive of the program presented by the Department. They are greatly concerned about the long drawn out time lines. They want action and they want action now. As the lady from Kansas told the farmers in the 90s " It is time to stop growing corn and start raising hell. We urge you to adopt the Departments program with our NEDC.s clarifying amendments.



# LAKE OSWEGO CORPORATION

P.O. Box 203 Lake Oswego, Oregon 97034

Lake Oswego, Oregon  
July 8, 1988

Environmental Quality Commission  
811 SW Sixth Avenue  
Portland, Oregon 97204

Re: July 8, 1988, Hearing on Adoption of  
Rules for the Tualatin River Basin.

Dear Environmental Quality Commission:

We endorse this evaluation process and the resultant rules as a critical step towards resolving water quality problems in the Tualatin River and in Lake Oswego.

Excessive nutrient loading in the Tualatin River has limited our options for standard lake management and restorative practices. Algae growth has become a serious problem and threatens our beneficial uses. Phosphorus, the primary pollutant contributing to this algae condition, arises 86.1% from Tualatin waters entering our lake environment. In fact, the amount of phosphorus entering Lake Oswego is the highest documented for any lake in the Pacific Northwest.

The degradation of water quality has gone as far as it can without negatively affecting property values in our community. Without the anticipated positive results of these rules, we will soon be overwhelmed by the effects of water pollution. Our beneficial uses are fragile, are suffering, and will be destroyed without corrective action.

The rules require us to develop and implement a lake management plan. We accept this responsibility, for our community is dedicated to preserving and protecting this valuable recreational resource. It is our stated goal to reduce the pollutants entering our lake by 90%.

Success of our management plan depends on achievement of the phosphorus limit, the time frame for application of this limit, and close cooperation with those who determine our environment. We have learned that lake management is not feasible without assistance from those who impact inflows.

*Hydro-electric Generation • Police and Water Safety Patrols  
Construction and Environmental Permits • Boat and Operator Licenses  
Marine Services – Gas and Oil*

Lake Corporation Headquarters 700 S.W. McVey Avenue Lake Oswego, Oregon

The required support of USA is vital to coordinate minimum phosphorus discharges with our early spring inflows. While we also face various legal and structural limits on the amount and timing of our Tualatin water uses, we believe significant phosphorus reductions can be achieved.

Although the rules assume the Lake Oswego drainage basin is included, it should be stated more clearly. Our tributaries provide a small inflow, but they are not free of urban non point source pollutants. An exemption must not be allowed to defeat the best efforts of our management plan.

Regarding our own basin drainage, we have been working to reduce both nutrient and siltation inflows. Our strategy has been to obtain voluntary marginal reductions wherever we can. Two illustrations of these efforts are worthy of comment.

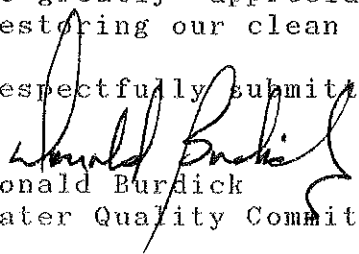
The City of Lake Oswego has become vigilant regarding preservation of wetlands, protection of stream environments, and monitoring of developers to prevent erosion during and after construction activities. Continuing this thrust, the City recently created a storm drain utility district to be funded by a surcharge on monthly water and sewer bills.

A second example is the voluntary removal from the Springbrook creekside of manure storage by the Lake Oswego Hunt Club. The Club also moved its corrals away from the stream and altered the drainage of a paved parking area so as to prevent direct runoff. To some, these efforts may seem a small contribution to cleaner waters. To us, it is consistent with our belief that incremental preventative efforts will collectively enable us to reach our goals.

In summary, we accept these recommendations as being the best obtainable rules at this time. We will work closely with USA to develop a management plan which minimizes the amount of Tualatin pollutants that enter our lake. We ask the Commission to more clearly include the Lake Oswego drainage basin. With inclusion, our management plan can be coordinated and monitored for all sources of water inflows.

We greatly appreciate the commitment of this Commission to restoring our clean water.

Respectfully submitted,

  
Donald Burdick  
Water Quality Committee



WASHINGTON  
COUNTY,  
OREGON

July 8, 1988

Environmental Quality Commission  
811 SW 6th  
Portland, Oregon 97204

Members of the Commission, my name is Bonnie Hays. I am Chairman of the Board of Commissioners of Washington County, and as such, sit as the Chairman of the Board of Directors of the Unified Sewerage Agency.

USA has been a serious participant in the TMDL process. The management of the resource known as the Tualatin River is of vital interest to our organization, and we applaud the acknowledgement by DEQ that such management is the responsibility of all users of the river, and not just those within the boundaries of Washington County, nor USA alone.

USA supports the adoption of TMDLs ... here and today. We must differ with the DEQ staff recommendation as to the numbers, but we feel that there is no reason to delay action.

We believe that the goals of this TMDL process can be achieved through the USA proposal of loadings in combination with the Control Strategy. USA's management plan would achieve algae control, support existing beneficial uses, create additional opportunities for recreation and wildlife, and would keep the USA effluent within the basin. The phosphate reduction in the DEQ proposal is so severe that choices become very few, and indeed limits the potential for a comprehensive solution.

USA is prepared to move ahead with its part of the algae control and water quality management plan for the Tualatin River. The other private, local, state and federal agencies have authority to act as well. Their coordinated participation is essential to a successful effort.

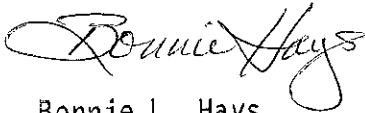
This enhanced management and clean-up effort comes with a substantial price tag. All benefitted parties must share in the cost of this effort, and all users of this resource must share in the responsibility of effective management. As this TMDL process is merely the beginning for the State of Oregon, and with several State agencies also having degrees of authority over our waterways, the State is also recognized as a partner in this process and should commit resources as well.

Environmental Quality Commission  
July 8, 1988  
Page 2

Other key partners are Washington and Clackamas Counties, and our cities. We at Washington County have begun the process to address surface water management for quality and quantity, by formation of a district. Frankly, based on this year's budget and our time schedule, the dates in the rule do not look realistic. We do intend to move ahead in the nonpoint source field.

In conclusion, the Unified Sewerage Agency recommends the adoption of TMDLs today ... based upon a realistic assessment of water quality. USA's proposed loads, together with its proposed management plan, provide a blueprint for achieving an appropriately enhanced level of water quality in the Tualatin River basin for all to enjoy.

Sincerely,



Bonnie L. Hays  
Chairman

3787M



WASHINGTON  
COUNTY,  
OREGON

July 8, 1988

Environmental Quality Commission  
811 S.W. 6th Avenue  
Portland, OR 97204

EQC TESTIMONY

Good morning, Mr. Chairman and members of the Commission.  
My name is Lorrie Skurdahl. I serve as legal counsel to the  
Unified Sewerage Agency.

DEQ embarked on this process with few guideposts. It has performed a site specific analysis, and it has included technical and citizen input via its committees and its three hearings on the originally proposed TMDLs as directed by EQC in March, 1988. It is clear that through the hearing process, DEQ staff listened and responded to public comment, including some from USA.

I will make four major points:

1. Algae is an aesthetic issue. EQC has authority to interpret existing water quality standards and define an acceptable level of algae for the Tualatin River. The existing "nuisance algae rule" is not the appropriate level.



2. The TMDL is one element of the water quality planning process. EQC should adopt TMDLs today, and direct that specific implementation measures be addressed by rule, or at least with additional opportunity for public comment. An appropriate plan for this river basin cannot be developed in a DEQ staff report with three days' public review.

3. DEQ has chosen the most expensive method to achieve the goal of enhanced water quality. USA's proposed TMDLs are sound technically, and will achieve the water quality goals at less cost.

4. DEQ has proposed a longer calendar period for the limits. USA proposes that the limits apply based on calendar *year* plus river flow and temperature.

The purpose of the TMDL for  $PO_4$  is to make the Tualatin more attractive for people. You will look in vain in the staff report for a description of what the Tualatin looks like now, what it looked like last August, and what it might look like at various levels of algae or chlorophyll a. This is why USA brought examples of different levels of algae, so you would have some inkling of what this means in terms of your own eyes. DEQ has not shown you. They have not attempted to describe it in words. They have picked a number out of a book.

The source of 15 ug/l. chlorophyll a value is the "nuisance algae rule", OAR 340-41-150. USA participated in the drafting of this rule. That rule was not intended as a water quality standard. It was not presented as such to this Commission. It was not submitted to EPA for review as is required for revised water quality standards. It was intended as a trigger level for a study by DEQ which would then describe existing water quality and could result in control measures. It is simply wrong for DEQ to graft that number into the TMDL process with no explanation, and without any connection of that number to support of beneficial uses in the Tualatin River, or review of alternatives. Yet that is what DEQ proposes. Other jurisdictions around the country have adopted numbers in the range of 25 to 40 ug/l. as a goal or indicator of acceptable levels of algae based upon aesthetic considerations. Members of the TAC were told that a range of 15 to 30 ug/l. chlorophyll a was the goal of the algae reduction and the TMDL process. It was on this basis that USA developed its river modeling effort and Individual Control Strategy, a comprehensive approach to addressing management of the river. USA's proposal meets that range of chlorophyll a values publicly announced by DEQ. In DEQ's staff report, for the first time, DEQ has announced that 15 is the number that shall not be exceeded in the Tualatin River.

DEQ staff apparently has rejected USA's approach <sup>in</sup> to toto, because it achieves 19, rather than 15, under the worst case. The difference between 15 and 19 ug/l. of chlorophyll a is not visible to the human eye. An aesthetic standard is by nature a subjective standard. EQC has authority to interpret its existing narrative standard for algae consistently with the range of chlorophyll a values between 15 and 30 ug/l.

DEQ has rejected USA's proposed loadings and its computer modeling approach because the number 15 is not achieved. Yet DEQ has pulled out the low-flow part of the analysis and made that the basis for the severe PO<sub>4</sub> reduction that is dictated for all flows.

DEQ has concluded, without explanation, that its algal assays will be the sole basis for setting phosphate TMDLs. The assays predict the ability to grow algae under ideal conditions in the lab. USA's computer model was based upon 1986 data, and was verified by 1987 data from the river itself. USA offered to submit its study and management plan to independent expert review. DEQ apparently rejected this offer; again, with no explanation. DEQ changed its recommended PO<sub>4</sub> level from 0.1 mg/l. to .07 mg/l. The Department did not identify any change in the river perceptible to human senses that would result.

Director Hanson's executive summary to you was correct when, on page two, it cites nutrients and other factors affecting algae growth. But he goes on to state that only phosphate can be controlled to limit algae growth. That is not correct. All these elements can be managed, and all are addressed in USA's management plan.

The algae issue is in stark contrast to the dissolved oxygen-ammonia linkage. USA first brought the  $\text{NH}_3\text{N}$  issue to DEQ, and proposed a solution. In the Tualatin River, the dissolved oxygen problem is on its way to a solution. There is a direct relationship between instream oxygen and ammonia. USA is constructing facilities to do the job, at its customers' expense.

The staff report has expanded the time of year to which both  $\text{NH}_3\text{-N}$  and  $\text{PO}_4$  limits will apply. The rule as written is too broad. Looking at October, 1987, and June, 1988, shows that we are addressing the variability of weather. USA has proposed that the rule be tailored to actual low flow and high temperature conditions in the river. USA has proposed flow and temperature parameters with significant margins of safety. The actual text is attached at the end of my written testimony.

Finally, what happens to the TMDLs? The consent decree takes care of the Rock Creek Treatment Plant through a permit

modification. DEQ staff have suggested a planning process in the latter part of the proposed rule. It has some good points, and some bad points. The Clean Water Act requires the state to have a Continuing Planning Process that clearly describes how TMDLs will be implemented. DEQ's document was adopted in 1984 and has nothing about TMDLs.

Given that most of us have had only three working days to review the implementation part of this rule, USA recommends that it be severed from the definitions and loadings portion of the rule. The Commission should direct staff to develop a rule of general applicability describing how TMDLs are to be implemented. The Commission should further direct DEQ staff to develop, with public input, a management plan to implement the TMDLs adopted today, dealing with all the factors that can be controlled, not just  $PO_4$ .

As a practical matter, this Commission must adopt TMDLs for the Tualatin River and submit them to EPA for review by a date certain. USA is not suggesting any delay in this process. Rather, USA suggests that this Commission take a reasonable, common-sense approach to managing an aesthetic issue.

In conclusion:

1. Define the aesthetically acceptable level of algae in the Tualatin River to be between 15 and 30 mg/l. of chlorophyll a.

2. Adopt TMDLs for  $PO_4$  and  $NH_3-N$  as proposed by USA but tailored to flow and temperature of the river, in the attached amendment.

3. Direct DEQ staff to develop a rule describing how DEQ will implement TMDLs generally.

4. Direct DEQ staff to develop with all parties concerned, by a time certain, a water quality management plan for the Tualatin addressing all factors subject to control, and including all state and federal authorities, not just local governments.

LSS:dee/0217r



UNIFIED SEWERAGE AGENCY OF WASHINGTON COUNTY

Attachment "A"

USA proposed amendment to Proposed OAR 340-41-470, July 8, 1988,  
Oregon Environmental Quality Commission, Agenda Item F.

340-41-470

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(3)(a) (Total phosphorus)

... measured [during the low flow period] when average weekly  
flow is less than 500 c.f.s. between May 1 and October 31 of each  
year ...

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.  
.

(3)(c) (Ammonia-nitrogen)

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.  
.

... measured when average weekly flow is less than 500 c.f.s. and  
average temperature is greater than 20°C, between May 1 and  
November 15 ...

0217r/dee

5

**TESTIMONY OF GORDON L. CULP**  
**AGENDA ITEM F, TUALATIN RIVER BASIN LOADINGS**  
**ENVIRONMENTAL QUALITY COMMISSION MEETING**

July 8, 1988

I am a consulting engineer specializing in advanced wastewater treatment. I am employed by CWC-HDR, Inc., in Edmonds, Washington as an executive vice-president and national director of the firm's water and wastewater treatment program. I have authored seven textbooks on water and wastewater treatment. Three of these texts dealt primarily with advanced treatment techniques for removal of nutrients, such as phosphorus, from secondary effluents. My resume is attached to my written testimony.

My experience with phosphorus removal projects began in 1965 with pilot plant studies and 14 months of full-scale operation of the South Lake Tahoe, California advanced wastewater treatment (AWT) plant. This project provided the highest level of full scale treatment of municipal wastewater ever achieved at the time. It has been a prototype for many other AWT plants around the world. Since the Tahoe project, I have worked on several other phosphorus removal projects. One has involved wastewater discharges from the Las Vegas area to Lake Mead. Algal growths in Las Vegas Bay were a concern in this project.

First, I'd like to comment on the technical feasibility of achieving 0.07 mg/l total phosphorus in treated effluent. Biological treatment followed by two-stage high lime coagulation and filtration represents the limit of conventional phosphorus removal technology. Other processes can be added to the high-lime process or separate disposal of recycle streams can be practiced to provide further removal of phosphorus but costs can increase dramatically. There is no assurance that the conventional high-lime process can meet a 0.07 mg/l total phosphorus limitation. The South Lake Tahoe high-lime plant would have met such a limitation only one of the last 20 years. The median phosphorus concentration is typically 0.19 mg/l at South Lake Tahoe.<sup>1</sup> A 35 mgd high-lime plant at Roanoke, Virginia produced an annual average phosphorus concentration of 0.13 mg/l with 10% of the values greater than 0.32 mg/l<sup>2</sup>.

A study of treatment technology reliability was conducted by the U.S. Department of Interior.<sup>5</sup> Recognizing that treatment plants do not operate at their optimum efficiency at all times in the real world, they concluded that the high-lime process could reliably produce



an average effluent concentration of 0.28 mg/l total phosphorus (Level 5c treatment, average performance). The performance limit for this process when it is operating at optimum efficiency is generally considered to be 0.1 mg/l total phosphorus.<sup>3,4</sup> This value provides little to no margin for operating error. The Rock Creek facility plan projected that 0.1 mg/l total phosphorus could be produced at Rock Creek by the high-lime process--an optimistic but possibly achievable goal with exceptional operation. To expect the process to reliably produce 0.07 mg/l requires that the process operate at its absolute limit each and every day with no safety factor--like expecting a pitcher to throw a no-hitter every day.

The Rock Creek facility plan projected the high-lime process costs would add about \$5.60 per month to the user charge. Lowering the phosphorus limitation from 0.10 mg/l to 0.07 mg/l has crossed over the reliability threshold of conventional treatment capabilities. The lower limit prompts the consideration of unconventional approaches such as irrigation of several thousand acres with effluent, exportation of the effluent out of the basin, or addition of other treatment processes to all or part of the flows. Irrigation and export alternatives raise several implementation questions. Adding other treatment processes would further increase user charges. The treatment implications of the proposed phosphorus limitation should not be taken lightly--even if the benefits to be obtained are certain.

But the benefits to be obtained are not certain. You should be very cautious about projecting the benefits from a strategy based solely on phosphorus loadings. There have been many cases where reductions in phosphorus discharges have failed to produce results. Welch<sup>6</sup> reports that "Of the 23 eutrophic lakes examined, only 10 showed an improvement to either mesotrophy or oligotrophy following diversion" of all sewage discharges out of the lakes. "In general [Welch reports], definite improvements were noticed in about one [lake] in three." In other words, removing all wastewater discharges of phosphorus failed to produce an improvement in two-thirds of the cases. Welch<sup>7</sup> points out that "nearly all lakes that showed poor or no improvement were shallow" (less than 20 feet). The lower Tualatin is shallow. He points out<sup>7</sup> that there is uncertainty over the benefits versus the costs to reduce phosphorus loading "because experience range from a high level of success to no improvement at all."

Since 1978, I have been involved in a study attempting to relate the levels of wastewater treatment in the Las Vegas area to algal (as measured by chlorophyll) levels in Las Vegas Bay. This bay in Lake Mead receives the treated effluent from the City of Las Vegas and Clark County's wastewater treatment plants. In 1979, a Federal Consent Decree between the U.S.

EPA, the State Department of Environmental Protection, Clark County, and the City of Las Vegas was entered. The decree required, as a political compromise, that phosphorus removal be provided at the City and County plants. Both jurisdictions proceeded with crash programs to get the needed facilities on-line. This decree also proscribed the studies to determine the relationship between waste discharges and chlorophyll. In addition to the most experienced Lake Mead limnologists and two consulting firms, three of the most prominent limnologists from throughout the U.S. were retained to help plan the study and evaluate the results. The various limnologists had different projections of the chlorophyll decrease that would occur when phosphorus removal increased at the treatment plants. The differences illustrate that such predictions are not an exact science. Their differing predictions of chlorophyll decreases certainly didn't prepare anyone for the results. In early 1981, phosphorus removal was initiated at both the City and County plants, decreasing phosphorus loadings by 85%. The field crews continued data collection. In early 1981, chlorophyll at the proposed control station in the bay (Station 3) increased to 160% of its 1979-80 summer average of 0.025 mg/l to 0.040 mg/l. Clarity got worse also--Secchi depths (the depth to which a white disc the size of a dinner plate can be seen) dropped from 1979-80 summer average of 2.4 meters to 1.5 meters--a 37.5% decrease. Was 1981 a fluke? An aberration of the first year of reduced phosphorus loading? No. In the seven subsequent years, chlorophyll has never decreased to the pre-phosphorus removal levels with summer averages as high as 0.058 mg/l (1986) vs. the 1979-80 average of 0.025 mg/l. The Las Vegas area has spent (equivalent present value) \$170 million to remove phosphorus to reduce chlorophyll in Las Vegas Bay. The results are a failure--chlorophyll values have increased rather than decreased. This failure as well as the many failures described by Welch, point out the potential folly of relying on control of a single element such as phosphorus.

**In summary:**

- ❖ The proposed phosphorus limitation under consideration today is pushing conventional AWT technology beyond reliable limits. There is no question that the 0.07 mg/l limit can be met by going beyond conventional AWT. There are questions as to the economic feasibility and the benefits that will be realized by this extra increment of treatment.
- ❖ Models to predict algal growths are far from precise. There is substantial uncertainty about the predicted benefits from phosphorus control. Such predictions have frequently been wrong in other locales.

☒ Just as in Las Vegas, you are rushing to meet a Consent Decree requirement, rushing down a multi-million dollar path to an uncertain destination. There is much wisdom in the old tailor's adage: Measure twice, cut once.

## REFERENCES

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- 2 Eckmann, D.E., and Zimmerman, H.S., "Performance of a Large Advanced Waste Treatment Plant," *Journal Water Pollution Control Federation*, p. 2717 (November, 1980).
- 3 "Manual of Practice, Wastewater Treatment Plant Design," MOP 8, Water Pollution Control Federation (1977).
- 4 Culp, R.L., Wesner, G.M., and Culp, G.L., "Handbook of Advanced Wastewater Treatment," Van Nostrand Reinhold, New York, NY (1978).
- 5 "Water Reuse and Recycling, Vol. 2: Evaluation of Treatment Technology," OWRT/RU-70/2, U.S. Department of Interior, Office of Water Research Technology, Washington, DC (1979).
- 6 Welch, E.B., "Lake Restoration Results," Chapter 23, pp. 557-571, in Taub FB [ed], *Lakes and Reservoirs*, volume 23 in *Ecosystems of the World*, Elsevier, New York, NY, (1984).
- 7 Welch, E.B., "Ecological Effects of Wastewater," pp. 160-167, Cambridge University Press, New York, NY (1980).

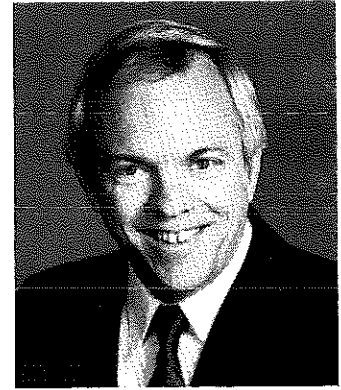
## GORDON L. CULP

### EDUCATION:

B.S., Civil Engineering, University of Kansas  
M.S., Environmental Health Engineering, University of Kansas

### EXPERIENCE:

U.S. Public Health Service  
Taft Sanitary Engineering Center, Cincinnati, Ohio, 1962-1963  
Columbia River Basin Project Office, Portland, Oregon, 1963-1964  
CH2M Hill, Consulting Engineers, Corvallis, Oregon, 1964-1966  
Neptune Microfloc, Corvallis, Oregon, Research Manager, 1966-1970  
Battelle-Northwest, Richland, Washington, Research Manager, 1970-1971  
CH2M Hill, Consulting Engineers, Reston, Virginia, Vice-President and Regional Manager, 1971-1973  
Culp/Wesner/Culp, 1973-Present



GORDON L. CULP offers experience gained in 23 years in the study, evaluation, design, and operation of water and wastewater treatment facilities. Since forming CWC, he:

- served as manager of a project to develop a comprehensive plan to control 2 billion gallons per year of combined sewer overflows from the metropolitan Seattle, Washington, area.
- served as project manager on wastewater facility plans for Edmonds and Mercer Island, Washington.
- directed preparation of a comprehensive wastewater collection and treatment plan for Yakima, Washington.
- has served as an expert witness in several major litigations on treatment plant design and construction issues and on water-quality issues.
- served as the City of Las Vegas' program management consultant on a two-year, \$2,000,000 study of the steps needed to protect the quality of Lake Mead, Nevada.
- served on a select committee established by the State of California to evaluate treatment systems proposed as innovative technology under the Clean Water Act amendments.
- was a major participant in an EPA study on energy consumption in wastewater treatment.
- developed a manual for EPA on troubleshooting wastewater treatment plants.
- participated in a sludge-management study for Omaha, Nebraska.
- developed a design manual for land treatment systems.
- has participated in EPA Technology Transfer design seminars on land treatment, sludge handling, nitrogen removal, physical-chemical treatment, and small community systems.
- has managed and participated in several facility plans involving cost-effectiveness analysis of many alternative treatment systems.
- coauthored the Value Engineering Workbook for

EPA, evaluated several VE case studies for EPA, and has been a VE team member for several studies.

- was project manager and principal author of a manual on the management of wastewater treatment facilities, prepared for EPA.
- was selected as the only U.S. consulting engineer to participate in an international symposium on water reuse, held in Mexico City.
- was retained by the South African National Institute for Water Research to conduct a series of seminars for engineers in South Africa.
- has served on the research committee of the Water Pollution Control Federation; on the WPCF committee which prepared a new manual on wastewater treatment plant operation; and as chairman of the Urban Wastewater Engineering Committee of the American Society of Civil Engineers.
- served as chairman of an ASCE subcommittee preparing a series of papers evaluating design approaches for alternative secondary treatment processes.
- is a registered engineer in 21 states and a diplomate of the American Academy of Environmental Engineers.
- has written 7 textbooks and over 60 technical papers and serves as the editor of the Water Management Series of textbooks published by Garland Press.

Before forming CWC, Mr. Culp served as a Vice-President and Eastern Regional Manager of CH2M Hill, a large consulting firm specializing in sanitary engineering. He served as project administrator on a study involving comparison of land treatment and AWT for a 60 mgd project and evaluation of several alternative plant sites—their relative environmental impacts and economics. Projects involved the indirect reuse of substantial amounts (22.5 mgd and 60 mgd) of AWT effluent in water supplies withdrawn downstream. His evaluation of the

necessary degree of treatment, plant reliability needs, and the programs needed to gain public acceptance provides a source of unique experience.

Before his work with CH2M Hill, Mr. Culp was manager of the Battelle-Northwest Water and Waste Section. He was responsible for Battelle's research and development work in the water and waste field and was instrumental in advancing physical-chemical treatment technology.

From 1966 to 1970, Mr. Culp was Research Manager for Neptune Microfloc, Inc., a manufacturer of water and waste treatment systems. The research program led to many new products now making up a large portion of the company's sales. He invented or co-invented several patents held by the firm.

With CH2M Hill, Mr. Culp was in charge of process evaluation studies at the South Lake Tahoe, California, water reclamation plant. These studies developed means of tertiary waste treatment which have since been used at several locations throughout the world.

Previously, Mr. Culp was a sanitary engineer in the U.S. Public Health Service. He planned and conducted field and laboratory studies on water and waste treatment problems and conducted water supply studies for the Columbia River Basin.

#### MEMBERSHIP IN ORGANIZATIONS:

American Academy of Environmental Engineers, Diplomate  
American Society of Civil Engineers, Member  
Past Chairman, Urban Wastewater Committee  
Past Chairman, Task Committee on Design Alternatives for Secondary Treatment  
American Water Works Association, Member  
Water Pollution Control Federation, Member  
Past Member, TPC Subcommittee on Operation of Wastewater Treatment Plants  
Past Member, Research Committee  
Past Member, Task Group on Long-Range Strategy, Government Affairs Committee  
Tau Beta Pi

#### REGISTRATION:

California, Colorado, Delaware, Florida, Maryland, Michigan, Minnesota, Nebraska, Nevada, New Jersey, New Mexico, New York, North Carolina, Oregon, Pennsylvania, South Dakota, Tennessee, Virginia, Washington, West Virginia, Wyoming

#### BIOGRAPHIES:

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*Personalities of the Midwest and West*  
*Who's Who in Business and Finance*  
*Who's Who in the West*

#### AWARDS:

*University of Kansas, Chi Epsilon Honor Member No. 4*

#### PUBLICATIONS:

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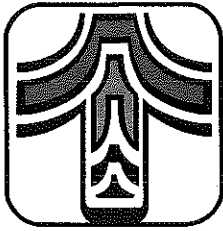
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**CITY OF TUALATIN**  
18880 SW MARTINAZZI AVE. PO BOX 369  
TUALATIN, OREGON 97062-0369  
(503) 692-2000

July 7, 1988

Environmental Quality Commission  
811 S.W. Sixth Avenue  
Portland, Oregon 97204

RE: Water Quality Standards in the Tualatin River Basin

Members of the Commission:

This letter is to inform you that the City of Tualatin is opposed to adoption of rules contained in the Director's Staff Report, dated June 8, 1988 regarding water quality in the Tualatin River Basin.

The City agrees with the Director's statement on page 2 of the Executive Summary, that the proposed rules have been significantly changed from those that went to public hearing and that these changes will affect persons and local governments that were previously unaffected.

The City feels that because of these changes to the rules that were available for public hearing, additional public hearings should be held so that the new proposed rules may be thoroughly discussed in a public forum to evaluate their impacts on the water quality in the Tualatin River Basin.

The City hopes that you will not adopt these rules and will schedule additional public hearings for input on these rules through the rule-making process.

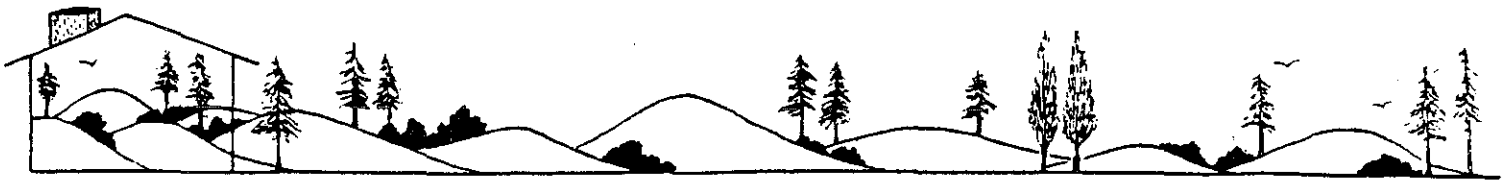
Thank you for consideration of this matter.

Sincerely,

*Luanne Thielke*

Luanne Thielke  
Mayor

/gk  
c:egc77.ltr



**Lower Tualatin Valley Homeowner's Association, Inc.**  
A Non-profit Corporation  
20401 Prindle Road Tualatin, Oregon 97062

July 8, 1988

Environmental Quality Commission  
811 S.W. Sixth Avenue  
Portland, OR 97204

Dear Sirs:

The following comments are prepared for presentation to the EQC meeting/hearing to be held July 8 at the DEQ conference room, 811 SW Sixth, Portland, Oregon. I am Kenneth H. Wright, President, Lower Tualatin Valley Homeowners Association, Inc. with address as shown above. Our Association has been continuously active since 1966. Its primary goal is to maintain the liveability of the Lower Tualatin Valley -- an area that is strongly influenced by the quality of the water in the Tualatin River.

We are pleased and honored that Mrs. Rosalie Morrison of our Association is a very active and effective member of the Citizens Advisory Committee of DEQ (1987-1988) studying the Tualatin River quality problems. Many other of our members have participated in studies of the Tualatin River over the past two years, and testified at many meetings and hearings. Summaries of this participation are summarized in the DEQ report/proposal to be evaluated by the Environmental Quality Commission on July 8, 1988.

We comment the DEQ for its comprehensive report and agree with much of it. Some specific content items that our Association feels particularly strongly about are:

1. The proposed phosphorus limits should be .05 milligrams per liter, rather than .07, as recommended by DEQ. Such level more accurately reflects the consensus of those testifying at the three hearings held last winter.
2. Pollution coming from storm drains needs much more attention.
3. Silt from soil movement during property development is largely being ignored, and contributes greatly to pollution.
4. Non-point pollution from various sources such as farms and forestry operations is not being monitored adequately.
5. The potential for winter flooding as the result of runoff from areas, formerly vegetated but now surfaced, has not been evaluated.

We are pleased to offer this testimony and wish to be involved in further study of the Tualatin River problem.

Sincerely,

*K. H. Wright*  
K. H. Wright, President

DEQ  
811 Sw Sixth Ave.  
Portland OR 97204-1390

From Kenneth E Fink  
Stafford Lower Tualatin CPO

Re DEQ Proposal to EQC for adopting  
interim TMDL limits to improve  
water quality Tualatin River.  
Hearing - July 8, 1988 Agenda  
Item F EQC Meeting

DEQ is proposing only two limits to improve water quality in  
the river. These are "interim".

.07 mg/l for phosphorus  
1.0 mg/l for ammonia

It is quite possible and more than likely that, as the popula-  
tion in the Tualatin Basin grows, and their various domestic  
and commercial activities multiply, that other pollutants will  
appear and become present. Provision should be made to discover  
and include these pollutants, with appropriate limits in water  
quality control for the basin. They will add to the TMDL.

In the 3rd paragraph of the notice to "people interested in the  
Tualatin River Proposal" there is the phrase "forcing fish to find  
a better habitat", to describe excessive amounts of pollutants  
in the river, robbing the water of its oxygen. Fish and other  
marine creatures have to live and multiply in the water of the  
basin as they find it. They are confined by water of the main  
reaches and tributaries as found within its banks. Very few of  
these marine creatures can escape when we humans make their watery  
environment unlivable. It is up to us in developing our water  
quality standards to define these standards so these waters are  
not only livable at all times, even during control upsets of  
pollutant discharges to them, but that at such times there is a  
sufficient body of livable water available for marine life to  
escape to rather than be trapped in its own environment and be  
forced to perish. I do not find that this item is clearly addressed.

It is important that all who use the Tualatin Basin realize that  
by the actions of the DEQ and the EQC in this matter that it is  
of vital importance to develop quality standards that will return  
the Tualatin to near pristine condition and to keep it there as  
a vital service to all. Some believe this is not possible and would  
not mind seeing the Tualatin an open running stinking poisonous  
sewer. These people believe they can obtain their potable  
water from the Bull Run system including the Troutdale well fields  
or similar sources. They do not understand that all sources are  
eventually finite - unless all growth ceases. Even people as far  
away as Wilsonville have been heard to say, "if our wells are in-  
sufficient we can just tap into Bull Run". So if the Tualatin is  
dirty, so what, we don't live by it.



The supposition that the interim pollution standards herein proposed will suffice is based upon assumptions regarding loads and flows for chosen stream segments, tributaries and population levels with their various activities. With the growth and change anticipated and desired, it is obvious that these standards may be good but that the plan to which they are applied is more than likely transient. Altho many items are covered I believe that this was not. We must allow for change for growth and build some of this into our plans as we go. We should not start out by "painting ourselves into a corner".

Remember, this land and Tualatin River Basin is what we have. Let us not mistreat it nor degrade it, thinking we can throw it away and get a new one -- or move to Eastern Oregon with our garbage.

I have only mentioned subjects pertaining to the standards since that is the subject of the discussion today. Ways to observe the standards and use transient values to control input of the various sources to maintain river quality is the main subject yet to be addressed: including the extremely important decisions of who is to be charged with doing it, and how is it to be capitalized and cost operated.

One peculiar solution to having clean Tualatin Basin water is to just pump polluted sewerage plant effluent down river to the Willamette or over the hill to the Columbia. This of course will get rid of large amounts of the desired wet stuff, much of which can be used to irrigate or fertilize with, if kept home.

We can obtain absolutely pure water at great energy expense by evaporating and condensing portions of impure water, discharging concentrated impurities to a suitable reclamation site. This is done at sea. We should attempt to avoid this system.

We have that marvelous free resource known as the Coastal Range and the clouds which come in from the Pacific, depositing clean pure rain water which can be caught in reservoirs surrounding the rim of the basin. These reservoirs can be used as heat sinks to maintain the moderate moist temperature of the valley, provide recreation of all sorts, and for propagation of wild life, surface aquatic and marine; and for summertime release for irrigation and to help maintain clean tributaries and a river. California goes states away to get this kind of needed moisture. We can get it right at our back door, with gravity flow, courtesy of Mother Nature, and our own ingenuity and courage. Note: All dams are not bad.

*Kenneth E. Fink*  
Kenneth E Fink  
6250 SW Prosperity Pk Rd  
Tualatin OR 97062

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# LAKE OSWEGO LAKE AND WATERSHED ASSESSMENT 1986 - 1987

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## Diagnostic and Restoration Analysis

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### Executive Summary

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**Prepared by**

SCIENTIFIC RESOURCES, INC.  
Portland, Oregon

**in association with**

AQUATIC ANALYSTS  
Portland, Oregon

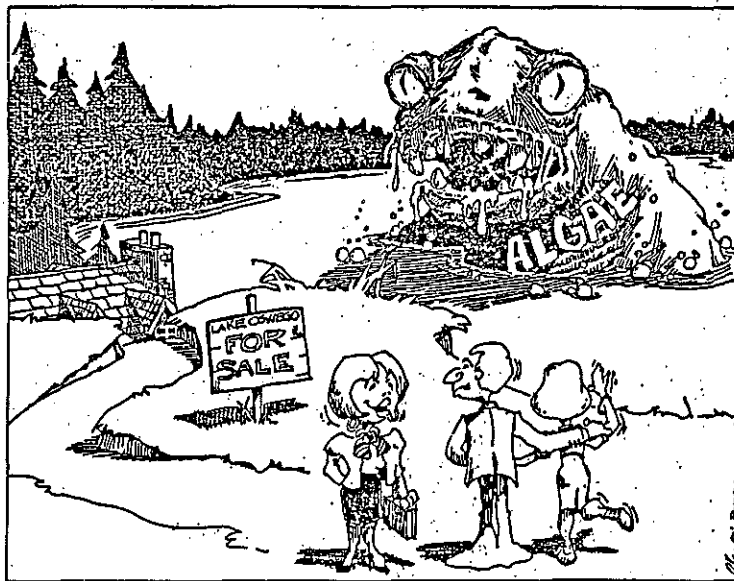
**Prepared for**

LAKE OSWEGO CORPORATION  
UNIFIED SEWERAGE AGENCY  
OREGON DEPARTMENT OF  
ENVIRONMENTAL QUALITY

## EXECUTIVE SUMMARY

## INTRODUCTION

It's unusual but true: more people per acre in the watershed of Lake Oswego know the word "algae" than in any other watershed at least in the western United States. This is true for a couple of reasons: 1) these people know that the greening of the waters that occurs seasonally in this lake is due to algae and that keeping the lake clear enough to use has required extraordinary control measures, and, 2) there are more people per acre around this lake than in most similarly sized watersheds of the west and these people see it and use it frequently. As most people in the watershed are aware, the problem of nuisance algae growth will not go away if it's ignored, as the following cartoon from the Lake Oswego Review illustrated.



JUST IGNORE IT... IT WILL GO AWAY

The interest by the Lake Oswego Corporation in protecting the quality of the lake for recreational use prompted the detailed one and one-half year study of the lake. The study by Scientific Resources, Inc. of Portland evaluated the 7.5 square mile watershed and the 400 acre lake to find alternatives to the high copper doses to the lake to suppress algae growth. Over the past seven years an average of 27,850 pounds of copper sulfate has been applied each year at an average cost of nearly \$12,000 per year.

Why algae growth has been so great in Lake Oswego was the central focus of the study. As plants, algae require similar foods for maintenance and growth as grass lawns: nitrogen and phosphorus. The approach to the study of algae was to measure the levels of these fertilizers in the lake and tributaries to the lake over a period of one year (October 1986 - September

1987). Since phosphorus is essential for algae growth and generally the least abundant of the nutrients algae need for growth, a one-year phosphorus 'budget' was developed to characterize its major sources. A water 'budget' was also developed which compared the amount of water entering and leaving the lake in the period of a year.

The amount of suspended sediment entering the lake was also measured. Navigation problems from shoaling have been common in shallow embayments and in the Canal and have required dredging at some locations.

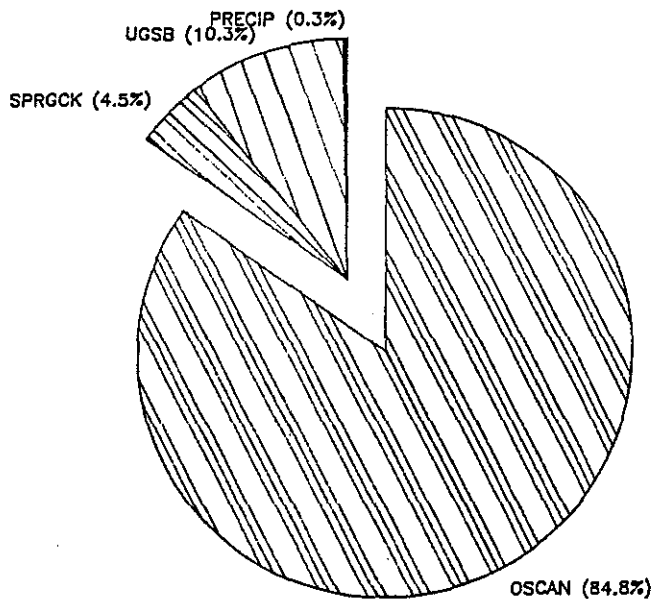
## THE WATER BUDGET

Much of the water for the lake comes from its natural watershed by means of four tributaries and 62 storm drains from the nine subbasins of the lake. However, most of the water to the lake comes through the Oswego Canal. The Lake Corporation has water rights to withdraw 57.5 cubic feet per second from the Tualatin River through the Canal in all months for the purpose of generating power as the water leaves the lake and runs to the Willamette River. Additional water rights provide for irrigation water in the summer, water to maintain reservoir water levels, and water to refill the lake following lake draw-down for repair of seawalls and maintenance of sewer pipes on the bottom of the lake. At current rates the value of power generated by drawing water into the lake from the Tualatin River will be approximately \$89,000 per year without lake draw down and around \$71,000 with lake draw down.

During the 1987 water year 81.84% of the water entering the lake was through the Oswego Canal, 4.62% from Springbrook Creek (the largest single tributary to the lake), 10.56% from all the other tributaries, and 2.98% from rainfall onto the lake. The water year was not representative of an average year both with respect to lower than average rainfall and because of repairs on the power generator which prevented withdrawals from the Tualatin during spring of 1987. On average the per cent contribution of water from the Tualatin River would be even higher. Ground water contributes less than one per cent of the total amount of water entering the lake.

## PHOSPHORUS AND SEDIMENT BUDGETS

The phosphorus budget showed that loading from the Oswego Canal overwhelmed all other sources of phosphorus to the lake, except for the months in 1987 when the Canal was closed due to lake draw-down and when repairs were made to the generator (February - June). The sum of total phosphorus inputs to the Lake for the water year was 13,846 kg. Oswego Canal contributed 84.85% of the total load, with Springbrook Ck contributing 4.53%, precipitation 0.29% and the ungaged basin tributaries the remaining 10.34%. The amount of phosphorus entering the lake was the highest documented in the Pacific Northwest. The pie chart illustrates the relative magnitude of the Canal (OSCAN) in comparison to other sources (precipitation, Springbrook Creek, and ungaged subbasins [UGSB]).



Much of the phosphorus that came into the lake during the study period remained in the lake. Of the total amount of 13,846 kilograms of phosphorus entering the lake during the 1987 water year, 9,155 kilograms left the lake, with 4,691 kilograms (or 33.88%) settling to the bottom in the form of algae and other particulates. The lake functions as a quarternary treatment facility in the Tualatin River system providing a final 'polishing' step for both phosphorus and sediment removal before the water reaches the Willamette River.

Runoff from the natural watershed generally contained higher concentrations of total phosphorus and total suspended solids during the months of greatest rainfall. Sampling confirmed the high suspended solids concentrations at areas which have been identified as having rapid sediment build up, namely Blue Heron Canal below Blue Heron Ck, Oswego Canal, and the deltas of Springbrook and Lost Dog Cks. An estimated 2,650 dry cubic yards of sediment came into Oswego Canal from the Tualatin River during the study, which is the approximate equivalent of 6,600 bank yards of sediment. The volume of this sediment as removed by dredging would be at least 8,300 cubic yards or the equivalent of 750 truckloads. For comparison, an estimated 358 dry cubic yards of sediment came into the lake from Springbrook Creek, which would translate to 894 bank yards and 1,118 cubic yards dredged out. The total annual discharge into the lake from Springbrook Creek was only 5.65% of the Oswego Canal volume, yet the amount of sediment transported into the lake via Springbrook Creek was 13.47% of the amount contributed by the Canal.

## LAKE BIOTA

One of the seasonal features of the lake generally invisible to people but sensed by creatures of the lake is the lack of oxygen in the lower waters of the lake. The depletion of oxygen starts in May and persists until the lake mixes completely in late fall. During most of the summer of 1987 20 feet below the surface of the water there was no oxygen. Since fish and the small organisms they feed on require oxygen, they are confined to the upper warmer waters of the lake, while the cooler deeper waters are avoided. Since the lake has a maximum depth of 55.5 feet, the amount of space occupied by this anoxic water is large.

The apparent reason for the lack of oxygen is a combination of high algae densities in the upper waters of the lake and in water entering the lake and their continual death and settling, and the decomposition by bacteria that use up the oxygen in the process. Since all of the organic matter is not decomposed, a large fraction of it settles to the bottom and increases the amount of sediment depth on the lake bottom. It was estimated that sediment build-up is occurring at a rate of one-half centimeter (2/10 inch) per year.

### Rooted Aquatic Plants

Only one species of rooted aquatic plant, close-leaved pondweed (*Potamogeton foliosus*) has been observed in the main lake and embayments. The lack of other species of rooted macrophytes is unusual. This one species of pondweed presently occupies approximately 23 acres of the lake bottom. The location and density of this plant appears to be controlled by the application of copper, since areas at the lower end of Oswego Canal, and at the mouth of Springbrook Ck and Lost Dog Creek are where the plant is presently located, areas where copper applications are continually diluted by in-flowing waters.

To achieve greater water clarity in the lake without use of a herbicide equally as effective as copper may result in profuse growth of the pondweed and other species of rooted plants to more than 143 acres of the lake bottom.

### Bacteria

The bacteria of concern are those that originate in the intestines of warm-blooded animals. The presence of the fecal coliform bacteria indicates the possible presence of pathogens that may be discharged into water with animal feces. Samples of fecal coliform bacteria exceeding state regulations were mostly in the Oswego Canal and in the west end of the lake. More violations occurred in winter and early spring than during other months, due to larger overland runoff reaching the lake, and to bird populations most abundant during this time. A more continual source of fecal coliform bacteria may be in ground water entering the Canal via the Bryant Woods Nature Park influenced by septic systems west of the Canal. Horse manure-hay piles at bankside on Springbrook Creek at the Lake Oswego Hunt Club are also likely sources of additional bacteria. No samples from the main lake during the recreational season exceeded the state standard, but the standard was exceeded during this period at the lower end of the Canal. On average, densities of fecal coliform bacteria were higher in the west end of the lake during the recreational season than at other stations around the lake, though densities

did not exceed state standards. Data indicate a sizable source of fecal coliform bacteria within the Canal at Bryant Road which has been associated with an intensive private feeding program for ducks at the Bryant Road bridge over the Canal.

### Algae

Lake Oswego algae (phytoplankton) exhibit an extreme growth potential because of the high nutrient supply to the lake. Without the present copper treatment program, the lake would become recreationally useless.

The lake was dominated by diatoms and green algae; blue-green algae were generally rare or lacking except for a brief period during autumn after copper applications stopped. Species dominance shifted frequently, often within a few days. The pattern of species succession observed in 1986 repeated in 1987, despite relatively large changes in inflow and weather.

The three main lake stations sampled were similar in terms of algae abundance and species composition. Lakewood Bay algae as well as each other bays, were different from the main lake. The algae in the canal (Tualatin River water) were always very much different from the lake. These observations and events such as the very dense growth of algae on the surface of West Bay in May of 1987 show that the shallow embayments associated with the lake display different characteristics than the open water of the main lake.

Phosphorus is not 'limiting' the growth of algae. Among the foods for algae, phosphorus is generally in shortest supply. Since algae require a 'balanced' diet, that is, a particular ratio of phosphorus to other foods such as nitrogen compounds, insufficient phosphorus relative to available nitrogen (or sunlight) results in no additional growth. Insufficient phosphorus then 'limits' algae growth. In the spring of 1986 and 1987 nitrogen compounds became limiting and algae growth reached its peak. Because of copper applications to kill algae, a surplus of phosphorus is present in the lake after copper applications start in May.

To achieve algae reductions that would result in the same transparency of water obtained through copper applications (7.3 feet in 1986, 8.9 feet in 1987), phosphorus would have to be reduced to approximately 0.024 milligrams per liter. In contrast, the average total phosphorus concentration at the center station of the main lake for the entire study was 0.150 milligrams per liter. The growing season averages (May - September) for 1986 and 1987 were 0.174 and 0.078. If copper were discontinued, algae would increase substantially. If other growth factors did not become limiting, the present phosphorus concentrations could support an estimated 8,700 algae per milliliter (equivalent to 0.135 milligrams chlorophyll a per liter or a Secchi depth of only one foot).

## Zooplankton

The prominent species of these small to microscopic animals in Lake Oswego are commonly dominant in highly fertilized lakes and feed on algae. In spite of copper applications that are high enough to be toxic to zooplankton, peak densities of certain kinds of zooplankton (microcrustaceans) often exceed criterion offered characterizing highly fertilized (eutrophic) lakes. In May, before copper applications begin zooplankton are so abundant in the lake as to be easily seen. As algae increases, zooplankton populations feeding on the algae increase. As the algae decrease due to this 'grazing', digested algae containing much of the phosphorus settle to the lake bottom and phosphorus concentrations in the lake are reduced. This phenomenon was clearly documented in May of 1987. Zooplankton are valuable algae managers.

## SUMMARY DIAGNOSIS OF LAKE PROBLEMS

### The One Problem with Many Faces

The problem with Lake Oswego is that of poor water quality due to overfertilization. This is in contrast to other area enriched lakes that have unsuitable water quality but also extensive beds of nuisance rooted plants which interfere with recreational use. Although nuisance rooted plants are present in Lake Oswego, they are now being controlled, but with important exceptions. Growth of the one species of Potamogeton is occurring where copper-containing lake water is being diluted by inflowing Canal or stream water. A large decrease in copper applications coupled with a large increase in water transparency (an unlikely combination with continued permitted Canal withdrawal) would likely result in the release of this species and possible others for extensive and possibly dense growth over a much larger area of the lake bottom.

The growth throughout the year of nuisance microscopic algae in Oswego Lake that results from fertile water is of greatest concern. Restoration of Lake Oswego is therefore, in some respects, less complex than other area lakes.

In summary, water quality problems include:

1. Excessive sedimentation in embayments from stormwater runoff, especially Blue Heron Canal;
2. Low water transparency due to microscopic algae, and suspended sediments;
3. Excessively fertilized water, leading to high algae densities;
4. Absence of oxygen in the lower waters of the lake that excludes life forms dependent on oxygen;
5. Growth of nuisance rooted aquatic plants at restricted locations;
6. High proportion of the lake volume without oxygen during summer and fall;
7. Copper concentrations required to suppress algae growth during summer exceed state water quality standards



- and concentrations are at levels which have been found to be toxic to species of zooplankton and fish.
8. Fecal coliform levels in Oswego Canal during the recreation season frequently exceed state standards from waterfowl populations, and during winter are in excess of state water quality standards apparently also due to waterfowl.

Due to a rigorous lake management program, the water quality of the lake has been generally acceptable for recreational use and aesthetic appreciation. Due to the very high fertilization of the lake waters from the near-continual discharge of Tualatin River water to the lake, without intense herbicide application throughout the summer, there is no margin for delayed response to developing algae "blooms".

#### Eutrophication Indices and Lake Oswego

'Eutrophication' is the enrichment of water bodies by plant fertilizers, particularly nitrogen and phosphorus compounds. Recently, DEQ considered the adoption of nutrient standards which would have resulted in enforcement if concentrations of certain forms of nitrogen and phosphorus were exceeded. The following concentrations (all in milligrams per liter) reflect recent reviews regarding summer levels (May - September) of these plant nutrients that should not be exceeded in order to prevent nuisance algae growth. The following suggested values are compared with Lake Oswego values (all values in milligrams/liter):

	SUGGESTED VALUES	LO 1986	LO 1987
TOTAL PHOSPHORUS			
in lake	0.025	0.174	0.076
TOTAL PHOSPHORUS			
streams into lakes	0.050	0.427	0.337 [Canal]
TOTAL PHOSPHORUS			
in other streams	0.100	0.162	0.112 [Spg. Ck.]
DISSOLVED PHOSPHORUS	0.011	0.120	0.040 [Lake avg.]
TOTAL NITROGEN	0.180	1.980	1.070
UN-IONIZED AMMONIA	0.020	0.170	0.120

This comparison indicates the large amount of exceedance of each of the threshold values for each of the two growing seasons.

The algae pigment chlorophyll is used in Oregon as a guideline for determining when "nuisance phytoplankton growth" is present. The DEQ regulations state that phytoplankton may impair recognized beneficial uses of a lake when chlorophyll levels exceed 0.01 milligrams per liter in natural lakes which thermally stratify, or 0.015 milligrams per liter in reservoirs. Before application of copper began in 1987 (late May) chlorophyll concentrations were 0.030 and 0.033 milligrams per liter. Even during summer while copper was being applied concentrations were occasionally in excess of 0.020 milligrams per liter.

A measure called Carlson's Trophic State Indices was used to predict the

condition of the lake on the basis of present average summertime total phosphorus concentrations without copper applications. Estimated chlorophyll concentrations would be 0.135 milligrams per liter and Secchi disk transparency would be only 0.9 ft.

On the basis of the 'loading' of the lake with fertilizers, particularly phosphorus, Lake Oswego has the highest annual documented areal loading rate of any lake studied in the Pacific Northwest. To standardize comparisons among lakes the surface area of the lake as well as its mean depth and flushing rate are taken into consideration. Lakes that are not plagued with excessive algae growth have an acceptable total phosphorus loading rate. A 95% reduction in areal total phosphorus loading from the 8.2 grams per square meter per year to approximately 0.4 grams per square meter per year would be required to change the loading to achieve acceptable water quality without the use of herbicides. This would translate to an approximate reduction in the total phosphorus concentrations in Oswego Canal water of from 0.427 to less than 0.020 milligrams/liter.

## OPTIONS FOR RESTORING THE LAKE

### The Basic Restoration Strategy

Opportunity for improving Lake Oswego depends on the ability to reduce nutrient loading to the lake. There are opportunities for nutrient reduction. By reducing the plant nutrient (fertilizer) phosphorus in order to reduce the amount of algae, other problems associated with overfertilization of the algae will be addressed. Nutrient reduction will decrease algae biomass, which will improve water transparency, which will in turn result in less decomposing algae biomass to deplete oxygen in the lake during lake spring, summer and fall. Other remedies are available which like copper applications treat only symptoms.

### Target Water Quality Conditions

The lake qualities we would like to achieve become targets for management of the lake. These qualities can be defined based on current uses of the lake. Primary beneficial uses of the lake are the use of the water for power generation, viewing the lake (aesthetic appreciation), boating and sailing, contact recreation (water skiing, swimming), irrigation, and fishing. The following are suggested target lake water quality conditions that will support these uses:

Power Generation	No Special Requirement
Viewing the Lake	0.01 mg/l Chlorophyll a (minimum of floating algae). Requires May - September total phosphorus concentrations of around 0.025 mg/l.
Boating	Keep rooted aquatic plants to a minimum (1986-1987 growth)

	maximum baseline) Total Suspended Solids in tributaries and storm drains (less than 15.0 mg/l Nov-Feb)
Contact Recreation	Minimum of 2 m (6.6 ft) Secchi Disc Transparency Requires May - September total phosphorus concentra- tions of around 0.025 mg/l.
	Fecal Coliform Bacteria (present ODEQ standard, less than log mean of 200 col./100 ml April - October)
Irrigation	No Special Requirement
Fish Habitat	Dissolved Oxygen no less than 6.0 mg/l (above 10 m depth May - October)

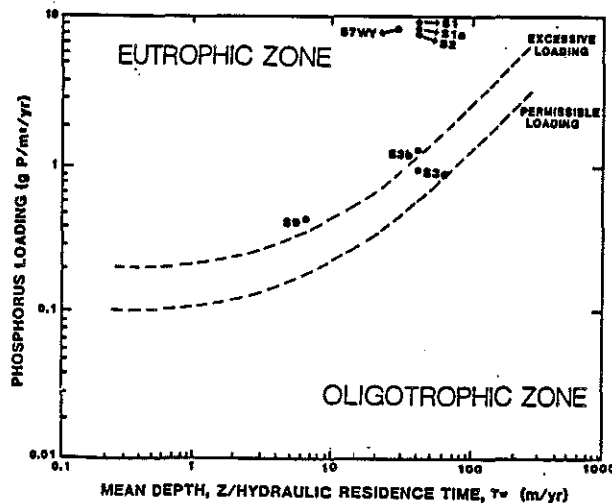
Analysis of Restoration Alternatives

Since the Oswego Canal (the Tualatin River) is the dominating source of phosphorus and nitrogen for the lake, significant reductions in lake phosphorus levels will result only by reducing loading from this source. Generally, there are three ways to reduce phosphorus loading from the Canal:

- 1) Reduce concentrations in Tualatin River water;
- 2) Reduce the amount of water withdrawn;
- 3) Reduce concentrations in Canal water after it is withdrawn from the river.

LOC has direct control over the latter two options.

The condition of the lake in the 1987 water year related to the likelihood of producing nuisance algae growth is shown in the following Figure. The acceptable range is shown by dotted lines in the central portion of the Figure.



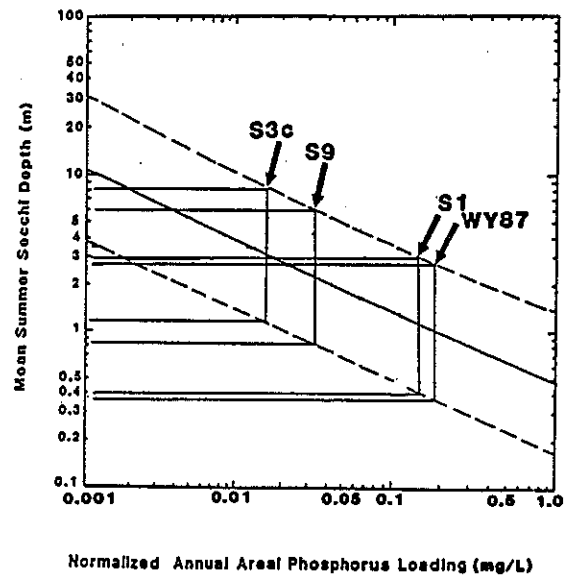
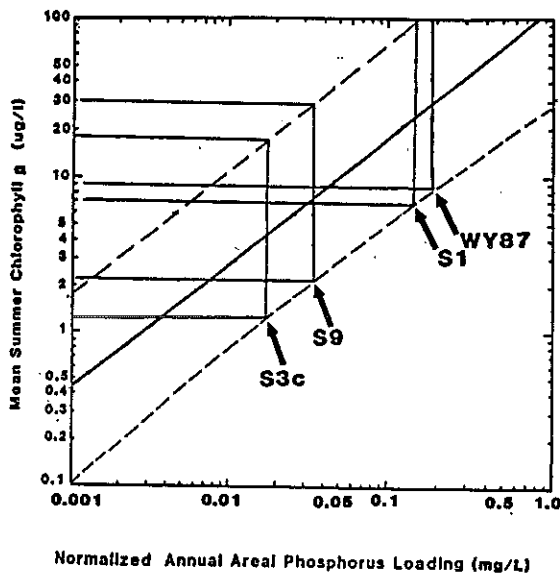
The lake during water year 1987 was in the excessive loading range. The point S1 on the graph shows the position of the lake under a normal year, when withdrawal is as permitted and the power generator is working. S1A shows a slight improvement (movement toward the dashed area) with a 50% reduction in total phosphorus loading from the natural watershed of the lake. This shows that changing the lake would be impossible by only cleaning up waters from the watershed.

The effects on the lake of having the proposed summertime Total Maximum Daily Load limits for the Tualatin River of 0.1 milligram/liter of total phosphorus is shown on the graph as point S2. There is very little if any noticeable improvement in the lake quality from these reductions in the quality of water that would flow into the lake from June 1 - September 15. The amount of time necessary to change water quality in the lake and the temperature differences between the river and lake water would provide negligible improvement in lake quality.

The Tualatin River average phosphorus concentrations would have to be reduced to 0.010 milligrams per liter total phosphorus to achieve lake quality that would be acceptable (point S3B). With a 50% reduction in total phosphorus loading from the watershed the improvement would be even more striking (point S3C).

The Best Option

By closing the headgate, keeping the Tualatin River out of the lake except for small summertime withdrawals, and, reducing phosphorus concentrations in runoff from the watershed by 50%, lake quality would be improved greatly (point S9) on the Figure. The benefits of this reduction are shown on the following Figure. The figure shows 'brackets' of most probable results of phosphorus reductions for mean summer chlorophyll a and secchi disk depth. By moving the eye from the vertical line on the graph between the dashed lines to the left side of the graph with numbers the range of the bracketed values is found.



Summer chlorophyll with this scenario would then be expected to range from above 0.002 to 0.030 milligrams per liter with an average of 0.080 - 0.090 milligrams/liter. Average summer secchi disk depths would be expected to range from slightly less than 1 to over 5 meters (3.3 to 16.4 feet) with an average of 2 meters (6.6 feet). Major target conditions would be achieved. Other target conditions would be achieved with a watershed management program described below.

### The Second Best Option

Substantial reductions (46.24%) in phosphorus concentrations in the lake from May - September of 1987 were achieved from late winter and spring closure of the headgate to repair the power generator. These reductions were shown above in the section "Summary Diagnosis of Lake Problems" in the Table comparing suggested threshold values with actual 1986 and 1987 May - September values. By closing the headgate of the Oswego Canal during the period February - May (until the lake stratifies) allowing the lake to flush with water from the natural watershed only, phosphorus concentrations would be reduced. Preventing water from the Tualatin River from entering the Canal during this period would also substantially reduce the amount of suspended sediment normally transported into the Canal and lake during these months.

Spring growth of algae using up lake phosphorus and subsequent grazing of zooplankton will further reduce the phosphorus concentrations as occurred in 1987. If the proposed TMDL for Tualatin River total phosphorus is implemented, the headgate could be opened in early June to allow the lower phosphorus water into the lake, resulting in lower late summer and early fall lake concentrations to suppress algae growth typically increasing then. Opening of the headgate in early June would allow usual navigation of the upper reaches of the Oswego Canal at the start of the recreational season. This scenario would permit power generation for eight months of the year. Some copper would need to be applied in embayments to control algae growth as well as in the lower reaches of tributaries to control rooted plant growth. This 'second best option' is recommended as a first step in managing the major source of phosphorus loading to the lake.

### Cleaning Up Natural Watershed Runoff

Only with major reduction of Oswego Canal pre-growing season phosphorus loading will there be sufficient reason to pursue an aggressive watershed improvement program. However, by implementing the 'second best option' such a runoff management program would be required to achieve the targeted growing season lake qualities. Target objectives for reductions of algae fertilizers (and sediment) in streams and storm drains will be 50-75% of the 1986-1987 values during the months of highest rainfall (November - April). The following measures are recommended to achieve reductions:

- 1) Eliminate or severely reduce applications of phosphorus-containing fertilizers in the watershed;
- 2) Develop and enforce strict erosion control measures for all development, including regular sweeping of parking lots and streets with curbs and drains;

- 3) Restore eroded and erodible stream corridors (e.g. Blue Heron Creek) to prevent further erosion;
- 4) Remove all obvious sources of stream pollution (e.g. Hunt Club manure pile and creekside holding pens);
- 5) Provide for continued interception of sediment by yearly removal of sediment from sedimentation basins on Springbrook and Lost Dog Creeks and on the stream entering the Frog Pond;
- 6) Facilitate a program of getting all unsewered homes in watershed on public sewer, particularly the areas west of Oswego Canal;
- 7) Remove or severely reduce duck and goose populations on the lake and in the Oswego Canal;
- 8) Implement total suspended solids monitoring program on the major streams (Springbrook, Lost Dog and Blue Heron Creeks) during wet weather, and continue to monitor accretion of sediment at the delta of Springbrook and Blue Heron Creeks.
- 9) Hire a 'Stream Keeper' to walk the lengths of the streams and monitor conditions and identify additional opportunities for improvement.

[8 May 1988]

JAMES C. BROWN  
BOGLE & GATES  
121 SW Salmon, Suite 1600  
Portland, Oregon 97204  
(503) 222-1515

Sept 9<sup>th</sup>

Chairman Hutchinson,

In conjunction with  
Agenda Item (K), the  
RSCC Rules, I would appreciate  
the opportunity to address  
the Commission on issues raised  
by the NOI comments and responded  
by response in Bogle & Gates  
comments. I would be more  
than happy to address the  
Commission along with Doug  
Morrison, New Pulp & Paper.

Thank you for your consideration.  
Jim Brown

MONICE RUSSELL 8/13/68

D.E.O. STAFF

FORGIVE ME FOR DRIVING

MY FEET IN CATCHING THIS

COPY OF MY INPUT AT THE

JULY 8, DEB & E.O.G HEARING

VERY NICE TO HAVE

HEAR YOU. I PROMISED YOU A

COPY. (REMEMBER) I HAVE ENJOYED

WORKING WITH D.E.O. THEY HAVE

DONE SO MUCH GOOD. THANKS A LOT

SINCERELY ~~Love & Peace~~



4<sup>TH</sup> JULY, 1988 ①

LEONARD G. STARK

5050 S.W. CHILDS RD

LAKE OSWEGO

OREGON 97035

(503) 639-2807

MORICE RUSSELL

DEPARTMENT OF ENVIRONMENTAL QUALITY

811 S.W. SIXTH AVENUE

PORTLAND

OREGON 97204

SUBJECT IS TULLAH RIVER

CLEAN UP GOAL - FRIDAY JULY 8<sup>TH</sup>

9 AM - 4<sup>TH</sup> FLOOR CONFERENCE - 811 SW 6<sup>TH</sup>

I AM LEONARD STARK OF  
5050 CHILDS ROAD LAKE OSWEGO  
97035. JUST A LITTLE TOUCH  
OF PERSONAL HISTORY TO SHOW  
HOW IMPORTANT GOOD WATER IS.

MY ANCESTORS THE  
OLSONS, PISTONS, AND STARKS  
HOMESTEADED ON THE BANKS  
OF FANNING CREEK AND TULLAH  
RIVER IN MIDDLE OF 1800'S AND  
LEFT THEIR MARKS IN HISTORY.

EDITH SANDBERG (MOTHER) (2)  
FOLKS CAME FROM SINGEDON)  
AND I BOTH WERE BORN AND  
RAISED BY FANNING CREEK. WHEN  
WE GOT MARRIED ALMOST FORTY  
NINE YEARS AGO WE SETTLED  
ON THE TULLYHIN AT OUR PRESENT  
PRESIDENT ADDRESS, AND DRANK  
FROM THE TULLYHIN, AND USED  
WATER FROM TWO SPRINGS OFF  
CHILD FOR TWO YEARS  
BECAUSE THERE WAS NO UTILITIES  
OUT HERE THEN.

ALL THAT IS GONE NOW.  
GOOD WATER, LARGE FORESTS  
OPEN LAND, AND PURE AIR, DUE  
TO CIVILIZATION, AND DEVELOPMENT  
WITH NO REGARD TO THE  
CONSEQUENCES.

D.F.Q. HAS DONE A GOOD  
JOB TO TRY TO CHANGE THINGS  
TO THE BETTER. BUT IT IS  
UP TO EACH AND EVERY ONE  
OF US TO 'BUCKLE DOWN' AND  
POLICE OUR OWN AREA.

Now for some of  
my own suggestions and  
ideas. Many of you have  
heard these before.

In the first place and  
on the list is the 1) the  
two sewage plants. The  
biggest offenders. Don't try  
to pipe their discharge to  
some one else. Build more  
treatment facilities. And put  
in settling tanks on wet lands  
we need that good water  
in the river.

And as for non point sources  
and have the cities look into  
their own problems. A good  
idea. This D.E.C. should enforce  
especially close to the river  
and where there is no sewers  
we have one of their rights  
in the area.

It is reported, that the  
springs, we once drank out of  
the runoff is contaminated.

IT IS VERY LIKELY THAT (4)  
IS COMING FROM DEVELOPMENT  
ABOUT THEM. THIS IS ONLY  
TWO CASES PROBABLY MANY MORE

THE OT MILLICAMS PER  
LITER OF PHOSPHORUS IS VERY  
GOOD SUGGESTION FROM D.F.S. BUT  
WITN THINK ANY WORK THAT  
COULD BE BROUGHT DOWN TWO POINTS

AND AS FOR THE DATES OF  
ENFORCEMENT MAY TO OCTOBER OR  
ON NOVEMBER. IT SHOULD BE  
FOR ALL YEAR LONG. WHY PUT  
CONTAMINATION IN THE WATER  
SHED AT ALL. THE THOUGHT MICH.  
OR THAT THE WINTER RAINS WILL  
WASH IT OUT. ON SET THE STARTING  
DATE SHOULD SAY THREE MONTHS.

I HAVE ALWAYS "PREDICTED"  
THAT MORE WATER WILL DELUTE  
THE CONTAMINATION. <sup>BUILD</sup> ~~STO~~ ~~STO~~  
MORE HOLDING DAMS ON THE  
TRIBUTARIES WHERE THEY WOULD  
DESTROY A LOT OF FARM LAND  
AND DISPLACE MANY PEOPLE

ANOTHER SUGGESTION IS TO (5)  
SPECIALLY WITH LIKE THE  
ONE FROM THE TRAIL TO THE  
TULLAH, LOOKING AT THE MAP  
THE NENALUM MIGHT BE A PHIPPI  
AND HAVE MANY HEADWATERS OF  
THE DRUALS LIKE SUPPLY, AND  
THAT MIGHT BE OTHERS. THE  
COLUMBIA MIGHT BE OUT OF  
THE QUESTION ON CONTAMINATED.

STOP THE DEVELOPMENT ON  
OUR WETLANDS. THEY ARE NEEDED  
FOR THE PURIFICATION OF LIFE.

SAVE OUR FOREST AND TREES  
THEY HELP THE EROSION AND  
KEEP THE AIR CLEAN.

SHOPPING CENTERS, BIG  
DEVELOPMENTS, AND INDUSTRIAL CENTERS  
COULD PUT IN SETTLING BASINS  
AND WAYS OF TRAPPING RUNOFF.

AGRICULTURE HAS GOT TO  
BE PRESERVED. BUT MORE RESEARCH  
COULD BE DONE ON FERTILIZERS  
AND MORE NATURAL FERTILIZATION  
INSTEAD OF SO MUCH CHEMICALS.

300

©

AFTER READING THE ARTICLE  
 IN THURSDAY'S APRIL 30<sup>TH</sup> PAPER  
 BY STEVE LAW ON PICK ON A THING  
 IS A GOOD ARTICLE AND WOULD BE  
 WITH CLERK. ON WHAT THE  
 AGENCIES AND PEOPLE ARE GOING  
 TO HAVE TO DO. ALL SHOULD  
 READ IT. BETTER THAN I CAN

EXPLAIN SOME OF MY THOUGHTS  
 BUT IT IS VERY CLEAR  
 THAT THE PEOPLE AND LIKE  
 ALL THE WITH SHARD. ARE  
 GOING TO HAVE TO BE REACHED

AND USE TECHNOLOGY ON  
 PRODUCTS USED. TO CONTROL  
 POLLUTION ESPECIALLY IN NITRATES

IF SINCE ANY FINGERING  
 CAN PUT MAN ON THE MOON  
 THIS SHOULD NOT BE A BIG PROBLEM

WE ALL GOT TO THINK ABOUT  
 THE FUTURE GENERATIONS COMING  
 AND NOT DESTROY THE EARTH

FOR THEM. THIS IS HAPPENING NOW  
 GOD BLESS YOU ALL FOR CONSIDER

YOUR WORTH TRULY  
 A. Donald H. Stebbins

Agenda Item F, September 9, 1988, EQC Meeting

Minutes for Agenda Item F Proposed adoption of Rules to Certify Wastewater System Personnel in Accordance with Oregon Revised Statute (ORS) 448.405.

DEQ Director, Fred Hansen, presented to the EQC an amendment to the proposed rules clarifying certification of shift supervisors. This amendment was recommended to address concerns of the League of Oregon Cities who believed the Department proposed to require shift operations have a certified shift supervisor. A letter submitted by the City of Portland supported the proposed change in rule language. Mr. Hansen briefly discussed the need for the clarifying rule language and stated that both letters were in favor of the changes as submitted in the amendment.

Chairman Hutchinson, requested Mary Halliburton, DEQ staff, summarize the proposed rules for the Commission. Ms. Halliburton reviewed the history of Certification in Oregon, the statutory requirement of ORS 448, the public hearing process and advisory committee input in developing the proposed rules and the benefits and impacts of the proposed rules.

Chairman Hutchinson, requested DEQ staff include the changing of the term "Sewage" to "Wastewater" in the law when the Department makes its report to the 1989 Legislature. DEQ staff concurred and will include the request in its report.

Chairman Hutchinson requested clarification on why industrial wastewater treatment system operating personnel were not required to be certified. Mr. Hansen responded regarding the lack of authority in the law to cover industrial waste treatment and that in general those personnel operating industrial systems were well qualified.

Chairman Hutchinson requested the Department encourage combination certificates for water system personnel with the Health Division.

The Commission members voted unanimously to adopt the proposed rules for certifying Wastewater System Personnel.

September 9, 1988 Environmental Quality Commission Minutes Summation

Agenda Item G: Appeal of On-Site Sewage Disposal System Variance Denial By Lester W. and Norma J. Fread

The Commission elected to uphold the Director's recommendation to deny Mr. & Mrs. Fread's proposal to vary from siting standards OAR 340-71-150(4)(a)(A) & (B) and well and property setbacks required under OAR 340-71-220(2)(i), Table 1, Items 1 and 10. Although the Commission sympathized with the Fread's desire to develop the property in question under a variance, no supplemental information accompanied the Fread's appeal that was sufficient to show that strict adherence to on-site rules was unreasonable.

In addition to providing the Fread's with a letter from the Director advising them of the EQC's decision, under a separate letter to the Deschutes County Board of Commissioners, Chairman Hutchison will apprise the Board of the EQC's action and the basis for that action.

WC3766



MINUTES

Subject:           Agenda Item H: Request for Approval of the FY89 Construction Grants Priority List and Management System

The FY89 project priority list was proposed to be the final list for federal construction grants; it was also proposed that only projects with letter Class A, B, and C designations would be eligible for funding.

Chairman Hutchison expressed concern by stating that the staff report was confusing, difficult to understand, and was the most unclear report which had been brought before the Commission.

Direction Hansen outlined the history of the construction grants program and the fiscal impact the program has on the federal budget. He explained that in 1987, Congress decided to phase out the grants program and replace it with a State Revolving Fund program, which would be capitalized by federal funds and by 20 percent matching funds from the state.

Commissioner Sage asked if a statement on page 3 of the staff report indicated that communities were expecting grants.

Tom Lucas responded by stating that many communities were anticipating a grant and that local financing arrangements were based on receipt of grant funds.

Commissioner Castle expressed reservation and concern about approving a list without knowledge of individual projects.

Chairman Hutchison asked if the Commission could approve the criteria for establishing the list, rather than take action on the specific listing of projects.

Director Hansen stated that approval of the list could be delegated to staff but that the current rules require Commission approval.

Tom Lucas stated that in prior years limited funds were rationed to communities and that community officials often contested proposed project rank-order before the Commission.

Chairman Hutchison asked several questions about the proposed priority list, including: if the list was actually a final list; if approval of the list would prevent some communities from receiving grants in the future; if the rules required a final list; if projects on the list could be re-ranked; and if new projects could be added to the list.

Director Hansen and Tom Lucas responded to the questions by stating that only projects through letter Class C would be eligible for grants, but that all known water quality problems would be addressed; that the list was proposed as a final list to allow program transition to the State Revolving

Fund (loan program); that the rules do not require a final list; that projects could be re-ranked; and that projects could be added to the list.

Action

It was moved by Commissioner Castle and seconded by Commissioner Brill that the FY89 construction grant priority list and management system be approved.

Commissioner Hutchison stated that he would support the motion with the understanding that the Department would prepare a strategy for transition from construction grants to the State Revolving Fund which would include a definition of the final list and that this transition strategy would be brought to the Commission along with the draft State Revolving Fund rules.

The motion passed unanimously.

Minutes from the September 9, 1988 EQC Meeting


Agenda Item I: Request for Issuance of an Environmental Quality Commission Order for the City of Elgin, Oregon

The Order would be used to resolve National Pollution Discharge Elimination System (NPDES) permit compliance problems and address other policy issues related to the Federal Water Pollution Control Act Amendments of 1972 (the Clean Water Act).

Chairman Petersen asked if representatives from the City were in attendance. Ken Vigil of the Water Quality Division responded that they were not. Mr. Vigil added that Department staff had read through the staff report with community officials and that they agreed with the report's recommendation and that the Order had been signed by the Mayor.

**DIRECTOR'S RECOMMENDATION:** Based on the report's summation, the Director recommended that the Commission issue the Compliance Order by signing the document prepared as Attachment D.

**ACTION:** Commissioner \_\_\_\_\_ moved that the Director's recommendation be approved, Commissioner \_\_\_\_\_ seconded the motion, and the motion passed unanimously.



I didn't take notes on who moved and who seconded the motion.

Ken V.

Summary of EQC Deliberations

Agenda Item J, September 9, 1988, EQC Meeting

Request for Issuance of an Environmental Quality Commission Compliance Order for the City of Coos Bay, Oregon for Treatment Plant No. 2.

Two individuals requested an opportunity to comment on this agenda item.

Lynn Heusinkveld, Attorney representing the Charleston Sanitary District, read a prepared statement (copy attached) expressing the District's dissatisfaction with their arrangement with the City for sewage treatment at Plant No. 2. The District intends to pursue construction of its own treatment plant, and requested the draft Compliance Order be modified in two respects to facilitate their entry into the facility planning process:

- a. Page 4, paragraph 8(A)(2), after the words "Plant No. 2 improvements", add the words "or acceptable substitutes thereto."
- b. At the end of the same subparagraph, add in parenthesis "(The Charleston Sanitary District may also submit alternatives by March 1, 1989.)"

Mark Lasswell, Century West Engineering, stated that the Facility Plan scope may be greater than originally anticipated, and the City desires to avoid being subjected to higher costs for special construction methods to accomplish a rushed completion. Thus an extension of time beyond the date specified in the Order may be needed to allow for construction. The City desires to reserve the right to request additional time for compliance, if warranted by the conclusions of the facilities plan. In response to Chairman Hutchison's comments that 2 1/2 years for attaining compliance is already a long time, Mr. Lasswell noted that major treatment plant construction often requires over 2 years. Their preliminary evaluation indicates that extent of required improvements may be greater than reported in the 1986 Facilities Plan. To allow only 2 1/2 years to accomplish planning, design, and construction may not be sufficient.

Mr. Huston noted that the Compliance Order may be modified at any time through mutual agreement of the City and the EQC, as specified in the Order.

Chairman Hutchison then asked Mr. Lasswell if he wished to respond to the statement of the Charleston Sanitary District. Mr. Lasswell stated that construction of a separate treatment plant in Charleston is a reasonable alternative which would have to be addressed in any approvable facility plan. He pointed out that the wording in the proposed order does not preclude this alternative, and that the alternative may be beneficial to the City.

The Director added that to receive EPA grant funds, federal rules require a systematic cost-effectiveness analysis of all alternatives. The wording requested by Charleston is not necessary to assure that all alternatives will be addressed.

Mr. Heusinkveld then suggested a clarification to the District's proposed revision by adding the sentence, "(The Charleston Sanitary District or other interested parties may submit their own plan by March 1, 1989 at their own expense.)"

The Director emphasized that the Department staff have no objections to the proposed revisions. However, the relationship between Charleston and Coos Bay is a local issue which the Order need not address.

Mary Halliburton pointed out that the full range of alternatives is expected to be addressed. Staff have no objection to the proposed revisions, but there may be ramifications to having two plans. In any facilities plan, having two separate plans with different cost effectiveness analyses would necessitate reconciling the plans and their conclusions. This could extend the time needed to secure an approvable facilities plan, and thus the time for compliance.

In a split vote the Commission decided not to sign an Order without either of the changes requested by Mr. Heusinkveld. It was moved that the Order be modified to include words "or an acceptable substitute" after the word "improvements" on Page 4, paragraph 8(A)(2). The Commission voted unanimously in favor of issuing the Order containing this change.

Date: 9-23-88 3:27pm  
From: Allan Solares:HSW:DEQ  
To: Monica Russell:OD  
cc: KASolares  
Subj: agenda item K 9/9 eqc meeting

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On Thursday afternoon, during the work session, the EQC heard a presentation by Allan Solares, ECD senior policy analyst, on the development and content of the proposed environmental cleanup rules. Then the EQC discussed the intent of the rules and some of the key issues with a panel consisting of several members of the Remedial Action Advisory Committee. On Friday, the EQC heard oral testimony in opposition to the adoption of the cleanup standard and requesting other modifications to the proposed rules. The EQC adopted the proposed rules 5-0 without any modification.

Date: 9-15-88 9:07am  
From: William Bree:HSW:DEQ  
To: Monica Russell:OD  
cc: DKRozell,WRBree  
Subj: EQC Yard Debris Rules Final Version

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I have submitted the yard debris rules to the Administrative Services division for filing with the Sec. of State's office with the following two changes.

1. Version Ic of the rules 340-60-125 (2) (a) and (c) now reads "... during the monhs of April through October...".
2. Version Ic of the rules 340-60-120 (7) now reads "...that a program which meets these minimum standards will produce more source separated yard debris than the processors or the local or regional government jurisdiction are capable of utilizing."

Note: Metro staff have inquired as to the proceedure and deadline for filing an appeal to these rules.

Date: 9-7-88 2:48pm  
From: Alan Kiphut:HSW:DEQ  
To: dkrozell  
cc: adkiphut  
Subj: Metro/Michael Huston

-----  
When we talked to Michael Huston about the statutory authority for directing Metro to implement their solid waste reduction program, he asked me to check with Steve Greenwood and find out exactly which section of ORS 459.055 applied to their permit application for Arlington.

I've talked to Steve and they applied for a permit "for a disposal site established as a conditional use in an area zoned for exclusive farm use", which is 459.055 (2).

This is simply a technical piece of information Michael wanted to know and does not affect the report or DEQ's authority.



# METRO

## KEY POINTS

- \*\*\* Rena may raise the issue of rate incentives at St. John's landfill. We state they have been dropped. More accurately, the rate incentive program is still in place but yard debris recycling has been dropped, so the rate incentive is a moot point. May want to acknowledge our report could have clarified that issue.
- \*\* We want to be sure to retain a formal mechanism for ensuring that METRO implements or modifies the 1986 and is not allowed to go off and start developing a whole new program, thereby continuing the planning process as opposed to implementing.
- \* Process of review and comment on METRO's report is a new one for DEQ. Perhaps we could have done better. We were derailed from going to public hearing by the Commission's early interest in METRO's performance because of upcoming rules on yard debris. Normally, we would have been through a public hearing before coming to the Commission. Again, this is a new activity and process.
- \* DEQ staff did communicate by telephone with METRO staff, Pat Vernon and Debbie Gorman, to clarify language and meaning in METRO's report. There has not been, however, detailed, item-by-item discussion with METRO as of yet. Not because DEQ doesn't intend to but because the normal process of moving to public hearing was short circuited, hence we are, admittedly, playing catch up.

## DEFINITIONS FOR METRO STAFF REPORT

- 1 "not pursued" means that the action element as described and approved in the 1986 Waste Reduction Program was not initiated

OR

action element was not pursued as described in the approved program and the Department was not notified of changes as statute requires (ORS 459.340).

- 2 "substantially behind schedule" means that at the time the report was submitted to the Department, June 30, the action item was at least 6 months behind the approved schedule per 1986 Waste Reduction Program work plan. (Some items are at least 1 yr behind schedule).

- 3 "insufficient information" means that the staff was not able to determine whether the specific action item was actually implemented based on Metro's Report or reviewer's comments.

OR

there were conflicting statements from Metro and the reviewers on the action items.

DEQ Report states that 15 out of 49 action elements were not pursued, 11 out of 49 action elements were behind schedule: The key activities (qualitatively) are:

1. Certification for Local Collection Services  
(refer to Attachment I, p.7)

Not pursued according to program description submitted by Metro.  
Replaced with Functional Planning process.  
Change not sent to DEQ for review and comment, as required by statute.

2. Rate Incentives (p.8)

B. To Assure Compliance with Certification Program

Not implemented because Certification Program (above) was not implemented.

3. Post Collection Recycling/Materials Recovery (p.6)

C. Waste Auditing and Consulting Service

Not pursued according to program description submitted by Metro.  
Replaced with Functional Planning process.  
Change not sent to DEQ for review and comment, as required.

4. Materials Market Assistance Program (p.8)

(Viewed by interested parties as an area where Metro can provide substantial assistance. Discussed with Pat Vernon, Metro).

B. Annual Market Survey - not pursued.

C. Annual Supply Profile - not pursued.

D. Recycled Products Survey - not pursued.

H. Grants & Loans (Research/Development) - behind schedule.  
(Passed by Metro Council 7/88).

I. Grants & Loans (User Assistance) - behind schedule.

5. System Measurement Program (p.9)

(Important Baseline Program - establishes goals and objectives for entire waste reduction effort).

Discussed with Debbie Gorham and Pat Vernon, Metro.

A. Waste Substream Composition Study - behind schedule  
(Completed 12/87).

B. Substream Resource Recovery Study - behind schedule  
(Completed 12/87).

C. Waste Reduction Performance Goals - behind schedule

(Draft completed 7/88 included as Appendix L to Metro report).

D. Ongoing Measurement of System Performance - behind schedule.

STATE OF OREGON

DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE MEMORANDUM

DATE: September 23, 1988

TO: Monica Russell

FROM: Bill Jasper

SUBJECT: EQC Meeting Sept. 9, Agenda Item P.

The following is my recollection of what happened. You can compare my version with what the tape holds.

Introduction by Fred Hansen. Agenda Item P deals with revisions to the Vehicle Inspection Program rules. Director noted that one of the provision was the decertifying of an older series of exhaust gas analyzer used by the licensed self-inspecting fleets. Other major components was the easing of the tampering criteria and engine change policy for pre-1980 model year vehicles.

One of the Commissioners (I don't remember which one) asked about the testimony and how many of the affected fleets were school districts. Bill Jasper (that's me) responded, summarizing some of the testimony from the hearing officer's report. Seven of the 29 effected fleets (out of 55 total fleets) were school districts.

Commissioner Sage complimented the staff on a report that was well written and clear.

And that's about all that I remember. You can check your tape to verify or add anything that I might have forgotten.

Date: 9-29-88 11:02am  
From: Yone McNally:RO:DEQ  
To: Monica Russell:OD  
cc: Yone McNally:RO:DEQ  
Subj: Summary of Agenda Item Q, 9/9/88 EQC meeting

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Here is my summary. Let me know if it needs to be embellished.

The Commission unanimously approved the adoption of housekeeping amendments to the Department's civil penalty rules, Oregon Administrative Rules Chapter 340, Division 12.

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## Summary

Agenda Item No. R, September 9, 1988

Proposed Adoption of Rules establishing Plan Requirements and Implementation Schedules for Achieving the Phosphorus and Ammonia Criteria for the Tualatin Basin Established in OAR 340-41-470(3) Special Policies and Guidelines.

The proposed additions established the implementation schedule and compliance period for achieving the criteria specified in the existing rule. The three major concerns with the proposed rule where:

The five year time frame for compliance was not achievable

Departments flexibility to allow load increases during the interim period between rule adoption and compliance

Including the Department of Forestry in the context of the rule as the lead agency for forested areas in the Tualatin Basin

The first concern was raised by Washington County, the Unified Sewerage Agency, and several Cities in Washington County. The Commission acknowledged the need to review the time frame for compliance. Wording of the rule requires that this review occur following the described planning process for point and nonpoint sources. The Commission elected 5-1 to adopt the proposed language.

The commission adopted wording within the rule that allows for interim increases in phosphorus loads to the Tualatin River.

The State Department of Forestry was concerned with being included in the proposed rule as the management agency responsible for attaining the load allocation for forested areas within the basin. Representatives of the Department of Forestry felt that the allocation of loads was not consistent with existing nonpoint source control programs. The commission unanimously elected to include the proposed language identifying forestry as the lead agency for nonpoint source control in forested lands within the Tualatin Basin.

Minor changes to the wording of the proposed rule were made by the commission. With exception to the five year time frame the rule was adopted unanimously by the Commission.